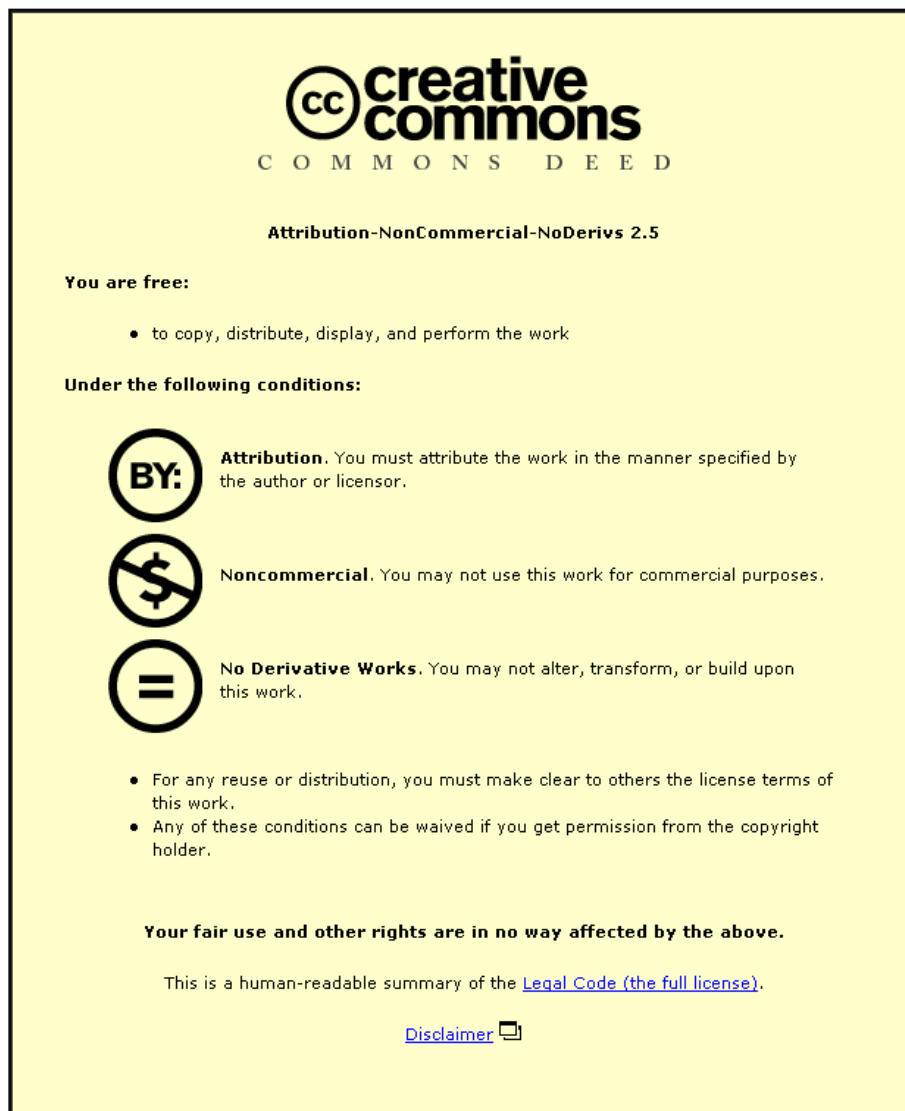


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LIBRARY AND INFORMATION NETWORKS FOR RESOURCE
SHARING IN DEVELOPING COUNTRIES WITH PARTICULAR
REFERENCE TO ENGLISH-SPEAKING WEST AFRICA

VOLUME 1 : TEXT

by

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A Doctoral Thesis

Submitted in partial fulfilment of the requirements

for the award of

DOCTOR OF PHILOSOPHY

of the Loughborough University of Technology

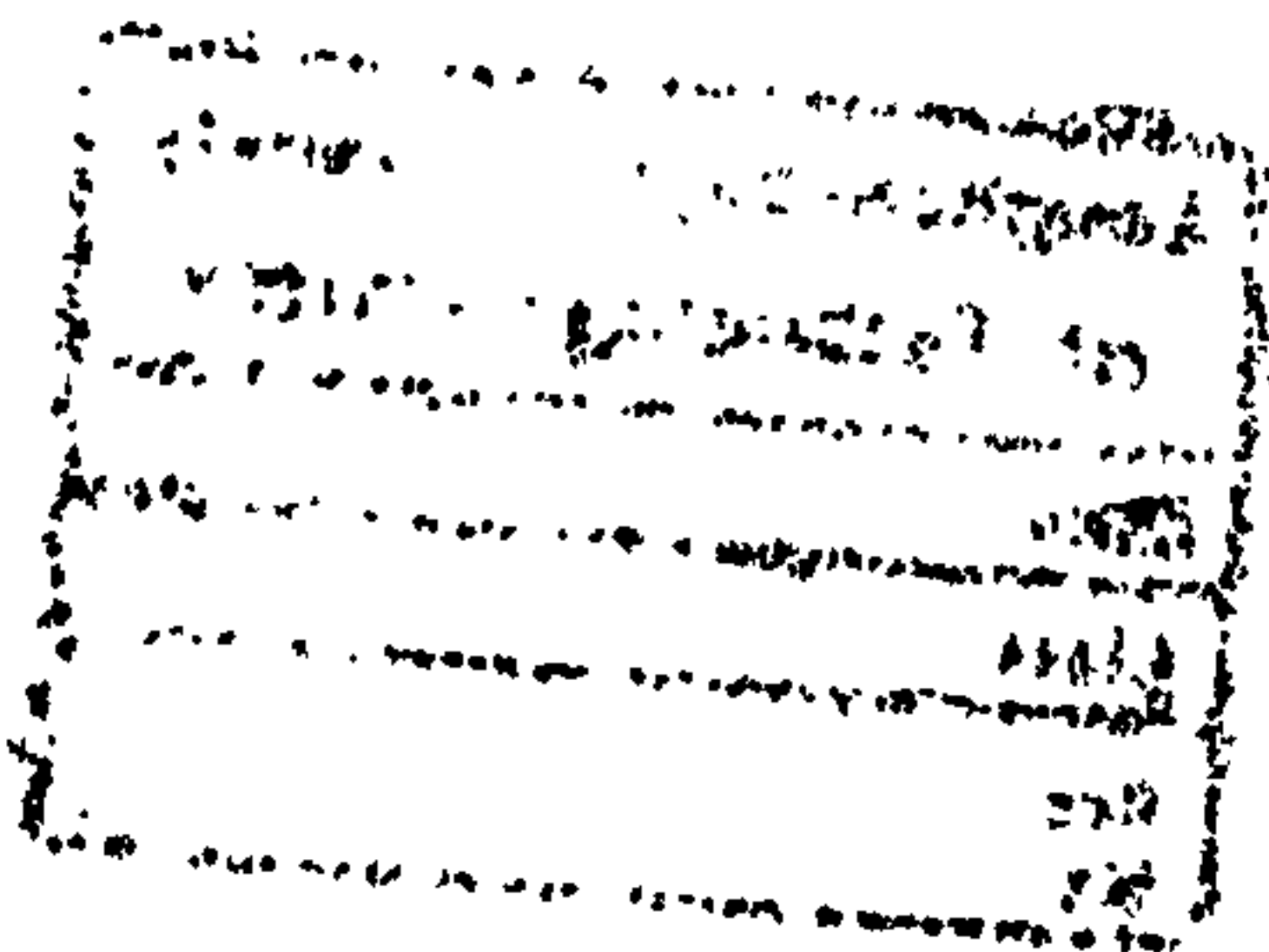
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To Len, Maggie, Timothy and Emma-Jane



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Preface

The concept of resource sharing has, of late, engaged the increased attention of librarians and information workers, and various conferences and seminars have been devoted to its exposition in one form or the other. The Airlie House Conference of 1970 ⁽¹⁾ and the Pittsburgh Conferences of 1973 ⁽²⁾ and 1976 ⁽³⁾ are some of the notable examples of this growing interest. Although these conferences and seminars have shown predominant concern with resource sharing in the context of the developed countries, the interests of the developing countries have not been entirely neglected as the IFLA/UNESCO Pre-Session Seminar of 1977 ⁽⁴⁾ shows.

The basic motivating factors behind resource sharing in the provision of library and information services are the acknowledged impossibility for any library or information centre to be self-sufficient, and the need to co-ordinate activities in order to avoid unnecessary duplication in the provision of the services. Additionally, technological progress has made library co-operation a lot more feasible than it has

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- (1) BECKER, J., ed. Proceedings of the Conference on Interlibrary Communications and Information Networks, sponsored by the American Library Association and U.S. Office of Education, Bureau of Libraries and Educational Technology, held at Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970. Chicago, ALA, 1971.
 - (2) KENT, A., ed. Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973 at Pittsburgh, Pennsylvania... New York, Marcell Dekker, Inc., 1974.
 - (3) KENT, A. and GALVIN, T.J., eds. Library resource sharing; proceedings of the Conference on Resource Sharing in Libraries, University of Pittsburgh, 1976. New York, Marcell Dekker, Inc., 1977.
 - (4) VERVLIT, H.D.L., ed. Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977. München, K.G.Saur, 1979. (IFLA Publications, 14).

ever been. These factors are relevant to both the developed and the developing countries and therefore make resource sharing a concept of common interest and relevance, too. However, the developing countries have to adopt strategies that are different from those of the developed countries in the interpretation and application of the concept. This is because in the developed countries, the resources are, by and large, in existence and are available in considerable quantity. In the developing countries, however, the reverse is the norm. The resources are generally scanty, and the supporting services are comparatively weak. So while the main concern of the developed countries may lie in the development of schemes for the sharing of the existing resources, to the developing countries, resource sharing should mean more than that; it should be seen as an essential part of the wider task of resource building. These two aspects (i.e. resource building and sharing) should be considered together to make the concept meaningful to the developing countries.

This interpretation of resource sharing forms the basis of this work, and the existing resources in English-speaking West Africa (comprising The Gambia, Ghana, Liberia, Nigeria and Sierra Leone) have been reviewed with these two aspects in view. In addition to individual country assessment, the opportunities for resource sharing at the sub-regional level have also been examined.

For ease of reference, the tables accompanying this text have been prepared separately as Volume Two.

Acknowledgements

This work has been possible because of the assistance and co-operation I received from various sources during the entire period of its preparation. They include the institutions which generously sent me requested documents and pieces of information, and the many librarians and information workers who kindly completed and returned the questionnaires on which the greater part of this work has been based. I appreciate their co-operation and offer them my very sincere thanks.

Some of my benefactors, however, deserve special mention, and it is my greatest pleasure to give them individual acknowledgement. First, I am very grateful to the Trustees of the Leverhulme Trust Fund for sponsoring the project, and to Professor Peter Havard-Williams for supervising it. I owe very special thanks to Professor Havard-Williams under whom it has been my good fortune to work. In addition to his excellent supervision and guidance, he has been an unfailing source of help and encouragement. His interest and concern contributed in a very large measure to the completion of this project. I am greatly indebted to him, and I am glad of this opportunity to acknowledge his help.

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My thanks for continued interest and help also go to Mr. Russell Bowden, Deputy Secretary-General of the (British) Library Association with

whom I also had very useful discussions. I am grateful to him, indeed, for his assistance.

The preliminary discussions I had with Mr.G.E.Gorman of the Institute of Development Studies, University of Sussex, Brighton, and Professor J.D.Pearson, formerly of the School of Oriental and African Studies, London University, proved very beneficial and I am grateful to both of them.

My fact-finding tour of English-speaking West Africa would not have been successful without the co-operation I received from all concerned. I requested, and was granted, interviews at very short notices. Most of those I interviewed were not even given the benefit of advanced notification - however short it usually was! The interviews gave me a better insight into the library and information services in the sub-region and I am very grateful to all of them, but particularly the following:

In The Gambia: Miss Sally P.C.N'jie, Chief Librarian,
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Villars, Librarian, Central Reference and Research Library,
CSIR, Accra.

Abstract

The role of information as a vital national resource and an essential attribute to social and economic development is increasingly gaining international recognition and acceptance. As a resource, information has to be developed and utilised through carefully articulated plans for its worth to be realised. The possibilities of achieving this objective in English-speaking West Africa through the establishment of national networks for the development and sharing of library and information resources have been investigated.

A historical sketch of the events leading to the formation of the General Information Policy of Unesco (and the declaration of information as a national resource) precedes a detailed consideration of the main characteristics of library and information networks. These characteristics form the bases for the analysis of the existing library and information resources in the sub-region. In the context of the work, the term "resources" has been given the broad interpretation of the sum total of all the elements, i.e. the materials, functions and services, which constitute a library or information centre.

In order to determine the extent of the existing resources, copies of a comprehensive questionnaire were circulated to a total of 211 libraries and information centres in The Gambia, Ghana, Liberia, Nigeria and Sierra Leone, out of which 148 were returned, representing a response rate of 70.14%. The results have been analysed under the major headings of: document resources; bibliographical organisation of document resources; accessibility of document resources; users; manpower; and formal organisation, and show varying degrees of development of library and information resources and services in the sub-region. The results also show the lack of national co-ordination in the development and use of the resources.

The general conclusion is that the sharing of library and information resources in the sub-region is not only necessary but feasible. Plans for the development and sharing of the resources have been proposed, and the role of the national governments in the realisation of these goals has been particularly stressed.

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CHAPTER 1

INTRODUCTION

1.1 The UNISIST and NATIS Concepts: a Historical Sketch

The role of information as an essential attribute to social and economic development is increasingly gaining international recognition and acceptance. This growing acknowledgement of the primacy of information was given added thrust with the organisation of the International Conference for the Establishment of a World Science Information System (UNISIST) in 1971 and the International Conference on the Planning of National Documentation, Library and Archives Infrastructures (NATIS) in 1974. These two Intergovernmental Conferences, in themselves, can additionally be said to have marked the culmination of a series of activities by Unesco and the other international organisations towards the development of infrastructures and the co-ordination of library and information activities. Since its inception in 1945 Unesco, for instance, has organised various conferences and seminars and has sponsored or supported many pilot projects and technical assistance schemes, which in addition to its grants, publication programmes etc. constitute an eloquent testimony of its strive towards the fulfilment of its objectives. ⁽¹⁾ But the singular significance of the two Intergovernmental Conferences lies in the unprecedented move to involve governments at both the national and

(1) Note for instance the following conferences and seminars organised by Unesco between 1951 and 1955 which facilitated the development of public libraries in the developing countries of Latin America, Africa and Asia and also helped in drawing attention to the important role of library services to social and economic development: Conference on the Development of Public Library Service in Latin America, Sao Paulo, Brazil, 1951; Seminar on the Development of Public Libraries in Africa, Ibadan, Nigeria, 1953; Seminar on the Development of Public Libraries in Asia, Delhi, 1955.

international levels in the co-ordinated and co-operative development and utilisation of library, information and archival resources and services.

1.1.1 The UNISIST Concept

The UNISIST scheme has a long and interesting pre-natal history of attempts to evolve a "world science information system" to enhance the systematic harnessing of the world's scientific information output. Although these earlier attempts failed, they were beacon lights to later developments. The first attempt of historical significance was made in 1896 when the Royal Society sponsored an international meeting to consider the publication of a complete catalogue of scientific literature for the benefit of scientific research. The resulting International Catalogue of Scientific Literature, a comprehensive indexing system, was abandoned after 25 years of its existence because of its inability to cope with the "flood" of the information it had set out to contain.

The Wellsian concept of a "World Encyclopaedia" or a "World Brain" which its proponent, H.G.Wells, presented to the Royal Institute in 1936, was well intended but clearly Utopian. The World Brain was envisaged as a "central bureau" with managerial and administrative functions, and empowered to promote and co-ordinate the global exchange of information. In addition, it was to link these services into an international network, nationalise and integrate them so as to avoid overlap and duplication and fill in the apparent gaps in the services. Such a centrally controlled organisation would have been confronted with a myriad of problems, not the least of them being financial and economic, whilst the different levels of technological advancement and other related issues would have accentuated the difficulties.

The proof of the above assertion was coincidentally provided by a group of distinguished scientists and intellectuals at the University of Chicago who had carried the concept even further. Concurrent with the Wellsian proposal (but unknown to either proponent) the group had actually started an identical project for the centralised acquisition and dissemination of scientific knowledge. The result of this predictably short-lived endeavour was:

1. The Journal of Unified Science;
2. "The Library of Unified Science" which consisted of a series of books; and
3. The International Encyclopaedia of Unified Science.

The next major event was the establishment of Unesco by the International Convention of November 16, 1945. In keeping with its objectives, Unesco showed immediate concern for the information problem. In 1948 it sponsored a conference on indexing and abstracting in the biological and medical sciences while another conference on scientific abstracting it sponsored in 1949 led to the establishment of the International Council for Scientific Unions (ICSU) Abstracting Board "to improve", through international co-operation, "the quality of scientific information and the acceleration of its distribution among scientists." (2)

Again in 1958, following an earlier conference in 1948, the Royal Society sponsored the International Conference on Scientific Information during which the formation of an international institute for scientific information was proposed. The Conference stressed the role of scientists

(2) LIBRARY OF CONGRESS. International scientific organisations; a guide to their library, documentation and information services. Prepared under the direction of Katherine O. Murra. Washington 25, D.C., Library of Congress, 1962, 312.

in the organisation of the institution which was to enable scientists of all levels to have access to all the information they needed. Although because of its magnitude the proposed institution would need the financial support of governments, it was to be free from governmental control. The Conference also proposed that such institutions as Unesco and ICSU should conduct enquiries into the possibility of creating an international centre of scientific information. The 1958 Conference marked a clear departure from earlier attempts at the evolution of "a world science information system" in that it recognised the importance of the co-operation of scientists, scientific institutions and organisations and particularly national governments in such a system. However, it was to take over a decade and two more international conferences on the theme for the objective to be achieved.

Of the preceeding conferences, one was the 13th Pugwash Conference on Science and World Affairs which was held in Karlovy Vary, Czechoslovakia, in September 1964 during which the formation of a unified and co-ordinated system for information storage and retrieval was advocated. The Conference also decided that the solution of the information problem lay in a single system: a "World Centre of Scientific Information". The fundamental, recurring theme of the need for an organisation which can receive and process information for international consumption once again dominated the next conference, the 11th Assembly of the ICSU held in Bombay in 1966, where it was decided to create a committee to study the feasibility of establishing a world science information system:

based on ensuring compatibility between systems, both existing and in the process of establishment, for the

collection, processing, storage and retrieval of scientific information. ⁽³⁾

Almost simultaneously with the ICSU efforts, Unesco was also considering ways for the efficient distribution of scientific information on an international scale to include a system that would enhance the international exchange of such information. The two organisations agreed to conduct a joint feasibility study and a Study Report ⁽⁴⁾ was produced in 1971 after four years' work. The conclusions were approved by the UNISIST Intergovernmental Conference for the Establishment of a World Science Information System which was held at the Unesco Headquarters in Paris from 4 - 8 October 1971. It was the first intergovernmental conference on the subject and its 326 participants represented 85 Member States and 40 intergovernmental and non-governmental organisations. The Conference was particular in stressing to governments the urgent need and importance of their support in the development of scientific and technical information both on the national and international levels; the contribution of scientists (as creators and users of scientific information) and information scientists (publishers, librarians, documentalists, and specialists in information processing) was stressed

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- (3) AMBARTSUMIAN, V. Address (delivered by the President of ICSU to the Intergovernmental Conference for the Establishment of a World Science Information System). In Final Report (of the) Intergovernmental Conference for the Establishment of a World Science Information System. Paris, 4-8 October 1971. Paris, Unesco, 1971, 281.
- (4) UNESCO. UNISIST; study report on the feasibility of a World Science Information System by the United Nations Educational, Scientific and Cultural Organisation and the International Council of Scientific Unions. Paris, Unesco, 1971 (An abridged version - the UNISIST Synopsis - has also been published).

as of equal importance for the efficient working of the system. Finally, the Conference saw scientific information as a "world resource" - a resource which is of vital importance to the world society. Accordingly:

The UNISIST Study is concerned with the cultivation of this resource, with increasing international co-operation to improve its accessibility and use, to the end that, as an international resource, it contributes optimally to the scientific, educational, social, cultural, and economic development of all countries. (5)

The UNISIST programme, a contemporary version of the Wellsian and, indeed, the earlier concepts of a "World Brain" or a centrally controlled organisation, was officially launched by the Unesco General Conference in January 1973 as:

a continuing, flexible programme to co-ordinate trends towards co-operation and to act as a catalyst for the necessary developments in scientific information. The ultimate goal [being] the establishment of a flexible and loosely connected network of information services based on voluntary co-operation. (6)

1.1.2 The NATIS Concept

Although the NATIS concept has a relatively shorter historical background than UNISIST, it is of no less significance and the impact of its implementation, particularly on the developing countries, is bound to be immense. It rests on the premise that information in general, of which scientific and technical information is only a part, is a resource as vital to each nation as its wealth in the traditionally recognised natural resources of gold, diamonds, oil, etc., and that the social and economic advancement of a nation is greatly conditioned

(5) UNESCO. UNISIST; synopsis of the feasibility study on a World Science Information System. Paris, Unesco, 1971, vi.

(6) WYSOCKI, A. and TOCATLIAN, J. A world science information system: necessary and feasible. Unesco Bull.Lib., 25 (2) Mar - Apr 1971, 63.

by the level of development of its information resources. This presupposes the co-ordinated planning of these resources (documentation, library and archival services) at the national level - a fact which had hitherto been largely ignored by national governments in the planning and execution of their national development plans.

Between 1966 and 1974 Unesco organised regional conferences on the planning of library and documentation services in Latin America, Asia, Africa and the Arab States ⁽⁷⁾ to draw the attention of the various governments and their national planning agencies to the importance of nationally co-ordinated information services and also to study the problems inherent in such co-ordination. At these, as well as at other related sub-regional conferences and meetings, the systematic planning of these services was endorsed as the effective means of ensuring their regional development.

The second of the intergovernmental conferences, the Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures (NATIS) which was held in Paris from 23 - 27 September 1974, was organised by Unesco with the co-operation of the International Federation for Documentnation (FID), the International Federation of Library Associations (IFLA) and the International Council on Archives (ICA). It was the first inter-governmental conference to be held exclusively to discuss problems associated with the national planning of documentation, library and archives services, and was attended

(7) The Regional Conferences were: Latin America (Quito, Ecuador, 7 - 14 February 1966); Asia (Colombo, Sri Lanka, 11 - 19 December 1967); Africa (Kampala, Uganda, 7 - 15 December 1970) and the Arab States (Cairo, Arab Republic of Egypt, 11 - 17 February 1974).

by 254 delegates from 86 Member States of Unesco and 63 observers from organisations of the United Nations, other intergovernmental organisations, and international non-governmental organisations and foundations. (8) It was held to generalise the findings of the four regional meetings of experts on the planning of library and documentation services and also:

to provide a framework for governments of Member States in various stages of development and with different social and political structures, to exchange views and experience on the co-ordinated planning of national documentation, library and archives policies... A further aim of the Conference was to recommend guidelines for the creation and development of national information infrastructures and their links with the different sectors of national development plans. (9)

1.2 The General Information Programme of Unesco

The final reports of both the UNISIST and NATIS Intergovernmental Conferences contain policy objectives and methods to be followed for the achievement of these objectives. The objectives of UNISIST are contained in 22 recommendations which are grouped under the following headings:

- 1) Tools of systems interconnection (which calls for the standardisation of all phases of information handling so as to evolve a world science information system);
- 2) Effectiveness of information services (concerned with identifying and developing the most effective ways for the transfer of scientific and technical information through libraries, documentation centres, indexing and

(8) For the final report containing the proceedings of the Conference, the text of the recommendations and the objectives, see UNESCO. Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris 23-27 September 1971. Final Report. Paris, Unesco 1975.

(9) UNESCO. National Information Systems (NATIS); objectives for national and international action. Paris, Unesco, 1975, 3.

abstracting centres, information analysis centres etc.);

- 3) Responsibilities of professional groups (this recommendation seeks to strengthen, through a co-ordinated education and training programme, the capabilities of the scientists, editors, documentalists, librarians, and information scientists who constitute the manpower resource for the UNISIST programme);
- 4) Institutional environment (concerned with the development of information policies and guidelines for the establishment of national centres, systems and networks. The recommendations in this group are addressed to governments in their capacities as formulators of policies and as those capable of implementing the recommendations);
- 5) International assistance to developing countries (concerned with special activities identified for developing countries to help them attain the "threshold criteria" without which they cannot expect to benefit from their participation in the UNISIST programme. Elements of the "criteria" include the establishment of reasonably adequate library services, nationally funded research and development programmes, high educational institutions in science and technology and a pool of scientific manpower);
- 6) Organisation of UNISIST (this recommendation placed the UNISIST programme under the Science Division of Unesco, supervised by a Steering Committee of 18 Member States, with an advisory committee made up of a small group of scientists, engineers, and information scientists advising the Director General of Unesco). (10)

The UNISIST programme also encourages the establishment of national focal points and national committees by participating members. The national focal points, which should be governmental or government controlled agencies, will be concerned with guiding, stimulating,

(10) Objectives 2 and 5 were later merged into one.

co-ordinating and developing the national information resources and services while the national committees will essentially deliberate on policy matters, and advise the national focal points and all co-operating organisations on all aspects of participation in the UNISIST programme.

The 16 recommendations which constitute the policy objectives of the NATIS programme are grouped under two main categories: i) objectives for national action, and ii) objectives for international action. The objectives for national action emphasise the importance of concerted action at the national level to maximise the availability of relevant information for all sectors of the community. Information is considered an essential part of a nation's resources to which the individual's access, be it for social, cultural, economic or even recreational considerations, must be assured as a matter of a basic human right. Such a thesis postulates the existence of a national information infrastructure capable of providing at least a minimum of basic library, documentation and archives services - a condition which is difficult, if not impossible, to attain without the planned development of the elements of the infrastructure which consist of: i) the users who are the raison d'être of the infrastructure; ii) physical information resources: libraries, documentation centres, archives etc., and iii) qualified manpower to run the infrastructure.

The planned development of the infrastructure requires the formulation of a national information policy and plan which should be incorporated fully into the national development plan. The information policy and plan, which will of necessity show national variations depending on the individual levels of national infrastructural

development and requirements, should be based on the results of surveys and analyses of existing physical, technical and human resources. In order to achieve a national information system, to ensure the maximum use of available resources, and to avoid unnecessary duplication, the NATIS objectives for national action recommend the formation of a central body (or bodies) to co-ordinate the functions of all documentation, library and archives services. Recommended also as of importance are: the promotion of user awareness through the institution of user instruction programmes; the availability of adequate financial support to ensure the effective implementation of the plan; the quantitative and qualitative adequacy of manpower to carry out the programme; and the provision of legislative action in support of the planning and implementation of the national information system.

The objectives for international action make provision for financial and technical assistance, from both national and international sources, to Member States especially the developing countries who will require such assistance in the planning and establishment of their NATIS programme. Priority will be given in this respect to the elaboration of methodologies as basic tools to guide Member States in all phases in the planning and development of NATIS; the application of information technology to documentation, library and archives services; and the education and training of information manpower. The promotion of the NATIS objective for Universal Bibliographic Control (UBC), an important instrument for the achievement of efficient control and exchange of information, is an objective for international action, as well as scheduled periodic

progress reviews of the NATIS and all related programmes.

The common concern of both the UNISIST and NATIS schemes for the organisation and dissemination of information makes some similarities in the programme objectives an unavoidable occurrence. However, there are also substantial differences which stem essentially from the different conceptual origins of the two programmes. From the historical account above, the origin of UNISIST is traceable to the wish of scientists, as originators and users of scientific information, to have a better way for its organisation and dissemination, while NATIS owes its origin to librarians interested in the role of library and documentation services in educational, social and economic development. Thus NATIS is concerned with total national information infrastructures whereas UNISIST shows its predominant concern for mechanisms for the transfer of scientific and technical information: abstracting and indexing services, data banks, information analysis centres, computer-operated information processing systems, etc. This basic difference in interests and methods of approach reflects on the operational levels of the two systems with UNISIST starting on a much higher level than NATIS which starts at the rudimentary level of establishing a sound infrastructural base on which any efficient information transfer system must necessarily depend. For most developing countries, the latter approach is of more immediate interest and relevance than the former. (11)

(11) For a more detailed comparative study of the UNISIST and NATIS objectives see BOADI, B.Y. The provision of scientific and technical information in Ghana with particular reference to the requirements of UNISIST. A Master's dissertation submitted.... for the award of Master of Library Studies of the Loughborough University of Technology, May 1977, 42-53. (Unpublished).

These differences notwithstanding, the two programmes can be seen as complementary since the planned development of the total information resources of a country would be incomplete without considering the relevant objectives of both programmes. So NATIS, starting at a lower operational level, would be a suitable, indeed an indispensable, base on which UNISIST would grow. The joint development of the two programmes, under a single administrative body, would seem the best means of ensuring maximum effectiveness of service and also of obviating any undesirable duplication and waste. Additionally, competition between virtually identical programmes, established under two different sections of Unesco, (12)

developed into a political struggle and both of them suffered from the expenditure of time on this struggle both by the Unesco secretariats and by representatives of member states. (13)

As a result of Resolution 7.21 adopted in 1974 by the 18th General Conference of Unesco, a group of experts was appointed by the Director General to study the wider implications of these issues. The group met in Paris from 16 - 20 June 1975 (14) and recommended "one general information policy and programme for all areas of Unesco's competence" and emphasised that "overall co-ordination is necessary to avoid duplication and to ensure complementarity between existing information programmes." The group recommended further that the general information programme should have one steering committee and a single advisory body.

(12) The UNISIST programme was put under the Science Sector of Unesco while the NATIS programme was put under the Department of Documentation, Libraries and Archives, which formed part of the Communications Sector, and which had traditionally been the main organ for the execution of Unesco's information programmes.

(13) GRAY J. Unesco in the information field. Libr.Ass.Rec. 79(10). Oct 1977, 573.

(14) IFLA. Memorandum from the Secretary General to members of the Executive Board on the report (19 C/42) of the Director General of Unesco on the overall information programme (dated 30 September 1976). Memorandum dated 11 October 1976.

The 19th General Conference held in Nairobi (Kenya) in November 1976 decided (by Resolution 5.1) to adopt the recommendations for the establishment of a single General Information Programme for Unesco and also the idea of a single advisory body. The General Information Programme's main two-fold objectives will be the achievement of UNISIST goals for a world scientific information system and the creation or improvement of national information systems (NATIS) encompassing documentation, library and archives services without which the UNISIST objectives may be unattainable. The implementation of the integrated programme will involve the promotion of the following aims:

- i) formulation of national and regional policies and plans;
- ii) establishment and application of methods, norms and standards;
- iii) contribution to the development of information infrastructures and to the application of modern techniques of data collection, processing, transfer and reproduction; and
- iv) training and education of information specialists and information users, with particular attention to the needs of the developing countries, especially the problems of transfer of information and data from the technologically advanced countries to the developing nations.⁽¹⁵⁾

The new Division of the General Information Programme was created by the Director General on 24th February 1977 in accordance with Resolution 5.1. It combines the former Division of Scientific and Technological Documentation and Information with the former Division of Documentation, Libraries and Archives and comes under the authority of the Director of the Bureau of Studies and Programming.

The 19th General Conference also approved the establishment of a steering mechanism - similar to, but superseding, the UNISIST Steering Committee

(15) NATIS News. One general information policy for Unesco. Unesco Bull. Libr., 31(2) Mar-Apr 1977, 62-63.

- for the new programme. Accordingly, a 30-member Intergovernmental Council has been set up to guide the planning and implementation of the General Information Programme. The Director General is also empowered to set up an advisory committee of experts and specialists to advise him on matters relating to the Programme.

The integration of the UNISIST and NATIS schemes into the General Information Programme reinforces Unesco's activities in the fields of information, documentation and archives and heightens the opportunities for the concerted national and international development and use of the global information output. It also brings closer to reality, the long quest for a "world information system".

1.3 The Nature of Information

It is appropriate at this stage to consider the nature of information and some of the factors which have shaped the new thinking on its qualities and the new approach to its development and use. The appreciation of the peculiar nature of information begins with an attempt at its definition of which there are as many interpretations as there are divergent opinions on its meaning. Wersig and Neveling ⁽¹⁶⁾, for instance, isolate six different semantic approaches to the use and understanding of "information". According to Gorn ⁽¹⁷⁾ "information", with matter and energy, belongs to "the trilogy of basic phenomena which constitutes the foundation of all human activities."

(16) WERSIG, G. and NEVELING, U. The phenomena of interest to information science. Inf.Scientist, 9(4) Dec 1975, 127-140.

(17) ANDERLA, G. Information in 1985; a forecasting study of information needs and resources. Paris, OECD, 1973, 91.

Parker (18) subscribes to this theme and declares in addition that "information, which is the pattern of organisation of matter and energy, has a potentially infinite supply", and that society's expenditure on information-producing activities like research and development, can be seen as investment in the production of knowledge on which the material progress of the society depends. This exposition is identical with the concept of information as a national resource the burgeoning world wide recognition and acceptance of which has already been noted. Drucker (19), on the other hand, sees information as being "purely formal [with] no meaning in and of itself. Information is impersonal whereas communication is interpersonal". Kaplan (20) gives this view an added dimension by saying that "Words do not mean anything, people mean things by words. Information means nothing, but people are informed and then take informed action or informed decisions".

These, and other, different interpretations of the purpose and meaning of information underscore the problems, and the often conflicting and differing opinions, associated with the conceptualisation of intangibles. For, information belongs to this category being "abstract and inert, held within forms which are inert without

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- (18) PARKER, E.B. Information and society; a report to the National Commission on Libraries and Information Science. Washington, D.C., National Commission on Libraries and Information Science, 1973, 64pp. (ED 073 776).
 - (19) DRUCKER, P.F. Technology, management and society. New York, Harper and Row, 1970, 12.
 - (20) KAPLAN, A. The age of the symbol - a philosophy of library education. In The intellectual foundations of library education, edited by D.R.Swanson, Chicago, Ill., University of Chicago Press, 1956, 8.

the intervention of human agency." (21) Even though information may be an abstraction, its contribution to societal survival and progress is real and vital. Individual members of the society need information of one kind or another for their daily activities, their own decision-making processes and for social communication, interaction and mobility. At the institutional level, managers and policy makers, planners, scientists and technicians, the different arms of the governmental machinery, etc. need information at all stages in the planning and execution of their programmes. Access to the right information at the right time is therefore a pre-requisite for functional efficiency and for the evolution of an informed society. But, as has been noted, information per se is passive and needs interaction or a communicator/recipient medium to make it meaningful. This being the nature of information it becomes apparent that an information system should consider user/service interaction as an essential aspect of its operations. It also implies that the system should not only concern itself with the house-keeping chores of acquiring, engineering, arranging and even disseminating the containers of the information (i.e. the book, periodical, etc.) but it should also see to the communication of the information contained in the containers in forms dictated by the needs of the users. As the nexus between these sources of information and the users, libraries and documentation centres have this important role to play.

(21) HAVARD-WILLIAMS, P. The folly of neglecting the national resource, information. Opening Keynote Address to the IFLA Worldwide Seminar, Seoul, June 1976. Libr.Ass.Rec., 78 (9) Sep 1976, 409.

1.3.1 Information - the National Resource

The traditionally-held notion that information is only a supportive element in national, educational, economic and environmental programmes is rapidly giving way to an awareness that information in itself is a resource which is as vital to a nation as its wealth in mineral deposits, energy, human resources, etc., and forms a crucial factor in socio-economic development. This change results from the realisation that expenditures on information may constitute the most promising investment in improved economic productivity. The huge investments in information by the industrialised countries illustrate this fact. It is estimated (22) for instance that the total United States expenditure on information increased by over 400% from 23 billion dollars per annum in 1950 to about 115 billion dollars per annum in 1970 - a staggering increase in just a matter of two decades - and that in about a decade more, as much as 50% of the United States labour force would be engaged in information processing occupations. (23) The Computer Usage Development Institute of Japan in The plan for an information society - a national goal toward year 2,000 (24), issued in 1972, proposed a 1,000 billion yen (2.3 billion dollars) five-year medium term plan towards a centrally planned development of an "information society".

(22) PARKER, E.B. op cit., 11.

(23) SWEENEY, G.P. The knowledge economy; its implications for national science and information policies. Inf.Scientist, 11 (3) Sep 1977, 90.

(24) JAPAN. Computer Usage Development Institute. The plan for information society - a national goal toward year 2,000. Tokyo, Computer Usage Development Institute, 1972.

The total expenditure on the medium term information programme and a longer term programme for fourteen years, is estimated at 20,000 billion yen (about 65 billion dollars).

These investments in information, or what Machlup (25) calls the "knowledge industry", are made with the conviction that all activities connected with the production, distribution and consumption of information in all its forms cohere to generate a suitable environment for economic development and national well-being. Thus the allocation of resources to formal and informal education, basic research and applied technical research and development constitutes an investment in the "knowledge industry" and an assurance of the "production" of knowledge which may contribute to growth of productivity and the enhancement of economic growth. The increasing dependence on information as a resource has caused McHale to predict that within the next ten to twenty years society will move from industrially based forms to post-industrial forms which will be "as different from the industrial society which we have known for the past century as that society differed from all the agrarian pre-industrial societies which preceded it." (26)

The potentialities of information as a resource are enormous. But it should be stressed that information is a resource if only it is recognised as such as is consciously developed and utilised like any other resource. The conscious development of information is

(25) MACHLUP, F.P. The production and distribution of knowledge in the United States. Princetown, N.J., Princetown University Press, 1962, 416pp.

(26) McHALE, J. The changing information environment: a selective topography. In Information technology; some critical implications for decision makers. New York, Conference Board, 1972, 196.

underlined by both the NATIS and UNISIST elements of the new General Information Programme (PGI) of Unesco. NATIS Objective 1 (A national information policy) calls for the formulation of a national information policy and plan reflecting the needs of all sectors of the community and the incorporation of the elements of the plan into the national development plans. The essence of this objective is that information should be considered as a primary resource whose development should command national regard identical to the priority accorded the tangible, revenue-earning resources. If it is considered that the premium that is placed on our natural resources, for instance, depends on what we conceive them to be, and that this conception is entirely derived from what information there is on them as regards their evaluation and utilisation, the value of information and consequently the need for its consistent development with the other resources would not be too difficult to appreciate. Similarly, UNISIST Recommendations 15-19 advocate the formulation of plans (local, national, regional, or international) for the co-operative development and use of scientific information which "constitutes a national resource to be considered in the formulation of national science policies in the same sense as scientific manpower and material resources." (27) Looking at the spectacular post-war economic, scientific and technological achievements of the industrialised countries (notably Japan, the United States of America and the USSR) vis-a-vis their huge investments in the "information industry", it would be naive to entirely ignore McHale's prediction or to under-estimate the intrinsic value of

(27) UNESCO. UNISIST; synopsis of the feasibility study on a World Science Information System, op.cit., 60.

information as a powerful resource fundamental to scientific and technological progress and also as an important medium for social interaction.

1.3.2 The Information Explosion

Inherent in information as a resource is its distinguishing, non-depletive nature. For, unlike gold, diamonds, oil, etc. which are exhaustible with exploitation, information is not. Indeed the reverse is true of information: the more the use of it the more of it that is generated. It has been observed of scientific information, for instance, that "new science and technology rests firmly on the base of information generated in the past; thus the effectiveness of future work depends on the efficiency of present information transfer." (28) The "future work" invariably generates more information to form the base for yet more future work... ad infinitum. Thus there is a continuous addition to the accumulated stock of information. The fast rate of the accumulation, aided by a flurry of scientific activities particularly over the past two to three decades, has caused what has become popularly known as the "information explosion".

The growth rate of scientific information is said to be exponential, the volume of information doubling itself every ten or fifteen years. Although it was estimated that it would reach a saturation point and then decelerate (de Solla Price ⁽²⁹⁾), it has

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- (28) UNITED STATES. National Academy of Sciences. Committee on Scientific and Technical Communication. Scientific and technical communication; a pressing national problem and recommendations for its solution. Washington, D.C., National Academy of Sciences, 1969, 1.
- (29) In his classic study Little science, big science (New York, Columbia University Press, 1963, 31), D.J. de Solla Price states: Thus, although we recognise from our discussion so far that saturation is ultimately inevitable, it is far too approximate to indicate when and in what circumstances saturation will begin. We now maintain that it may already have arrived.

been shown that not only is it escalating but that it can be expected to grow at an annual rate of 12.5% (Anderla (30)). (31) Scientific journals, scientific articles and scientists are also shown to be increasing exponentially. Unesco (32) estimates that there are between 50,000 and 70,000 scientific and technical periodicals annually being published, and that at the rate of increase the volume of literature may more than double within the next ten to fifteen years. The number of scientists, engineers, technicians, etc., has grown from a mere 10,000 at the beginning of the 19th century to one million in 1950 and the current number of people engaged in creating and disseminating information is put at between 10 and 12 million. (33) The estimates of Arntz (34) show the same growth pattern; the number of scientists, engineers, etc., increases by about 7% annually while their supply of information increases by 11%; by about 1990 the number of scientists, etc., producing information would be between 30 and 35 million (having taken into account any foreseeable development in the developing countries), and the total annual number of documents produced would be between 12 and 14 million, showing at least a six-fold increase over the current figure of about 2 million. (35)

(30) ANDERLA, G. Information in 1985; a forecasting study of information needs and resources. Paris, OECD, 1973, 120.

(31) An identical annual growth rate of 12.5% was arrived at by Professor Helmut Arntz in a paper presented at the Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris, 1974. See Arntz, H. Planning of national overall documentation, library and archives infrastructures. Paris, Unesco, 1974, 10.(COM/74/NATIS/Ref.2)

(32) UNESCO. UNISIST; study report on the feasibility of a World Science Information System. op cit., 11.

(33) ANDERLA, G. op cit., 25

(34) ARNTZ, H. Planning of national overall documentation, library and archives infrastructures. Paris, Unesco, 1974, 10-11. (COM/74/NATIS/Ref.2).

(35) GRAY, J. and PERRY, B. Scientific Information. London, Oxford University Press, 1975, 21.

These are some of the contributory factors to the information explosion problem and even if current economic conditions threaten to invalidate the accuracy and immediate essence of these forecasts, the delimiting effect on the projected growths can only be temporary and cannot be expected to exert any drastic change in the longer term growth rate. Anderla ⁽³⁶⁾ thus warns against conservatism and over-dependence on temporary economic recessions in the formulation of information growth forecasts.

Other conditions contribute to the problem as well. The primary purpose of research and development is the production of new information. Expenditure on research and development therefore constitutes an investment in the production of information. The correlation between research expenditure and the production of information was studied by Euratom, who, using atomic energy literature, found out that for each one million dollars spent on research and development an average of 18 documents were produced. Using a different parameter, Koch of the American Institute of Physics arrived at an identical conclusion; his investigation into the cost of each government sponsored paper showed an expenditure rate of about \$50,800 per document which was comparable with Euratom's average of \$55,556. ⁽³⁷⁾ Thus increased expenditure on research and development could lead to increased production of documents. Possible inflationary considerations aside, the rapid growth of expenditure on research and development (or investments in the "information industry") as has already been noted especially in the industrialised countries

(36) ANDERLA, G. op cit., 18-19, 36.

(37) COBLANS, H. An inflation of paper; a note on the growth of the literature. Her.Libr. Sci., 10(4), Oct. 1971, 352-353.

could be a factor in the information crisis.

Then there is the strong urge that scientists have to publish as a result of the premium that has been placed on a high publication rate as an index to academic or professional competence and success, as a means of gaining the recognition of peers, and, as happens in most institutions, as an important determinant in securing promotion to higher grades. Publications have therefore become synonymous with survival, quantity has gained pre-eminence over quality, and the "publish or perish syndrome" seems destined to perpetuation. Commenting on the "deluge of information", Bernal (38) had this to say:

The very bulk of scientific publications is itself delusive. It is of unequal value; a large proportion of it, possibly as much as three-quarters, does not deserve to be published at all, and is only published for economic considerations which have nothing to do with the real interests of science. The position of every scientific worker has been made to depend far too much on the bulk rather than the quality of his scientific publications. Publication is often premature and dictated by the need of establishing priorities....

Additional to these factors is the fragmentation of science which is the result of increased specialisation. The mathematician specialises in topology; there is the nuclear physicist as well as the astro-physicist, and not only do we have a biologist, a chemist or an engineer but we also have a biochemical engineer. This tendency towards specialisation still continues and such new cross-disciplinary fields of research as bio-deterioration, ergonomics and environmental pollution come under this category. The information requirements of the scientists in these fields may differ from those available in their "parent" disciplines (to which

(38) BERNAL, J.D. The social function of science. London, Routledge, 1938, 118.

they must needs refer anyhow) and to meet their specialised interests new information media must be created.

Furthermore, whereas two or three decades ago English, German and French were the main languages in which scientific articles were published, the list has expanded to include Russian, Japanese, Spanish and other hitherto lesser-used languages for the communication of scientific information. Their growing importance has added to the proliferation of scientific and technical information.

The information explosion issue is, however, not a generally accepted phenomenon and opinions differ on whether there is an information explosion at all, or to what extent it constitutes a problem. While not denying the existence of a problem, Licklider ⁽³⁹⁾, for example, does not think there is an "explosion". He writes: "Only in high hyperbole does a thing explode that takes 10 or 15 years to double its volume".

He sees the problem as being more analogous to a flood, with the water rising at a progressively increasing rate, than an explosion, which connotes a sudden and unexpected outburst. He however concedes that "Although the rise has been gradual, the overflow is sudden and dramatic." Voos, ⁽⁴⁰⁾ on the other hand, ascribes the main cause to dual publication: the multiple indexing of the same material in different indexes and the republication of the same material in different forms and in different media, and therefore sees the problem as one of paper, not information, explosion. Using "improved procedures" based on an estimation of literary

(39) LICKLIDER, J.G.R. A crux in scientific and technical communication. Amer.Psychol., 21, Nov 1966, 1044-1051.

(40) VOOS, H. The information explosion; or redundancy reduces the charge! Coll. Res.Lib., 32(1) Jan 1971, 7-14.

productivity per person, Mantell ⁽⁴¹⁾ rejects the theory of the exponential growth of technical literature, and estimates the growth of scientists and engineers as linear, not exponential. He concludes: "...analysis of actual productivity applied to these estimates fails to indicate anything like the volume of information other writers have predicted would occur."

The word "explosion" as applied to information (and population, too?) with its meaning in reaction kinetics may be a misnomer; it may not convey an accurate semantic interpretation of the situation ("flood" does not either) but that should not detract attention from a real and pressing situation, or indeed becloud it. Similarly, the predicted saturation point in the exponential growth of scientific information may have been reached and growth may actually have started to decelerate; ⁽⁴²⁾ the growth rate may not be exponential at all but linear, etc. but irrespective of the form of growth that prevails, the crucial fact remains that there is a continuous addition to the total stock of information which results in an ever increasing total, and that is the crux of the problem. Looked at in this rather simple way, the serious nature of the information problem becomes apparent and so does the need to contain it.

(41) MANTELL, L.H. On laws of special abilities and the production of scientific literature. Amer.Doc., 17, Jan 1966, 8-16.

(42) Agreeing with D.J.de Solla Price that exponential growth must slacken at a point, Professor W.Ashworth believes that the point of inflexion has been reached. He cites the slump in the growth of American librarianship, which started from about 1965, against the "flourishing" period twenty years before then; the existence of a parallel situation in the United Kingdom, the limiting effect of current inflationary tendencies and shortages on publications and also the current downward trend in student numbers, particularly in the sciences and engineering, contrary to predicted rise, as some of the indicators. See Ashworth, W. The information explosion. Libr.Ass.Rec., 76(4) Apr 1974, 63-68, 71.

Suggested remedy has included the limitation of the languages used for the publication of scientific articles, a reduction in the number of publications, more stringent refereeing processes to ensure that only essential new results are published, etc. all of which are measures to stem the problem at source or what may be called pre-publication control. The virtual ineffectiveness of these measures can be seen in relation to the intractable nature of the factors contributing to the problem. Knowledge, as has been observed, builds on knowledge, and as mankind inherently continues to seek new frontiers in knowledge the total stock of information expands. This is a process that cannot be halted since the creation of new knowledge is a sine qua non condition for progress and mankind will characteristically continue his quest for progress, if only to save him from lethargy and decadence. A consequence of progress and the growth of knowledge is specialisation and its resulting fragmentation which can also hardly be controlled but which could effectively add to the proliferation of the literature.

Like a barnacle, institutional dependence on publications for assessment and recognition is so deeply entrenched that it would need a radical change in the current system of assessment to minimize the threat of the "publish or perish syndrome" and the spate of publications, although such change seems almost impossible. The political implications of the suggested reduction of the "language of science" to a set number make it an unworkable proposition, and neither would the personal interest of authors, motivated by the wish for self-assertion and the vested interest of the publishing industry help to assuage the situation. Since pre-publication control seems an ineffective measure, the obvious alternative is post-publication control.

Post-publication control has taken the form of abstracting and indexing journals (or the secondary services) and review publications (or the tertiary services) to draw the attention of readers to the relevant publications and advances in their various disciplines but there is evidence that these, in themselves, are being overcome by the "explosion". These services have been increasing both in number and in the items cited. There is an estimated 1,800 abstracting and indexing journals in science and technology alone, and Keenan ⁽⁴³⁾, working on a ten year period, (1957-1967) shows in a statistical survey that the Biological Abstracts had a percentage increase of 212% in the cited items, the Chemical Abstracts increased by 138% while the Engineering Index had a 115% increase, etc. Or, in a different mode of expressing the increase, while it took the Chemical Abstracts about 32 years to announce the first one million abstracts, the second million was reached in 18 years, the third in 8 years, the fourth in 4 years 8 months and the fifth million in 3 years and 4 months!

Other post-publication control methods like SDI (Selective Dissemination of Information) services, specialised subject bulletins, automated processes (e.g. on-line and batch processing systems) specialised information centres, etc. have been adopted in combating the problem. Probably what has not been sufficiently appreciated as an equally important control measure is the judicious exploitation of the available literature. This process does not only demand the proper organisation of the literature, which cannot be achieved without

(43) KEENAN, S. Abstracting and indexing services in science and technology. In Annual Review of Information Science and Technology, vol.9, edited by Carlos A. Cuadra. Chicago, Encyclopaedia Britannica, 1974, 279.

countries is not being disputed but whether, basing our assessment on the above criteria, the "developing" tag must be the exclusive preserve of the "Third World" countries is a matter for debate. Similarly, library and information services in some of the developing countries may compare favourably with (and in some case may even show a higher level of development than) those in some of the developed countries. A corollary to this is that although developing countries may exhibit common traits in many respects, generalisations about these countries have limited validity and any meaningful study must therefore be based on the individual circumstances of the countries concerned. In the context of this work, then, "developing countries" will refer to the "emergent" nations of Africa, Asia, Latin America and the Caribbean.

The observation above does not seek, in any way, to underrate the gravity of the problems that most developing countries face in the provision of library and information services; it is meant to stress the importance of the recognition, in their true perspectives, of these problems which range from the lack of adequate financial support, books and periodicals, professionally trained staff, technical manpower, national policies for providing the essential minimum of infrastructural requirements, to completely non-existent or embryonic infrastructures. Both the UNISIST and NATIS schemes of the General Information Programme take due cognisance of these problems and make special provision in their programme objectives to assist the developing countries in achieving a certain level of infrastructural development or a "threshold criteria" before they can

beneficially participate in the co-operative programmes for the development and use of the information resources.

The problem with most developing countries is not so much the identification of their information problems as the implementation of the recommended solutions to the problems. Problems may be identified with or without the intervention of "expert" assistance and solutions proffered but they serve little to advance the course of the development of library and information services if, as it often happens, they are not implemented. Harsh economic conditions may impose genuine constraints on the implementation of some of the solutions but a factor of no mean significance is the low priority ratings that such programmes are often accorded by the authorities in whose hands their implementation rests which, in itself is an indication of the lack of appreciation of the dynamic role of information in the society. Lester Asheim's words are worth repeating here: (46)

....it is the ministers of education, the chancellors of universities, and the directors of the budget, who will determine in what direction libraries will go and how much support they will receive. Until they understand the function of the library as an educational institution, until they recognise that organised information is a national resource, until they accept librarianship as a profession essential to the nation's welfare, most of our effort will be wasted.

So the UNISIST and NATIS recommendations will only be pipe-dreams to the developing countries if there was no conscious national effort to implement them. It is true that some of the recommendations are beyond the immediate capabilities of most of the developing countries. The UNISIST Recommendations for the

(46) ASHEIM, L. Librarianship in developing countries. Urbana, Ill., University of Chicago Press, 1966, 94.

establishment of information analysis centres, numerical data banks, telecommunication networks etc. for instance, cannot be implemented on non-existent infrastructures. But it is equally true that the fundamental steps towards the establishment of the basic infrastructures as contained in the NATIS Objectives can be implemented by the developing countries with minimum difficulty. That is the essence of the merger of the UNISIST and NATIS programmes into the General Information Programme: that with a common approach to the information problem a solid foundation would be laid on which a strong national information system would thrive.

Although the importance of information to socio-economic development has already been stressed, it should not seem superfluous to emphasise the need for the adoption of a more vigorous attitude by the developing countries toward the development of their library and information services to which their future prosperity is inextricably bound. The great disparity in economic, social, educational, scientific and technological development between them and the developed countries has been ascribed to the disparity in the quality, quantity and the degree of use of the available stock of information. The developing countries can only hope to bridge the gap between them and the developed countries through the purposeful development and use of information, a "world resource", in which they should show as much concern and interest as the developed countries.

The degree to which they succeed in achieving this objective may largely depend on their committed participation and involvement in national and international programmes for the joint development

and sharing of the information resources. With this supposition the opportunities for the participation of developing countries in networks for the development and use of library and information resources will now be examined, paying particular attention to the English-speaking West African countries.

CHAPTER 2

NETWORKS, NETWORKING AND RESOURCE SHARING; SOME GENERAL CONSIDERATIONS

2.1 Definition of Library and Information Networks

The call to the developing countries to accept the new "information order" is a call for the adoption and implementation of carefully articulated plans for the total mobilisation and efficient national and international use of their library and information resources. Recommending the establishment of networks as one of the possible steps towards the attainment of this objective, the UNISIST Feasibility Study ⁽¹⁾ envisages:

comprehensive systems (local, national, regional or international) in which every scientific library or centre may ultimately be used as an access point, or mode in a switching network.

The concept of library and information networks ⁽²⁾ long precedes the exhortation of their establishment by the UNISIST Feasibility Study, librarians having participated in one aspect of the network activity or the other for a very long time.

(1) UNESCO, UNISIST; synopsis of the feasibility study on a World Science Information System. Paris, Unesco, 1971, 61.

(2) It is noted that some writers distinguish between "library networks" and "information networks" on the basis that the former are a subset of the latter used to transmit a particular kind of information for or by the librarian, or that "information networks" have a base in communications technology while "library networks" have not. For the present purpose the distinction will be disregarded since the factors under consideration are largely basic to both systems.

Becker and Olsen's ⁽³⁾ interpretation of an information network as a venture in which:

... more than two participants are engaged in a common pattern of information exchange through communications for some functional purpose

qualifies such long-established undertakings as inter-library loans, union catalogues and lists, co-operative acquisition programmes, etc. to be considered as varying forms of network participation for resource sharing. In this sense, therefore, library networks are not entirely new phenomena. In the sense, however, that the development of networks should be seen as an important element in the national and international aspirations towards the co-ordinated development and utilisation of the world's information resources, library and information networks are of fairly recent origin, and recent technological developments have made it possible for the networks to be organised on much better bases and with new expertise.

These two factors (i.e. the relative newness of the concept and the recent technological development, in particular the advent of the computer and advanced electronic communication systems) have contrived to give a multi-faceted perception to the nature and intent of library and information networks. The result is a series of definitions based on different parameters of perception.

Becker and Olsen, ⁽⁴⁾ for instance note three different ways in which information networks are generally identified:

(3) BECKER, J. and OLSEN, W.C. Information networks. In Annual Review of Information Science and Technology, vol. 3, edited by Carlos A. Cuadra. Chicago, Encyclopaedia Britannica, 1968 289-290.

(4) Ibid, 290-291.

- i) by class of equipment, e.g. telephone network, teletype network, computer network, etc.
- ii) by form of data, e.g. digital network, audio network, video network, film network, etc., and
- iii) by function, e.g. financial networks, library networks, educational networks, agricultural information networks, etc.

The authors state further that:

information networks include some combination of the above elements, which when coupled with a communications system, provide the desired pattern of information exchange.

Overhage (5) shows the following five different contexts in which the word "networks" is used:

- i) science literature, e.g. citation-linked papers in which the citation of papers by authors provides the linkages in the network,
- ii) organisation structures, e.g. the Educational Resource Information Center (ERIC) clearing-houses which link universities, professional organisations, school systems and boards of education into a network and make available to them all relevant research results,
- iii) co-operative arrangements, e.g. inter-library loans, a traditional arrangement among libraries,
- iv) communications systems, e.g. press wire services in which a set of teletype or telephone channels are used without the intervention of computers, and
- v) computer-communication systems, e.g. the NASA Recon system of the National Aeronautical and Space Administration where high-speed computers are used to process, store, and retrieve digitally encoded information.

(5) OVERHAGE, C.F.J. Information networks. In Annual Review of Information Science and Technology, vol. 4, edited by Carlos A. Cuadra. Chicago, Encyclopaedia Britannica, 1969, 340-343.

Overhage sees the combination of computers, data circuits, and user terminals as constituting an information network in the modern sense and specifies, as an essential feature of such a network:

the utilisation of a set of communications channels through which the information is transferred by electrical signals. (6)

Nance, et al. (7) provide a mathematical definition of an information network in terms of:

- i) users,
- ii) information resources,
- iii) information centres, and
- iv) the total information transfer structure linking the above three components, and "concentrate on the message transfer structure, as distinguished from the document structure to identify some basic information networks."

And Gray (8) defines an information network as essentially a means of linking a variety of sources to a variety of users and identifies networks by the type of service they channel, the four main types of which he categorises as:

- i) supply of literature itself,
- ii) supply of information about literature,
- iii) supply of information in the literature, and
- iv) contact with sources of information.

(6) Ibid, 339.

(7) NANCE, R.E., KORFHAGE, R., and BHAT, U.N. Information networks: definitions and message transfer models. J. Am. Soc. Inf. Sci., 23(4) Jul-Aug 1972, 246-247.

(8) GRAY, J.C. Research and the planning of library and information networks. In EURIM II: a European Conference on the Application of Research in Information Services and Libraries, Amsterdam, 23-25 March, 1976. London, Aslib, 1977, 27.

With these, as well as other variations on the theme, the term "library and information networks" seems to evoke different connotations to different people, such connotations being fashioned around the assumed functions of the network (i.e. the services it provides, the people it serves, etc.) or on its structure for information transfer. Thus, to some network enthusiasts, for instance, an information network can be designated as such only if the information is transferred by electronic means. The prevailing lack of consensus on what networks are and what they should do arises from the fact that networks, which are essentially ventures in resource sharing, can be organised around virtually every conceivable aspect of library and information work and may appear in different organisational configurations. Out of the plethora of definitions, Richardson's, which seems the most suitable, will be adopted. He defines a network as:

an association of libraries [and information centres] to achieve specific goals/objectives through a formal arrangement directed to guaranteeing the achievement of the network goals/objectives without at the same time diminishing the independence/autonomy of the component units and their pursuit of other goals/objectives. (9)

Networks may be organised in geographical groups, that is, they may operate within defined geographical areas and may include all types of libraries in the area be they public, school, academic, special, etc.; they may be organised in speciality groups where the bond is a common subject interest; they may be built on existing facilities or may be established as completely new schemes. But whatever system that may be adopted, it goes without saying that it

(9) RICHARDSON, W.D. Networks: some general considerations on their characteristics and structure. LASIE, 6(4) Jan/Feb 1976, 9.

needs a considerable amount of planning and organisation to establish an efficiently-working network. It should also go without saying that an absolutely vital part of the planning and organisation should be a clear identification of the objectives of the network, the services to be provided, the resources to be shared, the user population for whom the services are intended, and the co-operative means by which the objectives would be achieved.

2.2 Impetus for Networks

One of the reasons for the new approach to networks, as has been noted, is the realisation of the need for co-ordination in the development and use of information resources. But there are other equally important influencing factors, not totally unconnected with the above reason, for this upsurge of interest in networks.

First, there is the accelerated growth in the volume of information produced (or the "information explosion") which continues to make it impossible for any single library to be self-sufficient in meeting the requirements of its readers. From the growth of knowledge has resulted an increasing diversity of demands on library and information services which even the big and most affluent libraries find impossible to satisfy. The following statement by the Harvard Librarian illustrates the point:

Research interests have become so broad and the quality of printed material useful to research has increased so greatly that the Harvard Library today, with its 7,000,000 volumes, is more frequently reminded of its inadequacies than it was 60 years ago when it had only 1,000,000. It is less nearly adequate now than it was then to meet all the demands of Harvard professors and students. (10)

(10) As quoted in de GENNARO, R. Austerity, technology, and resource sharing. Libr.J., 100(10) May 1975, 919.

More than a decade later, and an additional 2,000,000 volumes, the Harvard Library continues to be reminded of its inadequacies.

Second, the ever-increasing tide of inflation and the consequent escalation in the prices of library materials continue to reduce the purchasing capacity of libraries and information services, while, more often than not, tighter budgetary allocations add to the financial pressures. The need to operate cost-effective services becomes a glaring necessity.

Third, technological progress has made communications better and faster than they have ever been, and mechanisation has removed the tedium and slowness in manually-operated library chores making such important network activities as the up-dating of records, the production of bibliographical information, etc. faster and more efficient. These then are the factors which, in the main, have tended to foster co-operation among libraries and information services and an interest in networks as instruments for the judicious development and use of their resources.

2.3 Characteristics of Networks

The success of a library and information network will, however, depend on how far certain basic conditions or characteristics are satisfied. Becker and Olsen ⁽¹¹⁾ list the following as the characteristics of an ideal network:

(11) BECKER, J. and OLSEN, W.C. op.cit., 290-291.

- i) Formal organisation. Many units sharing a common information purpose recognise the value of group affiliation and enter into a compact.
- ii) Communications. The network includes circuits that can rapidly interconnect dispersed points.
- iii) Bidirectional operation. Information may move in either direction, and provision is made for each network participant to send as well as receive.
- iv) A directory and switching capability. A directory look-up system enables a participant to identify the unit most able to satisfy a particular request. A switching centre then routes messages to this unit over the optimum communications path.

Again there are differing opinions on what should constitute the basic requirements of a library and information network. The following two examples are cited in support of this assertion.

Swank ⁽¹²⁾ offers the following characteristics:

- i) Information resources - collections of documents or data in whatever medium; the data bases; the input.
- ii) Readers or users - usually remote from the main sources of information.
- iii) Schemes for the intellectual organisation of documents or data - as directories for use by readers or users.
- iv) Methods for the delivery of resources to readers or users - the output.
- v) Formal organisation - of co-operating or contracting formations, representing different data bases and/or groups of users.
- vi) Bidirectional communications networks - preferably through high-speed, long-distance electrical signal transmission with switching capabilities and computer hook-ups.

(12) SWANK, R.C. Interlibrary co-operation, interlibrary communications, and information networks - explanation and definition. In Proceedings of the Conference on Interlibrary Communications and Information Networks.... Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 19-20.

In a more comprehensive way Duggan ⁽¹³⁾ identifies the following as the "critical components" to orderly, planned development of a library and information network:

- i) Organisational structure that provides for fiscal and legal responsibility, planning and policy formulation. It must require commitment, operational agreement and common purpose.
- ii) Collaborative development of resources, including provision for co-operative acquisition of rare and research material and for strengthening local resources for recurrently used material. The development of multi-media resources is essential.
- iii) Identification of nodes that provide for designation of role specialisation as well as for geographic configuration.
- iv) Identification of primary patron groups and provision for assignment of responsibility for library service to all citizens within the network.
- v) Identification of levels of service that provide for basic needs of patron groups as well as special needs, and distribution of each service type among the nodes. There must be provision for "referral" as well as "relay" and for "document" as well as "information" transfer.
- vi) Establishment of a bi-directional communication system that provides "conversational mode" format and is designed to carry the desired message/document load at each level of operation.
- vii) Common standard message nodes that provide for understanding among the nodes on the network.
- viii) A central bibliographic record that provides for location of needed items within the network.
- ix) Switching capability that provides for interfacing with other networks and determines the optimum communication path within the network.
- x) Selective criteria of network function, i.e. guidelines of what is to be placed on the network.

(13) DUGGAN, M. Library network analysis and planning (LIB-NAT) J.Libr. Automation, 2/3, Sep 1969, 159-160.

- xi) Evaluation criteria and procedures to provide feedback from users and operators and means for network evaluations and modification to meet specified operational utility.
- xii) Training programs to provide instruction to users and operators of the system, including instruction in policy and procedure.

Although these characteristics have been differently expressed, what runs among them as a common theme is the apparent complexity of the set of relationships which must needs exist to ensure the success of the network: relationships that should not only provide an efficient machinery for the administration of the network but also for the joint development of the document resources, schemes for their intellectual organisation as well as their delivery, communication links between the nodes on the network, and the identification of the users and the services to meet their requirements. It is worth remarking that Becker and Olsen omit document resources and users from their characteristics of an "ideal" network. This omission, not peculiar to Becker and Olsen, illustrates the frequent lack of appreciation (or an insufficient recognition) of the fact that document resources and readers are indeed important components of a network. The emphasis is often placed on the use of modern technological devices in networks (as in fact Becker and Olsen do) much to the disadvantage of the other components. While the current, and the continuing, importance of modern technology to library and information work is acknowledged, and while throughout this work the use of automated and mechanised processes in networks will be strongly advocated, it would, however, be worth paying heed to Swank ⁽¹⁴⁾ who warns that:-

(14) SWANK, R.C. op cit., 19.

...overemphasis on the communications technology sometimes obscures other essential components of information services that are not dependent, strictly speaking, upon any particular technology.

As will be maintained, the essential components which should not be obscured include the document resources, the development of which should constitute a vital network activity, and the users who are the raison d'être of the network and whose needs should be clearly identified and adequately satisfied. For, although communications technology may speed up library and information activities and may make them more efficient, the undisputable fact is that such technology is only a means to an end and not the end itself. The "means" as well as the "end" should be equally developed. In the following sections some of the components are examined and their importance related to networks.

2.3.1 Formal Organisation

It is probably not a matter of coincidence that Becker and Olsen as well as Duggan precede their characteristics of networks with the need for a formal organisation. On the contrary, it is a re-affirmation of the cardinal importance of such a formal organisation. A network, as has been defined, is an association of a heterogeneous group of library and information centres with basically different objectives, and belonging to different organisational set-ups. It would need a formal organisation to chart the course of the network through the labyrinth of management problems characteristic of such associations if the stated aims and objectives of the network are to be achieved. The organisation, as Duggan details, would provide for

fiscal and legal responsibility, planning and policy formation. However, survival of the organisation, and by implication the network itself, will depend on the degree of commitment that the participants accord the organisation. Indeed so central is the question of commitment to the success of a network that moral commitment alone (important as it is) is considered not enough; it is considered that there should also be legal or contractual commitment because contracts mean commitment and networks cannot operate without full commitment from participants. The legal aspects of a network are considered in some detail below.

2.3.1:1 Legal Aspects of Networks

Patrick ⁽¹⁵⁾ gives four basic kinds of agreements by which a network may be established:

- i) an informal agreement,
- ii) a written agreement,
- iii) a constitution, or
- iv) articles of incorporation.

An informal agreement consists of a mutual decision by a group of libraries to co-operate in certain activities or to provide certain services. Usually there is no formal, unambiguous record of the transaction, the agreement is not binding on the parties and the success of the network depends on trust and good-will. The lack of an official record can also lead to confusion and disagreements, with the passage of time, as to the original delineation of responsibilities. Most of the traditional forms of co-operative undertakings have floundered

(15) PATRICK, R.J. Guidelines for library co-operation; development of academic library consortia. Santa Monica, California, System Development Corporation, 1972, 92.

largely because of the relative informality of the agreements and the consequent lack of formal commitment to them.

In most cases, a written agreement does not go beyond a mere listing of the activities in which the participating libraries have agreed to co-operate, while a constitution states the purpose of the network and enumerates the titles of the officers and rules for membership. Neither of them, however, can be considered as constituting a formal document.

The articles of incorporation, on the other hand, constitute a formal document in the sense that, although they contain the same kind of information as the constitution, they are filed with the state government and thereby establish the network as a legal entity. Patrick lists the following advantages in incorporation:

- i) it provides the [network] with the rights and privileges of a legal body;
- ii) it makes it easier to enter into contracts;
- iii) it fixes legal responsibility and provides limited liability for the individual members (although it does increase the liability of the [network] and its officers). (16)

Establishing a network as a separate legal entity is probably the most ideal method. However, as it often happens, a network may be "grafted" onto some previously existing institution to whose legal and fiscal arrangements it may be subjected. Networks which are built on existing facilities are the most likely to be established as appendages of existing institutions. Although there may be inherent initial advantages in this kind of arrangement, in that the budding

(16) Ibid, 100.

network may have access to the established facilities of the host institution, there may also be the possibility of the development of the network being restrained through restrictive legal and, particularly, fiscal policies of the "host institution", or the interests of the network being considered secondary to those of the "host institution". A clearly drawn-up agreement between the network and the host institution which commits both parties to the observation of their respective responsibilities and obligations might be a guarantee against possible confusion and conflict of interests.

Equally important is a clearly drawn-up agreement specifying the roles and responsibilities of the network participants, and providing the basis for legal or contractual commitment to the network. The central importance of total commitment to the network concept has already been noted and the significance of such a document therefore cannot be over-emphasised. The details of the agreement will obviously vary from one network organisation to the other, depending on the dictates of local conditions. However, a review by Duggan ⁽¹⁷⁾ shows some, or all, of the following as the major components of network contracts:

- i) Definition of participating parties and individuals authorised to request services.
- ii) Time period covered by the contract.
- iii) Work to be performed or services to be provided and responsibilities of each party.
- iv) Fees (or costs) discount rates, method of billing (i.e. reciprocity or exchange versus cash payments), and method of conveying funds.

(17) DUGGAN, M. Legal and contractual aspects of interlibrary and information service operations. In Proceedings of the Conference on Interlibrary Communications and Information Networks... Airlie House, Warrenton, Virginia, September 28, 1970 - October 2 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 221.

- v) Eligible users or authorised method of use, with constraints on "rebroadcasting".
- vi) Liability disclaimer or other limits of legal responsibilities, i.e. patents and copyrights.
- vii) Contract cancellation rights and procedures.
- viii) Penalties for nonconformity or noncompliance.
- ix) Legal procedures for contesting disputes.

Important as all the components are to the success of a network, item vii (Contract cancellation rights and procedures) calls for special comment. Implicit in this component is the preservation of the inalienable right of a participant to withdraw its membership; this is a democratic principle which should be a vital feature of any network legislation. However, in the interest of the integrity of the network or of its continued existence and development, it is a matter of prime importance that the procedure for withdrawal of membership should be unambiguously spelt out and strictly adhered to. One of the procedures which should demand utmost adherence, for instance, should be the period of notification for intention of withdrawal. The period of notification (as would be specified in the agreement) should be sufficiently long for the network to adjust to the change in composition. Sudden, unscheduled withdrawals could exert a devastating effect on the network and ought to be avoided. The advocacy in view of this is that serious consideration should be given to the need for penalties or conditions for withdrawal when the agreement is being drawn up and that these, if any are agreed upon, should be made known in advance to prospective participants. The following are some of the conditions known to be in use:

- i) a withdrawing member would have to pay the costs of decataloguing (removing the location information from the union catalogue);
- ii) the withdrawing member would no longer be eligible for external funds the [network] might be receiving;
- iii) books bought on a common budget would remain with the [network];
- iv) the withdrawing member could withdraw its own books, but only after the [network] had reproduced any unique volumes desired;
- v) the withdrawing member must give 2 years' notice. (18)

The provision for a legal foundation for a network is a complicated issue of which this has only been a brief, indicative sketch. The guiding principle should be that competent professional advice should always be sought. But whatever form of arrangement that may be considered suitable for adoption, the overriding factor must be the preservation of the fundamental autonomy of all participants in terms of:

- i) their legal status,
- ii) their funding and financial control,
- iii) their responsibility to their own user clientele,
- iv) control of their resources. (19)

As much as the importance of legislative backing in the establishment of a network has been stressed, what should also be stressed as of equal importance is what Becker ⁽²⁰⁾ has termed "social engineering" or getting people to appreciate the need for the network

(18) PATRICK, R.J. op.cit., 105.

(19) RICHARDSON, W.D. op cit., 9.

(20) BECKER, J. Library networks. Law Libr. J., 63(4), Nov 1970, 530.

and to co-operate effectively, and sustaining their interest through motivation. Essentially, "social engineering" involves making inroads into encrusted attitudes which, like tradition, tend to die hard. In his paper read at the Second European Congress on Information Systems and Networks at Luxembourg in 1975, Anderla (21) made the following observation:

.... perhaps the arrangements that are the hardest to reach concern matters of principle and basic concepts which are however sometimes obscured by professional or personal preferences ... Better mutual understanding and greater tolerance on all sides are good recipes we must apply again and again until differences of opinion are sufficiently narrowed down.

Initial hesitancy on the part of prospective network participants should perhaps not be too unexpected (and could indeed be justified) for apprehension about a new venture is a natural and understandable instinct. And in networking when old, entrenched allegiances and practices may have to be altered, and when participation could mean the observation of new sets of rules and regulations, the apprehension may not be entirely unfounded. Attitudinal barriers can be removed, and "mutual understanding and greater tolerance" forged, only when there is an appreciation of the need for the network, and the willingness to co-operate. The appreciation of the need for the network, on the other hand, would depend on an understanding of the information problem and a conviction that part of the solution at least might be found in networking. In addition to "social engineering", professional education could help in promoting the right attitude. But above all, proof of

(21) ANDERLA, G. EURONET and the changing European information environment. In Commission of the European Communities. Second European Congress on Information Systems and Networks, Luxembourg, 27-30 May 1975. München, Verlag Dokumentation, 1976, 73-74.

benefit from participation will be the best motivator.

2.3.1.2 Organisation and Management of Networks

1. Governing Bodies

As has been seen from Becker and Olsen, a formal organisation is formed when "many units sharing a common information purpose recognise the value of group affiliation and enter into a compact". The resulting organisation, in common with all organisations, would need a mechanism - a controlling or governing body - to plan the orderly development of the network. The governing body would formulate the policy of the network, establish its purpose and objectives, apportion fiscal and legal responsibilities, and generally chart the course of the network towards the attainment of its aims and objectives. From the brief sketch, the legal requirements and implications of networking alone would seem to warrant the establishment of a governing body; add to this these other requirements and the absolute necessity for a body of that nature becomes immediately apparent.

Controlling bodies of library and information networks may take one of the following three major organisational forms:

- i) they may be government-appointed,
- ii) they may be under the jurisdiction of a quasi-government body, or
- iii) they may be appointed by the members, and operate under a legal charter and byelaws. (22)

Governance of a network under a government-appointed body would have the advantage of governmental support, and therefore the probable assurance of regular financial sustenance. However, it would have

(22) STEVENS, C.H. Governance of library networks. Libr.Trends., 26(2), Fall 1977, 220.

little room for independent action and would have to operate within the confines of its enabling legislation which is largely effected through statute and regulation.

A controlling body operating under a quasi-government organisation would normally derive its legal status from that organisation as in the case, for example, of the New England Library Network (NELINET) of the United States of America which derives its authority from the New England Board of Higher Education (NEBHE). NEBHE appoints the executive director of NELINET, controls its fiscal policy and operational development and gives the executive committee and staff of NELINET the authority to operate the network. (23) The possibility of a conflict of interests developing out of such an arrangement has already been noted, and NELINET has proved no exception. Stevens (24) reports:

The difficulties of operating a library network within NEBHE have become noticeable in recent years. The library network is attempting to deal with areas for which a board of higher education has no specific concern - libraries in industry, public libraries, and school libraries. As this is written, the executive committee of NELINET is attempting to determine the course of its future insofar as questions of governance are concerned.

One of the very important steps that a member-appointed controlling body should take is to establish the network as a legal entity by filing its articles of incorporation with the state government and thereby gain it the legal identity and recognition without which it would find it difficult to operate as an organisation. The articles of

(23) Ibid, 230.

(24) Ibid, 231.

incorporation would have to pay special attention to matters of accountability and the coercive powers to set fees and to establish standards for participation in the agreed activities of the network. With carefully prepared articles of incorporation this category of network has the possibility for a more flexible service and a better chance for member-user satisfaction than the government or the quasi-government bodies who, on the other hand, have the advantage of access to more assured funding sources. (25)

ii. Planning

The viability of any undertaking depends to a large extent on its planned development and this is even more so in the case of library and information networks which are invariably affiliations of units with basically differing aims and objectives. It would need good planning to achieve the group aims and objectives. Essential as it is, planning is at times considered to be unnecessary or indeed an impediment because of its inherent restraining effect on actions. An extension of this is the consideration that long-term plans often do seal up resources which could otherwise be appropriated for current developments. In any case development plans, it is also often claimed, are soon made redundant by uncontrollable external factors, and "realistic" plans have only short-term relevance. The logic may be valid but in practical terms it is inconceivable that any serious project could be undertaken without prior planning. The plan may be overtaken by events but any good plan should have a mechanism for evaluation and the flexibility to adapt to changing circumstances.

(25) Ibid, 239.

As has been noticed elsewhere, library and information networks may be established in one of two ways: either they are built on existing resources or they are established as completely new organisations. However, networks are usually built on existing resources. The advantages in this are that the existing, and already functioning, library and information services would provide a convenient take-off base for the network; they might not only reduce the initial capital expenditure, but could also accelerate the development of the network. Additionally, a network evolving out of an existing system would:

preserve the freedom of choice and local autonomy which allows individual libraries and information services to adapt themselves to the needs of their constituency. (26)

This advantage is particularly worth stressing since it brings to the fore a cardinal consideration in network planning: that a network should be planned as a flexible, non-monolithic organisation within which members retain their identity and with it any valuable services they may be providing at the local level, while they aspire as a group towards the achievement of their common goals and objectives. It is however important to heed Samuelson's (27) warning to resist the temptation of prematurely considering some existing library and information services as having "obvious" roles in the proposed networks. The issues involved in the establishment of networks are so complex that any unplanned decisions could lead to certain confusion.

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- (26) BECKER, J., ed. Working Group summary on network needs and development. In Proceedings of the Conference on Interlibrary Communications and Information Networks ... Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970. Chicago, American Library Association, 1971, 15.
- (27) SAMUELSON, K. Challenges to theory and methods of systems cybernetics and information networks. In Systems, cybernetics and information networks. 1972 (FID Publication no. 498).

The first step to be taken in the planning of a library and information network, then, would inevitably have to be a survey (or an inventory) of the available resources. From the results it would be possible to identify the strengths and weaknesses within the framework of the network as well as its problems and opportunities. A rational development programme could then be planned detailing goals and objectives, services, areas of priority concern, etc. The programme could be phased out as would be considered necessary. Patrick ⁽²⁸⁾ has identified a list of 24 planning steps (grouped under four major phases) which, although are principally concerned with academic library consortia, could be found useful in general network planning. The four major phases are:

- i) Exploratory Phase: includes discussions for the purpose of deciding whether to establish an academic library consortium.
- ii) Planning Phase: includes the selection and approval of objectives, program plans, financial support, and organisational structure.
- iii) Development Phase: includes all design and development tasks for consortium activities.
- iv) Operation and Evaluation Phase: includes the operation and consortium activities and the evaluation of consortium performance.

The planning steps ⁽²⁹⁾ given in this four-phased model are not to be considered strictly sequential; some of the steps may be varied or even eliminated as needs and circumstances in individual networks would dictate. Others, like those in the Operation and Evaluation Phase,

(28) PATRICK, R.J. op cit., 21.

(29) For the detailed guidelines see Appendix 1.

for instance, would be found, on the other hand, to permeate the operation of the network in all its phases. The usefulness of a model of this nature for the planned development of a library and information network can hardly be over-emphasised.

iii. Identification of Objectives

One of the most important activities connected with network establishment is the identification of objectives. This will, to a large extent, depend on the purpose of the network and, as has been noted, on the results of a thorough assessment of organisational strengths and weaknesses.

Objectives, as used in the present context, are essentially written statements that indicate some future course for action. Vital to planning, they are signposts to development but as wrong signposting invariably leads to wrong destinations, so can wrong or inarticulate objectives lead to wrong or inappropriate actions. Network objectives should therefore be clearly and unambiguously defined so as:

- i) to serve as a framework to guide [network] planning and development,
- ii) to act as a communication vehicle for explaining to others what the [network] is trying to do,
- iii) to help define appropriate measures of [network] performance.(30)

A well-defined objective would have a statement of purpose indicating the precise steps to be taken to achieve the stated objective, who the beneficiaries of the intended action are and the estimated time for the accomplishment of the objective. It would also establish criteria

(30) PATRICK, R.J. op cit., 55-56.

and performance levels against which progress toward the objective may be judged and a mechanism to measure achievement of the objective. (31) The standard methods of evaluation, e.g. surveys, questionnaires, observation, etc. aside, a well-defined objective is in itself a useful means of assessing performance. Thus if a network had as its objective the achievement of 90% satisfaction rate of all reference enquiries within two years, its success or failure in attaining the objective would be more readily and reliably ascertained than one which had the unspecific objective of improving reference enquiry work.

After the identification of the objectives, the next step would be to rank them in order of importance. This would depend on such factors as the urgency accorded any objective, or group of objectives, by the members of the network and especially on the practicability of their implementation in terms of technical feasibility, financial and manpower resources, etc. It would help the course of the network, as well as sustaining the interests of the participants, if the more readily attainable objectives were implemented first. The others could follow as time and resources would permit; this in fact, is the essence of a planned development programme. The mechanism for the implementation of the objectives would depend on the organisational structure of the network which is discussed below.

(31) YOUNG, A.P. Generating library goals and objectives. Illinois Libr. 56(9), Nov 1974, 864-865.

iv. Organisational Structure

The detailed organisational structure of a network will mainly depend on the nature of its governing body, that is, whether it is member-appointed, government-appointed or whether it is under the jurisdiction of a quasi-government body. Generally, however, networks work through an assortment of committees and directorships for the implementation of their objectives.

The governing body (which may be a Board of Directors, a Council, a Commission, etc.) may be empowered by its enabling legislation, or by its constitution, to appoint special committees to whom it may give specific responsibilities in connection with the implementation of the objectives of the network. Committees may be appointed for: Acquisitions, Budget Review, Public Relations and Information, Reference, Special Collections, Technical Services, User Services, etc. The Committees should ideally be composed of librarians with the relevant background who would thus avail the respective committees of the benefit of their experience and expertise. The committee structure also holds the promise of engendering the spirit of co-operation and a sense of common purpose among the committee members whose selection would normally be representative of the participating libraries and information centres. These are aspects of "social engineering" - informal yet effective means - which help to hold the network together. The committee structure, however, has its disadvantages. Committee work tends to be slow particularly when decisions have to be made quickly, and can also be frustrating under ineffective leadership and guidance. It is especially important in this

respect that committee members know their authority and the extent to which they may pursue projects. An inherent disadvantage in the committee structure is the possible strain on the resources of the network as a result of too many committees pursuing too many projects simultaneously. This might endanger the successful completion of projects but careful demarcation of priorities and proper co-ordination of services should provide an agreeable pace for development.

If effective leadership and guidance are necessary for committee work, the need for these qualities is even greater for the successful management of the network. And these are qualities which a director who may be appointed to head the network should not lack. However, the decision to appoint a director or not will depend mainly on the nature of the controlling body of the network. An independent network under the governance of a government-appointed controlling body would normally provide for the appointment of a director in its enabling legislation; a network under the jurisdiction of a quasi-government organisation may have a director appointed by the "parent" organisation, while a member-controlled network may or may not have to appoint one. The size and range of activities of the network will also be deciding factors. A national network committed to the organisation of the total national library and information resources, for instance, would find its development seriously handicapped without a director to provide the essential guidance and managerial control. A much smaller network with much reduced commitments, on the other hand, might not consider it necessary to appoint a full-time director but might, instead, wish to appoint a part-time director or employ the services of a consultant for

specific projects. If the decision is against the appointment of a director (full time or part-time) then some arrangement would have to be instituted for the administration of the network.

A rotatory scheme among the heads of the participating libraries and information centres offers one possibility.

In addition to qualities which make for effective leadership and guidance (e.g. administrative talent and experience, ability to work with people, familiarity with government programmes and experience in grant requests, experience and sympathy with library co-operation projects, knowledge of the participating institutions and an understanding of their problems, etc. (32-33)) the network director must have some kind of management authority over the personnel implementing the network projects. As Patrick (34) reports in her study of some academic library consortia in the United States of America:

In several consortia studied, the directors would call meetings and obtain agreement among participants as to what activities would be undertaken, only to find later that some participants - after returning to their own environments - did not carry out their required assignments. In these instances, the directors had no authority to ensure that the necessary work was accomplished.

Responsibility without authority can, as in the above case-studies, neutralise the efforts of the director and obstruct the development

(32) PATRICK, R.J. op cit., 110.

(33) REYNOLDS, M.E. Authority and responsibilities of a network director. In Proceedings of the Conference on Interlibrary Communications and Information Networks...Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 277-280.

(34) PATRICK, R.J. op cit., 112.

of the network. Properly drawn-up network legislation outlining the roles and responsibilities of all participants, and detailing penalties for non-compliance with decisions might help in such situations. But to stress again, at the risk of being repetitive, a genuine understanding of the need for the network and a resolute willingness and determination to participate stand the network a better chance for survival. A director who is able to sustain this spirit of understanding and willingness among the participants has the type of leadership, guidance and "authority" needed for the successful management of a network.

v. Organisational Hierarchy

Of the pressing initial decisions to be taken during the planning stage, one would have to be on the organisational hierarchy or configuration of the network. This is a very important design parameter deserving careful consideration since the type of configuration adopted will determine the communication channels and the flow pattern of messages within the network. Different patterns of network configuration have been identified (Duggan, ⁽³⁵⁾ Korfhage, ⁽³⁶⁾ etc.) of which the following (as illustrated on page 64) may be considered the basic structures:

- i) Cyclic network.
- ii) Non-directed network.
- iii) Directed network.
- iv) Composite network.
- v) Hierarchical network.

(35) DUGGAN, M. Library network analysis and planning (LIB-NET) op cit., 164-167.

(36) KORFHAGE, R.R., et al. Graph models for library information networks. Libr. Quarterly, 42(1) Jan 1972, 31-42.

If each dot in the illustrations is designated as representing a node (i.e. a participating library or information centre) in the network and each line as denoting the communication or information-transfer path linking one node to the other, the pattern of information flow within each type of configuration becomes manifest. The different patterns will be considered in turn.

The cyclic network (variously referred to as the net or ring network) (Fig. 1) has each node linked only to the adjacent node forming, as the name implies, a circular or ring-like configuration, with information flowing in a uni- or bi-directional pattern. Intrinsically it is a decentralised system with no central processing body and a request at any of the nodes needing further processing can only be communicated to the adjacent node. This has the disadvantage of possible lengthy response time. But probably the most serious disadvantage is its vulnerability since any break in communication could considerably disrupt the system. It is, however, relatively inexpensive to establish.

The non-directed network (also known as the distributed, full connected or mesh network) (Fig. 2) is a totally decentralised structure with each node connected to all other nodes in the network. Connection among nodes is thus direct. In common with the cyclic network there is no co-ordinating agency and neither is there any imposition of rank or order on the communication links. The non-directed network has the maximum number of links and also has a capacity for enormous increase in links with the growth of the network. The illustrated 5-node network (Fig. 2) for instance has 10 communication links. Working with the formula $L = \frac{N(N-1)}{2}$ (where L = links or channels and N = nodes) we realise

that an additional node would increase the links from 10 to 15; two nodes would turn the original 10-channelled network into a much larger 21-channelled structure, etc. Installation of the non-directed network can therefore be quite expensive. But unlike the cyclic network a break in communication between any two nodes would not be drastic on the efficiency of the network.

A structural reversal of the non-directed network, the directed network (often referred to as the star network (Fig. 3) is a totally centralised system with the nodes linked indirectly through a central node from which all activities and services of the network are controlled. The communication links are not as many as those in the non-directed network and growth of nodes does not result in enormous increases in links. The 5-node directed network (Fig. 3) requires only 5 links to have all the nodes interconnected through a central node or switching centre, as against the 10 links of the non-directed network, and increase in links equates with growth of nodes ($L = N-1$). As a totally centralised structure, it has the advantage of being the most easily controlled network. But therein, paradoxically, lies its greatest weakness; absolute dependence on the potency of a central switching node makes it extremely vulnerable.

The composite network (Fig. 4) is an interface of two or more networks. Illustrated (Fig. 4) is a composite of two directed networks requiring 11 communication links to interconnect the two 5-node networks through their respective switching centres. A composite of two 5-node non-directed networks would, on the other hand, require 45 links. The composite network arrangement offers an ideal plan for developing area networks into larger service units and could be found

Fig. 1-5 BASIC PATTERNS OF NETWORK CONFIGURATION

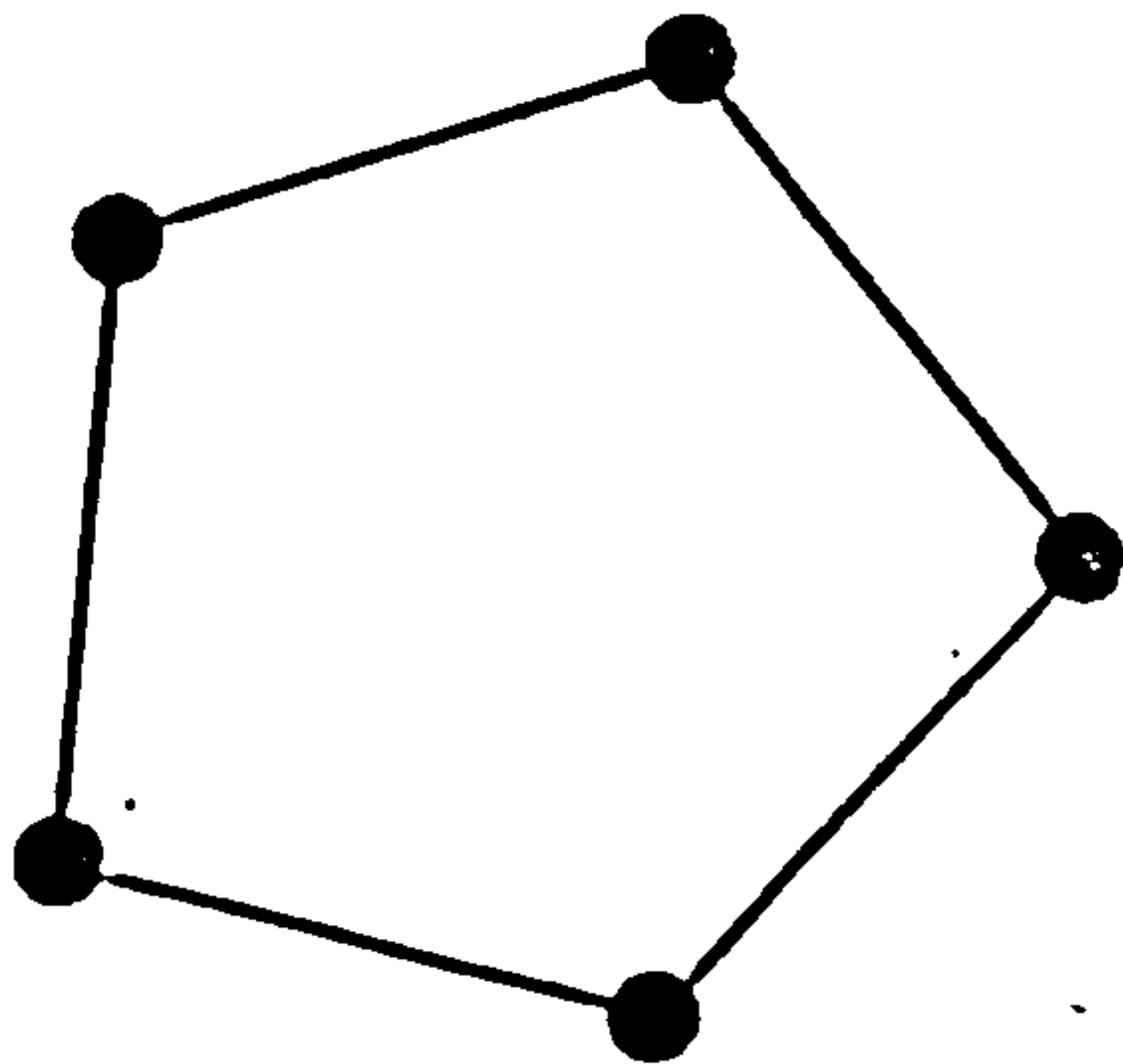


Fig.1. Cyclic network

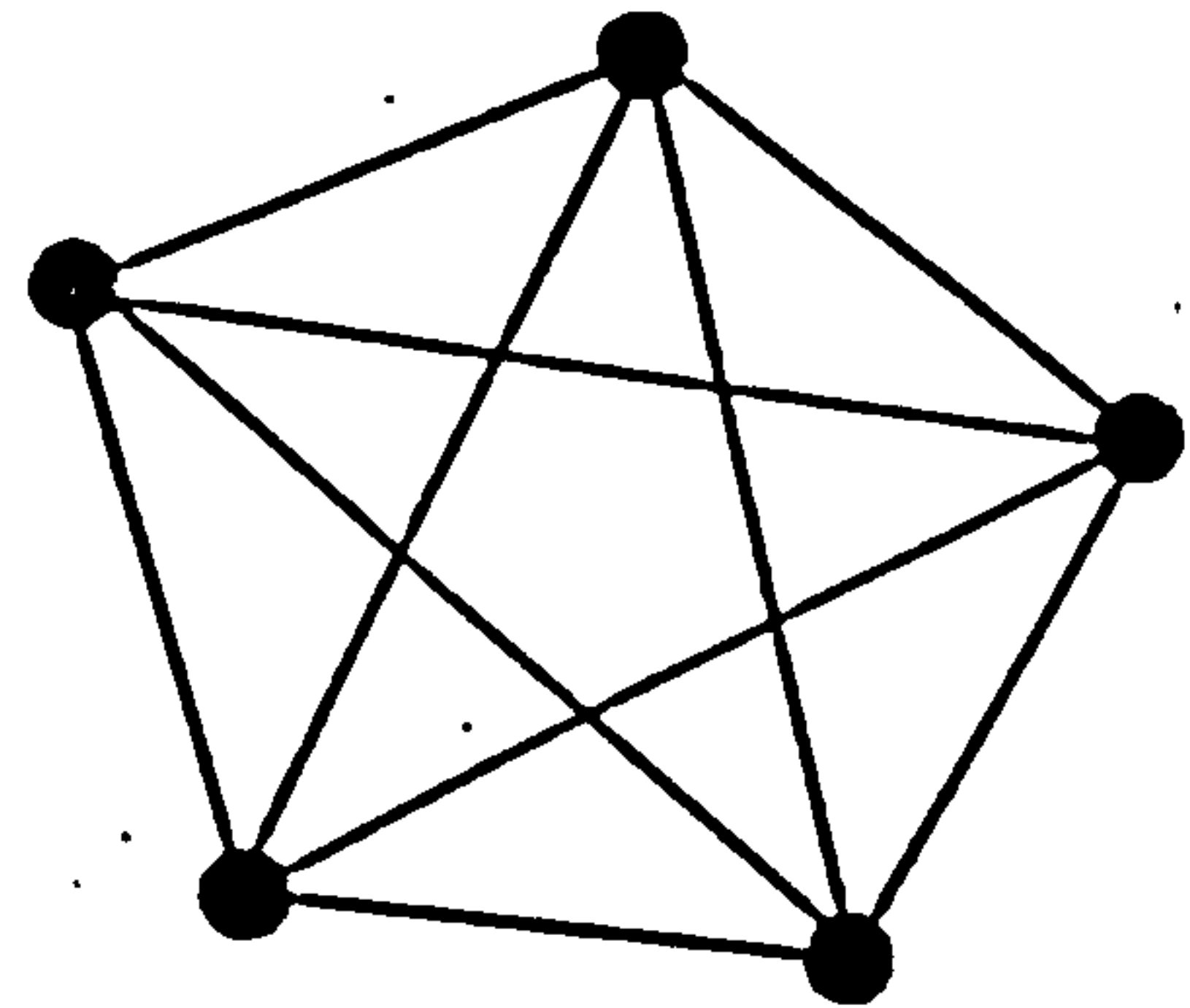


Fig.2. Non-directed network

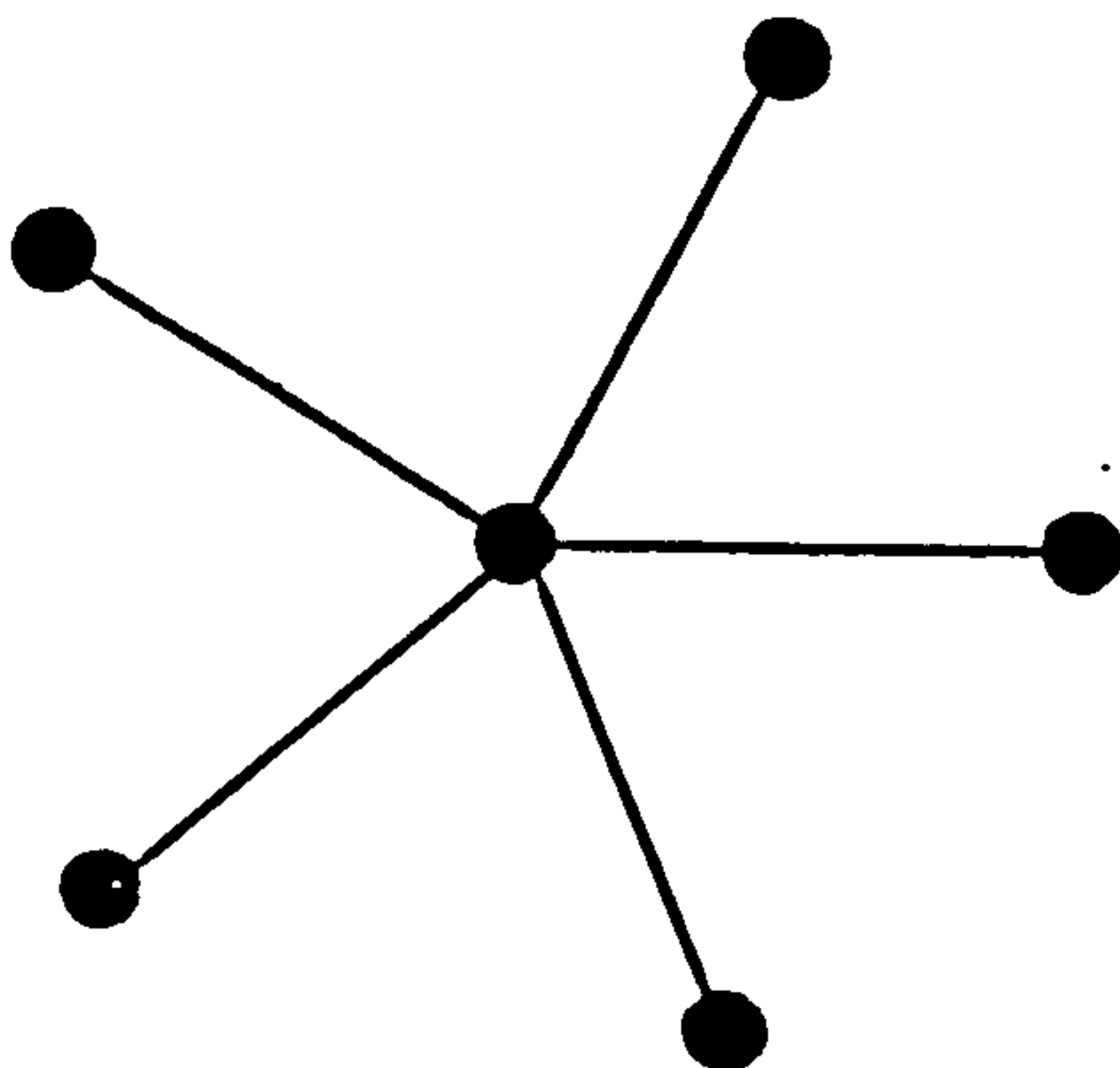


Fig.3. Directed network

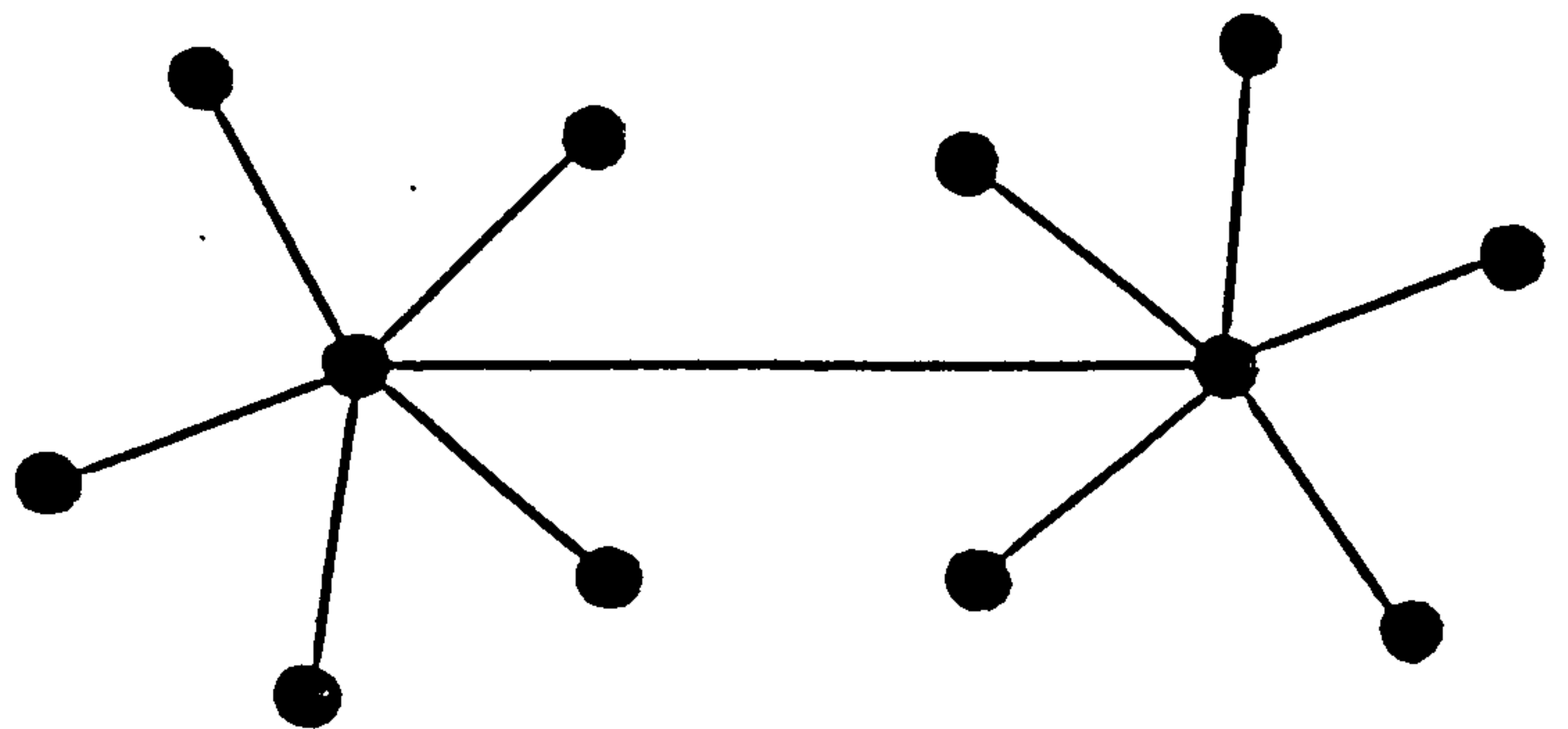


Fig.4. Composite network

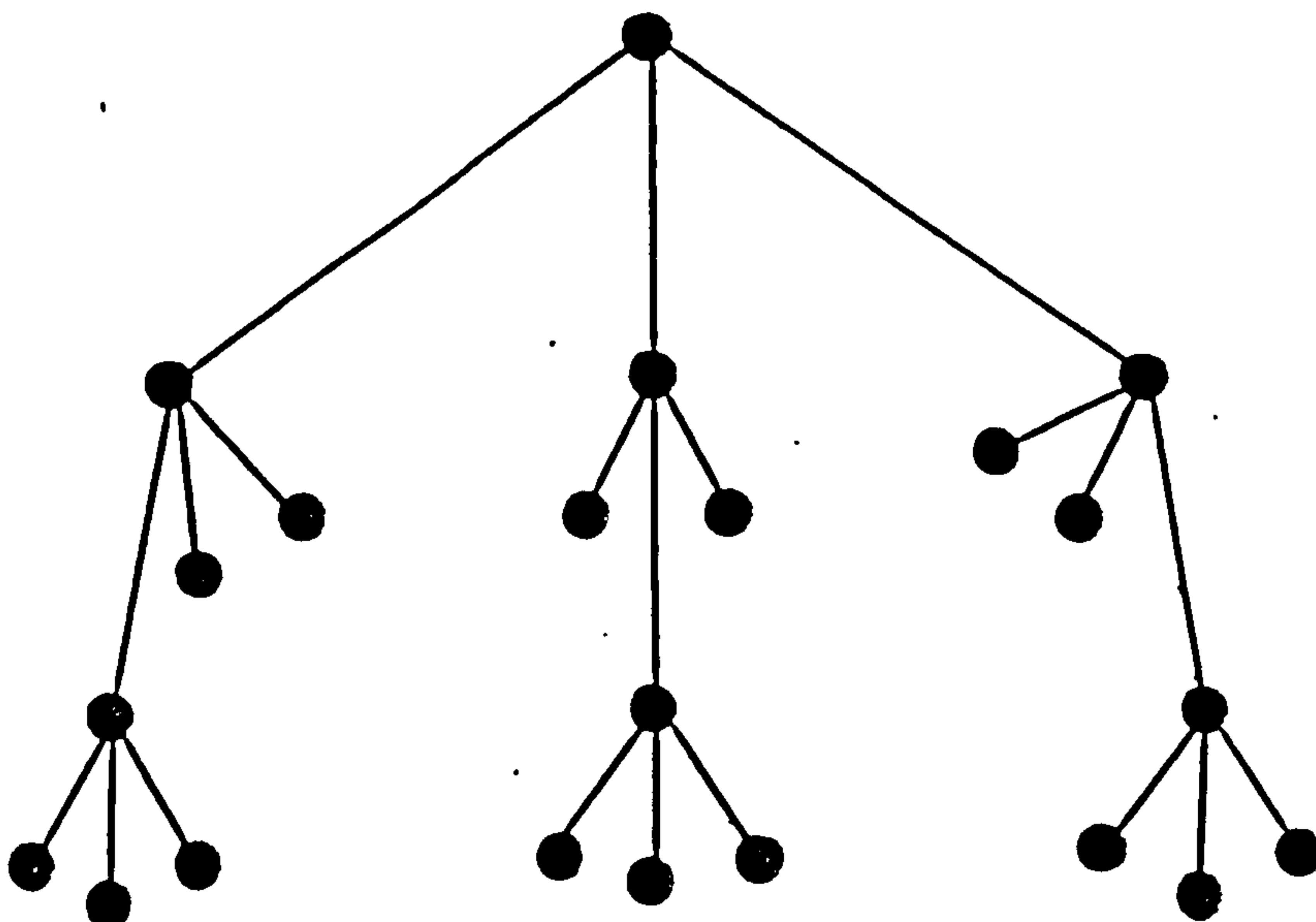


Fig.5. Hierarchical network

especially useful in inter-state or regional network programmes where particularly in composites of directed networks, inter-connection of the networks could be conveniently effected through the identified switching centres of the participating states or countries.

Being an interconnection of different nodes (which in themselves could be switching centres for sub-networks) the hierarchical network (Fig. 5) may be considered a variation of the composite network. However, the nodes are structured in an order of "increasing concreteness" which also determines the pattern of communication within the network. A request needing further processing would normally move upwards in the network (i.e. in a vertical or hierarchical order) progressing through a regime of nodes which decrease in quantity but increase in responsibility and quality of resources and culminate at the apex in the most comprehensive node. This node could also be the central authority controlling activities within the network. The hierarchical network is suitable for the interconnection of a large number of nodes which particularly show varying degrees of development and resourcefulness. It also has the following technical advantages:

- i) it facilitates the provision of local service between libraries of a region;
- ii) it is relatively economical in data channels because communication channels can be designed to follow the level of demand;
- iii) it is capable of indefinite expansion;
- iv) there is a natural match with the requirements of an information service, and
- v) it provides satisfactorily for connections to national and international and other information resources. (37)

(37) PEAKE, D. and CASSIDY, M. CONISA? Co-operative Operational National Information System for Australia. Austr.Lib.J., 25(13) Oct 1976, 326.

The hierarchical pattern of communication within the network is a possible cause for long response time although the control and monitoring of the information flow can be carried out quite effectively because of the segmented nature of the network.

The characteristics of the different types of network configurations, as outlined above, are some of the factors which have to be considered in the planning of a network. Fundamentally these are issues concerning reliability, flexibility, cost and management of the network, decisions on all of which will be influenced to a large extent by the objectives of the network and the services envisaged.

vi. Funding

Central to the successful operation of a network is sound fiscal planning and support. That this is an important consideration is often not sufficiently appreciated and must account for the poor performance or total collapse of many a network. It is a lack of appreciation which is founded on the generally held impression that networks are purposely money-saving and that in consequence there should be minimal financial involvement in their operation. The following statement might help to correct that thinking:

The notion is that little or no additional costs are required for co-operative programming. However, if a particular program requires little or no additional resources, the significance and/or peripheral nature of that program is questionable. To state the point bluntly, interinstitutional programs are not developed and administered without an investment of manpower, money and other resources whether they are centralised or decentralised. (38)

(38) PATTERSON, L.D. Consortia in American higher education. Report 7, November 1970, ERIC Clearinghouse on Higher Education, Washington, D.C., 1970, p.6. As quoted in PATRICK, R.J. op cit., 19.

There ought to be a clear understanding among network participants that the ultimate purpose of networking does not necessarily reside in cost reduction but in the provision of a user-service that is more efficient and more extensive than it is possible with the resources of any individual library or information centre. As an extension of this understanding, plans should be formulated and agreed on to ensure the provision of adequate financial support for the operation of the network.

The form of fiscal arrangement devised will depend on the governance (or the controlling body) of the network. Thus a government-controlled body would derive the greater part of its funding (or indeed the whole of it) from the state government, a quasi-government-controlled body would rely on its "parent" organisation for most of its financial needs, while a member-controlled body would have to determine the funds, or other forms of support, which the participating members should provide the network. But what must be considered by all at the early stages of planning is the establishment of a permanent basis of funding. While regular funding may be assured for the government supported network, and may be reasonably so for the quasi-government-controlled network, an unambiguous fiscal policy would nevertheless have to be adopted, preferably backed by appropriate legislative provision, to ensure uninterrupted funding. The assurance of a permanent funding pattern is even more crucial for a member-controlled network since its sustenance will be appreciably dependent upon the response of the participating members to their financial obligations towards the network. It needs no special emphasis, in this case, that a fiscal policy

detailing the responsibilities and obligations of the network members, supported also by the necessary legislation, is an even greater necessity.

Depending on the type and range of services planned, networking can be capital-intensive and there may be the need in some instances for initial capitalisation or "seed money" to establish the network. The source of the "seed money" will vary from one situation to the other. In the United States of America, for example, national and private foundations are known to be significant sources for such grants whereas in other countries the alternative to government funding would be self-funding by members. Whatever its source, it is considered that the "seed money" should be adequate for at least two years of operation ⁽³⁹⁾ to see the network through its stabilising period.

In addition to "seed money", grants, subsidies, donations, etc. other sources of income include membership or access fees, charges for services provided, revenue for publications, etc. These latter sources may constitute a substantial part of network funding, particularly for self-supporting networks, and a clear scheme for their institution should therefore be drawn-up as part of the overall fiscal policy of the network. Funding should be considered the nerve-centre of networking and the success or failure of any network venture should considerably be seen in relation to the adequacy or otherwise of its fiscal arrangements.

2.3.2 Document Resources

Often not accorded the same recognition of importance given other components, document resources, as has been advocated, should

(39) COTTON, I.W. Network management survey. Washington, D.C., National Bureau of Standards, 1974, 75. (NBS Technical Note 805).

be given prominent consideration in the design and planning of library and information networks. Schemes for their joint development must be agreed upon by all participants who should seriously regard the co-ordinated development and use of the document resources as constituting the primary justification for the establishment of the network. Collaborative development of the document resources may be realised through co-operative acquisition programmes of which there are varying practised forms of subject specialisation and joint purchase schemes. To these must be added gifts and exchanges which can also be important factors in the collaborative development of resources.

2.3.2.1 Fields of Special Responsibility

The more popular of the two major co-operative acquisition practices, and definitely the more publicised, is the subject specialisation scheme in which member libraries accept the responsibility for the systematic acquisition of materials on agreed upon areas of specialisation. The Farmington Plan of the United States of America, probably the best known scheme in this category, serves as a ready example. Started in 1948 (although the agreement on its establishment was reached in 1942) the Plan had the objective of ensuring that:

at least one copy of each new foreign publication that might reasonably be expected to interest a research worker in the United States would be acquired by an American library, promptly listed in the National Union Catalog, and made available by inter-library loan or photographic reproduction. (40)

(40) WILLIAMS, E.E. Farmington Plan. In Encyclopaedia of Library and Information Sciences, vol.8, New York, Marcel Dekker, Inc., 1972, 361-362.

Initially (that is, during the first three years of its existence), the Plan operated on a "subject responsibility" basis in the collection of materials from thirteen western European nations in addition to those from Australia, New Zealand and South Africa. Areas of responsibility were mostly allocated to libraries that already had relatively comprehensive collections and which thus provided good foundations for the planned development of the resources in question. A second procedure, based on the principle of "country responsibility", was later adopted to collect materials from over 120 countries. In this case, a participating library assumed responsibility for a particular country and, mindful of the objective of the Plan, attempted to collect from that country everything "that might reasonably be expected to interest a research worker in the United States". The Plan operated for 25 years after which two significant events in the national acquisitions programme of the United States led to its discontinuance. The first was an amendment to Public Law 480 which, after 1961, made it possible for the Library of Congress to use foreign currencies from the sale of surplus agricultural commodities in acquiring materials which were distributed to American libraries. The second and the more ambitious of the two was the institution of the National Program for Acquisitions and Cataloging which, under Title II-C of the Higher Education Act of 1965, seeks to enable the Library of Congress to acquire, promptly catalogue, and make immediately available for use, the world's output of current monographs and monographic series of research value. The Farmington Plan had thus been rendered redundant. But during its existence, it had been able to involve 60 major American libraries, including 50 university libraries, the Library Congress, the National

Library of Medicine, etc. in the acquisition of materials the collection of which may otherwise have not been possible.

An equally well-known subject specialisation scheme is the Scandia Plan of the four Scandinavian countries of Denmark, Finland, Norway and Sweden which was founded on the initiative of the Federation of Nordic Research Librarians (Nordisk Vitenskapelig Bibliotekforbund - NVBF) and has been operating since 1957. Based on a system of voluntary co-operation, the Scandia Plan is a decentralised acquisition scheme whose aim is:

....to develop rational and economic forms of co-operation in the field of acquisition of literature and information service connected with it as well as in the field of library interlending among the research libraries in the Nordic countries. (41-42)

The only international co-operative acquisition programme in operation, the Scandia Plan is self-supporting and with the exception of the financing of planning conferences by the Nordic Cultural Committee (an inter-Scandinavian organisation for cultural affairs) the participating special and research libraries assume full responsibility for the acquisition and processing of the materials in their respective areas of specialisation. There is no central administrative control and each library retains authority over its purchase and exchange policies.

The allocation of special subject areas is made on the basis of existing collections and fields of interest as well as on regional and linguistic bases for subjects like medicine, science and technology to

(41) As quoted in HAKLI, E. The Scandia Plan. In Acquisition from the Third World. Papers of the Ligue des bibliothèques européennes de recherche seminar 17-19 September 1973, edited by D.A. Clarke, London, Mansell, 1975, 211.

(42) This is a modified version of the original aim which merely sought to rationalise the acquisition of marginal literature in the four participating countries.

ensure comprehensive coverage among the participating libraries. A library would thus collect Chinese technological literature, while another would specialise in Indian technological literature, etc. Each member functions as a bibliographic centre for the designated subject, disseminates information about holdings and makes materials available through an inter-library loan system. The development and promotion of the Scandia Plan has since 1973 been transferred from the Federation of Nordic Research Libraries to the Committee for Co-operation of the Nordic Research Libraries (De Nordiska Forskningsbibliotekens Samarbetskommitteé) which was formed to co-ordinate library co-operation projects in the Scandinavian countries.

Of historical, and particularly of administrative, interest is the system that was in operation in Germany towards the end of the nineteenth century in which the Prussian State Library and the ten Prussian university libraries ⁽⁴³⁾ formed a "closed system". Interestingly, the chief librarians were not responsible to their respective universities but to the Ministry of Education in Berlin. This arrangement, especially through the active directorship of the Minister, resulted in "reforms and models for well-planned co-operation" the effects of which are noticeable on German librarianship even today in, among others, the assignment of "special fields of collection development (Sondersammelgebiete) to different libraries." ⁽⁴⁴⁾

(43) They were the university libraries of Berlin, Bonn, Breslau, Göttingen, Griefswald, Halle, Kiel, Königsberg, Marbug, and Munster.

(44) WEHMER, C. The organisation and origins of German university libraries. Libr.Trends, 12(4) Apr 1964, 497.

The inter-regional coverage scheme of Great Britain shows yet another variation of a subject specialisation programme. The Subject Specialisation Schemes, as they were called, were instituted to obtain self-sufficiency of British books. Each region was allotted a section of the Dewey Classification Scheme and undertook to cover all books listed in the British National Bibliography pertaining to the specified section. They were subject specialisation schemes in a limited sense only since coverage was restricted to current British books and not, in the strictest interpretation of subject specialisation, to a specific subject in all its aspects and from sources catholic. However, they served a useful purpose and amply met the needs of the moment.

The earliest of the schemes, the Metropolitan Special Collections Scheme, was started by London public libraries in 1948, quickly followed by other regional schemes. But the establishment of the British Library in 1974 and particularly the comprehensive acquisition and central lending services of its Lending Division (BLLD), have considerably altered their erstwhile dominant roles. From the results of a 1977 survey it was concluded that the British Library was used successfully for 73% of all inter-library loan requests in the United Kingdom while the regional system accounted for between 11% and 12%. (45) The indications are that the BLLD will continue to play a leading role in national (and, indeed, international) interlibrary lending.

In addition to specialisation which may be subject, geographic or linguistic, there is also what may be referred to as material or from

(45) LINE, M.B. and STEEMSON, R.J. Interlibrary lending in the United Kingdom; summary of a national survey conducted in February, 1977. Interlending Rev., 6(2) Apr 1978, 31-38.

specialisation, that is, acquisition that relates to particular types of material: official publications, microforms, audio-visual materials, etc. The Greater London Audio Subject Specialisation Scheme (GLASS) provides an example in this area for non-book materials. Established by the thirty-three London public libraries, it aims to achieve full coverage of the various forms of recorded sounds on records and cassettes (poetry, drama, music, languages, etc.) issued in Britain and make them available for inter-lending. (46)

2.3.2.2 Purchase Agreements

The second major plan for the collaborative acquisition of document resources, purchase agreements, like subject specialisation schemes, appear in different forms. However, they all have the common objective of preventing unscheduled duplication. Centralised purchase, joint purchase and pre-purchase checking are the major forms.

In centralised purchase, one library in a network or a co-operative group of libraries accepts the responsibility for placing orders - books, periodicals, etc. - for all the participating members of the network. Alternatively, a purchasing agency could be commissioned to order them on behalf of the group. In addition to the common advantage of unnecessary duplication, this arrangement has the possible added advantage of getting the group more favourable discount concessions in respect of the larger volume of orders than would be obtained through individual orders. The duplication of expensive or less frequently used bibliographical tools and book trade

(46) SADDINGTON, G.H. The Greater London Audio Specialisation Scheme. Libr.Ass.Rec., 74(11) Nov 1972, 218-219.

publications would also be avoided since single sets at the central point would be sufficient for the needs of the entire network.

Another form of purchase agreement often practised, is the joint purchase of collections, sets, etc. Members of a network may decide to share the cost of special (and often expensive) collections such as microform sets, back-runs of periodicals, etc. They would be conveniently located and all members of the network would have access to them. Again, in a slightly different arrangement, members would individually be responsible for the purchase of certain items to which all other members would have equal access. In one six-member network, for example, each member agreed to acquire one of the major foreign encyclopaedias. (47)

The last activity to be considered in this category is pre-purchase checking. It simply consists of members of the network informing all participants of purchase of items or sets of material that exceed an agreed price limit. This, like the preceding activities, is to avoid unwanted duplication.

2.3.2.3 Gifts and Exchanges

Properly planned, gifts and exchanges can contribute enormously to the enrichment of the resources of a network. The fundamental principle underlying the concept of gifts and exchanges, aside of any connotations of goodwill and charity (particularly in the case of gifts), is that no library, however well-endowed it might appear to be, can

(47) PATRICK, R.J. op cit., 175.

claim self-sufficiency in the acquisition of materials. Working on the impossible assumption of unlimited financial resources, at least one crucial factor would obviate any aspirations towards self-sufficiency: publications that cannot be acquired through the normal trade channels. Notable in this respect are most government publications, and publications of associations, societies, etc. Additionally, other factors like the sheer quantity of published information, scarcity of funds and, in a growing number of instances, particularly in the emergent nations, currency restrictions and similar constraints raise the premium on gifts and exchanges as beneficial supplements to an acquisitions programme.

Within a network, gifts and exchange schemes can also be organised among the participating members to consolidate the resources. Members could exchange periodicals, for instance, so that all the issues of one title would be in one place; gaps in holdings could be filled with unwanted duplicates and discards, etc. Gifts and exchanges have many permutations of use which should be explored for the total benefit of the network.

In concluding this section on the development of the document resources of a network, it is pertinent that the following observation be made. The co-operative acquisition methods discussed (i.e. the subject specialisation and joint purchase schemes, etc.) should be backed by well-organised co-operative storage and interlending arrangements since there would be little point in acquiring materials if they cannot be stored and supplied to others when needed. If these vital conditions do not exist at an appreciable level of efficiency, the collaborative development programme would have little practical meaning.

2.3.3 Bibliographical Organisation and Accessibility of Document Resources

A natural sequel to the acquisition of document resources is their bibliographical organisation. Under this heading comes a wide range of activities which permit intellectual and physical access to the document resources. Seen in the context of a library and information network, these activities assume even greater importance. Some of these activities are discussed in the following sections.

2.3.3.1 Standardisation

One of the characteristics of an information network, as has been indicated, is the existence of common standard message codes that provide understanding among the nodes on the network. Interpreted in a broader context, standardisation of systems and procedures is necessary for the successful operation of a network. The ISO Committee for the Study of the Principles of Standardisation states, as one of the aims of standardisation, the promotion of:

overall economy in terms of human effort, materials, power, etc., in the production and exchange of goods. (48)

In the current efforts towards the establishment of national and international networks to facilitate the free flow and exchange of information, and also with the advent of machine-based bibliographic systems, this aim (and consequently standardisation) has become a matter of increasing concern and relevance to library and information work.

(48) SANDERS, T.R.B., ed. The aims and principles of standardisation. Geneva, ISO, 1972, 5.

Although recent events have heightened interest in standardisation, its need has been realised for many years. The oldest recorded attempt in the field of bibliographic description can be said to have started in the United States of America at the beginning of this century with the production of the catalogue card of an internationally accepted size (75 x 125mm or 3 x 5 ins.) by the Library of Congress. This card was later introduced to Europe with the aim of making catalogue cards exchangeable and facilitating centralised cataloguing but the absence of uniform catalogue rules did not make the venture a successful one and the project was confined within national boundaries.

The next major attempt towards uniformity in cataloguing was marked by the publication of the Cataloguing Rules: Author and Title Entries (Anglo-American Cataloguing Rules) in 1908, an event which was not only a landmark in international standardisation but was also the herald of further attempts at uniformity. For, persisting differences in cataloguing principles in spite of the Cataloguing Rules led to the appointment of an eight-member working committee by the IFLA Committee on Cataloguing in 1954 to consider the international co-ordination of cataloguing principles. The recommendations of the Working Party paved the way for the International Conference on Cataloguing Principles (ICCP) which was held in Paris in 1961 with the aim of reaching agreement on:

basic principles governing the choice and form
of entry in the alphabetical catalogue of authors
and titles . (49)

(49) ANDERSON, D. International standardisation of cataloguing and bibliographical records. Unesco Bull.Lib., 27(2) Mar-Apr. 1973, 67.

The resulting "Paris Statement of Principles", was unanimously accepted by the delegates and their international adoption was recommended. Once again, the implementation of the "Statement of Principles" revealed a number of inconsistencies and ambiguities and this necessitated the convening of another conference to consider the issues. That conference, the International Meeting of Cataloguing Experts (IMCE) was held in Copenhagen in 1969 and had, as an additional aim, the establishment of international uniformity in cataloguing. Two working groups were set up as a result: one was to prepare a revised and definitive edition of the "Statement of Principles", while the other was to prepare a formula (of contents and elements) for an International Standard Bibliographic Description (ISBD) for monographs which would serve the needs of catalogues and national bibliographies. The revised edition of the "Statement of Principles" was published in 1971.

The International Standard Bibliographic Description for Monographs - ISBD(M) -- was also published in 1971. Its relevance to library and information networks lies in its bid to achieve uniformity in the recording of basic bibliographic data on all publications, using an internationally acceptable interchange format. This would make it possible for such data to be easily exchanged among information systems whether they are manual or computer-operated, national or international. ISBD(M), as the Chairman of the IFLA Committee on Cataloguing states, is:

designed primarily as an instrument for the international communication of bibliographic information. By specifying the elements which should comprise a bibliographic description and by prescribing the order in which they should be presented and the punctuation by which they should be demarcated, it aims at three objectives: to make records from different sources interchangeable; to facilitate their interpretation across language barriers; and to facilitate the conversion of such records to machine-readable form. (50)

(50) As quoted in COBLANS, H. Librarianship and documentation: an international perspective. London, Deutsch, 1974, 47.

Although the third objective stated above is the conversion of bibliographic records to machine-readable form, cognisance was taken of the fact that many countries (especially the developing countries) are far from achieving mechanisation and the computer age and that for these countries, the traditional form of cataloguing will continue to be the method of describing monographs for quite some time. Provision was therefore made for it to accommodate the traditional catalogues and at the same time provide for their eventual mechanisation. NATIS Objective 12 (Universal Bibliographic Control) recommends the adoption of ISBD(M) as well as its counterpart for serial publications - ISBD(S)-which was issued in 1974 and which sets out a recommended order of bibliographic elements that describe a particular serial together with the punctuation that should be used between the elements. (51)

Progress has also been made towards the achievement of uniformity in procedures and practices in other areas of bibliographic description. Within the framework of the UNISIST programme, for example, the establishment of the International Serials Data Systems (ISDS) is seen as a first concrete step towards the creation of a World Register of Scientific Periodicals (UNISIST Recommendation 3) which would provide universally-accepted codes for the titles of scientific journals as a means of providing unique designators for individual units of information such as papers in journals, monographs, technical reports, etc. A system of that kind would make the transfer or exchange of such units of information possible. UNISIST Recommendation 4 (Subject specification) is directed to the standardisation of subject

(51) ISBDs for non-book materials, printed music, cartographic materials and a general ISBD that is meant to be hospitable to all types of library materials have since been issued.

specification which would also involve the standardisation of terminologies, nomenclature and notation for data handling in science and technology. The existing diversity of classification schemes in use all over the world would make the process of achieving compatibility between existing and future information systems difficult to attain. The establishment of a Broad System of Ordering (BSO) within the UNISIST programme has therefore been advocated to serve as a switching mechanism to link the different individual classification schemes and thesauri in the process of information transfer. Through its Technical Committee 46 (ISO/TC 46), which is responsible for standards for documentation, books and library services, the International Organisation for Standardisation (ISO) has also issued a number of international recommendations all of which are aimed at standardising the methods involved.

The recent trends towards national, regional and international co-operation in the provision and exchange of information make standardisation an over-riding necessity, and the growing use of mechanised processes in the handling of information further strengthens its importance. The adoption and implementation of the recommended standardisation practices could help foster the understanding among the nodes of a network which, as has been noted, is one of a network's important attributes.

2.3.3.2 Directory and Switching Capacity

An essential element in a library and information network is the existence of what Becker and Olsen, in their characterisation of networks, call a directory look-up system - a directory or bibliographic

record - that provides for location of needed items within the network. Union catalogues of books and union lists of periodicals (both of which may be computer-based or manually operated) provide these records.

In his guide to union catalogues, Willemin ⁽⁵²⁾ defines a union catalogue as:

an inventory common to several libraries and containing all or some of their publications listed in one or more orders of arrangement ,

and gives, as its main unquestioned function, the location of publications. This function makes union catalogues, as well as union lists, tools "for the rationalisation of inter-library loans". As the bibliographical record they constitute the key or the "navigational guides" to the resources of the network and thus substantiate the philosophy of networking which is that of resource sharing.

To optimise the use of the resources, however, the network should have a switching capacity to determine optimum communication routes within the network or, it should be possible for queries or requests to be transmitted to the appropriate information resource by the most convenient route, and for the answer or relevant material to be transmitted back to the source of the query or request. The switching capacity would operate through a switching or referral centre equipped with the catalogues of the holdings of the total resources of the network. Descriptions of the resources at each node of the network would also be given to enable a request and its answer to be transmitted over the appropriate routes.

(52) WILLEMIN, S. Technique of union catalogues: a practical guide Paris, Unesco, 1966, 6.

2.3.3.3 Communication System

The network would need communications to bridge its nodes and to provide the necessary system on which the performance of other equally important attributes of the network would entirely depend. The switching capacity of the network, which has been discussed above, would obviously need a dependable communication system to perform efficiently.

Similarly, the network's bidirectional capability, another important network attribute, would be ineffective in an unfavourable communications environment. Bidirectional capability is the ability of the communications system of the network to provide a "conversational mode format", that is, a question/answer capability. It allows interaction with the network and permits the modifications of search strategies as necessary. Ideally, a searcher at one point or node on the network should be able to establish a two-way contact with another point, make an enquiry, modify it if necessary and continue with the interaction until the query is satisfactorily answered. Evidently an inefficient communication system would frustrate efforts in this direction.

The preceding aspects of the communication system are basically concerned with message transfer. But a different aspect, of no less importance, is document delivery. After a searcher has searched the data base or bibliographic record, etc. and has identified specific references, the next step would be the provision of physical access to the documents. There are two sides to this issue. First, the availability of the documents within the network and second, the ability of the network to provide speedy access to the documents. The concern here is with the latter.

One of the points often advanced against networks and co-operative acquisition and joint ownership practices, is the possibility of delayed access when requested documents have to be transported from one point of the network to another. This is a concern which only an efficient document delivery system will help to assuage. As has already been observed, a co-operative acquisition programme must be backed by a well organised interlending arrangement and, by implication an efficient document delivery service. Patrick ⁽⁵³⁾ gives a good illustration of the point when she says:

A professor of African history and literature may be displeased to learn that the library will not collect beyond the minimal level in this subject area; however, his displeasure may be alleviated if he knows that another consortium member has been able to develop a comprehensive collection in African history and literature, to which he has not only bibliographical access as a result of consortium exchange of bibliographies, but also physical access, in that a truck delivery system will bring him the book he requests within 24 hours .

The truck delivery system (or the shuttle system) is one of several ways in which a document delivery service may be operated. But whatever system, or combination of systems, a network would adopt, efficiency of service should be the primary consideration.

2.3.4 Users

It may be recalled that Duggan gives, as one of the important factors in the operation of a library and information network, selective criteria of network function, i.e. guidelines of what is to be placed on the network. Establishing guidelines for what to put into the network by way of publications, services, etc., for instance, implies a

(53) PATRICK, R.J. op cit., 173.

thorough knowledge of what would make the network beneficial to the users. As a necessary extension of this, it also implies an identification of the users and an establishment of their needs. These requirements make the user community a factor to be considered, indeed a focal element, in the design and planning of networks - a fact which is easily appreciated if it is considered that users are purported to be the ultimate beneficiaries of the often elaborate and expensive network.

2.3.4.1 Identification of Needs

Having a precise knowledge of exactly what constitutes user needs and how to satisfy them can, however, be problematic. This may in part be due to the ineffectiveness of known methodologies of user studies - interviews, questionnaires, the diary method, observation and analysis of existing data, etc. - all of which have their advantages and disadvantages, and also the diversity of factors which influence the information requirements of users. Drawing on results from previous surveys in the scientific field, it is known that the scientist who is engaged in basic research has broader, less defined, needs and therefore has a great need for information. The technologist, on the other hand, normally has narrow questions but needs a lot of data. The information requirements of the scientist or technologist may differ from task to task and even at different periods in the execution of any one task. Another factor is the increased subject specialisation of scientists as a result of the fragmentation of science. Science has thus become a cross-disciplinary subject and although a scientist may be engaged in a specific area of specialisation

such as particle physics or ergonomics or biodeterioration, etc., he still depends on information from other subject areas for the performance of his duties. His information needs have become even more difficult to predict.

These constraints notwithstanding, library and information networks should be developed with the users and their needs in mind. The ineffectiveness of known methodologies of user studies has been noted. Taking questionnaires (probably the most frequently used technique for user studies) as an example, it is realised that they have the advantage of reaching a wider sector of the community especially when they are mailed but they also have the following disadvantages:

- i) the response rate is likely to be low;
- ii) one has no way of knowing the respondent's state of mind when he was answering the questions, e.g. he might be feeling flippant at the time;
- iii) one has no way of knowing whether the respondent understands the questions;
- iv) it is impossible to probe an incomplete response. (54)

So do the other techniques have their advantages and disadvantages. A combination of methods, as for example, the questionnaire and interview or face to face methods, could prove an effective means of eliciting the required information. Properly planned, administered and interpreted, user surveys could at least serve as useful pointers to user requirements and also act as a feed-back mechanism for determining the effectiveness of services provided.

(54) WOOD, D.N. Discovering the user and his information needs. Paper presented at the Joint Conference of the Midlands and Northern Branches, Oxford, 10th-12th April 1969. Aslib Proc., 21(7) Jul 1969, 265.

2.3.4.2 Education and Training

The education of the user in the effective utilisation of library and information resources has been a major concern for quite a long time. This has arisen out of the unhappy realisation that most users are ignorant of the extent of the resources and services at their disposal. Using scientists again as the identified user community, this observation will be found substantiated by various surveys and reports. The 1948 Royal Society Conference on Scientific Information drew attention to the inability of the scientist to use the literature of his subject after his academic training and put forward a number of recommendations to improve the situation. Acting on the recommendations, the (British) Library Association set up a Working Party which suggested a three-point programme for the instruction of scientists in the use of libraries and in bibliography. (55) It was a graduated programme which covered the entire university career of the student - from the undergraduate level to the postgraduate level where the final instruction could be undertaken partly by the library staff and partly by the academic staff.

The seriousness with which the situation is viewed is evidenced by several similar reports which have been issued since then. The Weinberg Report, (56) the Hale Report, (57) the Parry Report, (58) etc.

(55) GREAT BRITAIN. Library Association. Council Notes. Libr. Ass. Rec., 51(5), May 1949, 148-150.

(56) UNITED STATES. President's Science Advisory Committee. Science, government and information; the responsibilities of the technical community and the government in the transfer of information; a report... (Chairman, A.M.Weinberg). Washington, D.C., U.S. Government Printing Office, 1963.

(57) GREAT BRITAIN. University Grants Committee. Report of the Committee on University Teaching Methods. London, HMSO, 1964 (Chairman Sir E.Hale)

(58) GREAT BRITAIN. University Grants Committee. Report of the Committee on Libraries. London, HMSO, 1967. (Chairman, Dr.T.Parry).

have all stressed the importance of formal instruction in the use of scientific literature, dispelling, in the process, the erroneous notion held by most academics that such knowledge is intuitively acquired. The Parry Report illustrates the pervading ignorance in the use of library resources in a survey covering twenty-three universities: only 37% of the total number of undergraduates knew what abstract journals were, 14% had been taught to use them, 25% did not know whether their library had an author or subject catalogue, and 41% did not know of the existence of the inter-library loans service.

In a bid to ameliorate the situation, a number of high institutions of education in Europe, America and Britain have introduced formal instruction in the use of scientific literature into their regular teaching programmes. The contents of the courses vary from institution to institution and range from short seminars to lengthy courses with practical work. Generally, the courses are known to have been beneficial to those who have attended them.

Although the scientific community has been used to illustrate the problem, the observations are equally applicable to the other sectors of the community and are by no means the bane of scientists alone. So general is the issue, and such is the concern, that user education is featured in the Objectives of NATIS. Objective 2 (Stimulation of user awareness) stresses that awareness of the existence of information resources and the advantages they offer should be cultivated early in life and recommends that:

Use of libraries should therefore be a part of instruction from the primary school level onwards so that seeking information becomes a normal part of daily life. (59)

(59) UNESCO. NATIS; national information systems. Objectives for national and international action. Paris, Unesco, 1975, 12. (COM-74/NATIS/3 Rev.).

The Objective recommends further that the content of the courses should be expanded to tally with the progress in education until at the university level where:

courses in the use of specialized literature and sources of information should be made available as part of the regular curricula, and these courses should be set up with the full co-operation of the university libraries [as well as]... appropriate institutions [like] schools of documentation, librarianship and archives, national libraries and archives, or specialized documentation centres. (60)

The interest and facility thus acquired should be maintained and encouraged throughout professional life where they would be usefully employed in their research and development programmes.

The NATIS objective is of course a long-term plan expressed in the context of the development of a total national information system. It however helps to portray the acute presence of the problem and to underline the importance of user education. Any library and information network cannot but have an appropriately structured user education programme as an important part of its overall development plan if the resources are to be effectively used.

2.3.5 Manpower for Networks

The successful implementation of the programmes of the network would obviously depend on the availability of qualified personnel. This topic will be treated in greater detail later on in this work. Suffice it to say at this point that manpower training and development should be considered essential elements in the design and development of a library and information network.

(6) Ibid, 12.

2.3.6 Barriers to Networking and Resource Sharing

It may be apparent from the discussion so far that a library and information network is fundamentally a mechanism, or an organisational arrangement, for the sharing of resources and that these resources are the sum total of all the elements that constitute a library or information centre.

2.3.6.1 Definition of Library Resources

Fetterman, ⁽⁶¹⁾ offers the following definition of "library resource" which is considered adequate. He defines it as:

any and all of the materials, functions, and services which constitute a modern library system.

He further defines "materials" as:

all of the imprinted material which a library handles together with such nontraditional items as microforms, films, and machine-readable data bases.

The term "functions" relates to:

the activities required to purchase, process, store and retrieve the material,

and "services" are:

those activities and procedures used to relate the users to the material.

He concludes that:

The resources of any library must also include the expertise of the professional and nonprofessional staff. It is this amalgamation of people, processes, ideas, materials and money which form the substance of a library and can be described as its resources.

(61) FETTERMAN, J. Resource sharing in libraries - why? In Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973 at Pittsburgh, Pennsylvania... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 1.

Resource sharing then may be said to be the process by which a group of libraries and/or information centres, operating through the administrative machinery of a network, plan and develop their resources (i.e. materials, functions and services) for the common use and benefit of all members of the group. It is a pooling of resources, a co-operative effort, for increased capability, greater user satisfaction and economy of effort. "Pooling resources", however, has the following implications: it presupposes the existence of the resources thus to be "pooled", and it also implies the planned organisation and development of the resources to facilitate their "pooling" and subsequent sharing. These conditions form the bedrock of a resource sharing venture .

2.3.6.2 Barriers

Even where the above two basic conditions are satisfied (and there are many situations in which they are not) there still exist certain constraints or barriers which tend to inhibit efforts towards the establishment of networks for resource sharing. In 1968 the American Library Association held a series of ten one-day conferences in an attempt to identify these barriers. The participants who included librarians, library trustees, school administrators, and others, identified forty-six major barriers which Nolting ⁽⁶²⁾ has summarised under the following major headings:

- i) Psychological barriers - fear of loss of local autonomy, clash of personalities, inertia and indifference, unwillingness to experiment, etc.
- ii) Lack of information and experience - lack of knowledge of the needs of users, unpredictability of demands on the library by its legitimate users, failure of small libraries to realize the value of resources of larger libraries, lack of public interest, unawareness of successful co-operative efforts in other states.

(62) NOLTING, O.F. Mobilizing total library resources for effective service, Chicago, ALA, 1969, 20.

- iii) Traditional and historical barriers - lack of adequate funds, fear by large libraries of being overused and undercompensated, inadequacy of libraries to serve their own needs, limitations on access to academic and special libraries, institutional competition between school and public libraries.
- iv) Physical and geographical barriers - distance between libraries and distance of users from libraries, difference in size of collections, lack of space in public libraries to serve students, delays in satisfying needs and requests of users.
- v) Legal and administrative barriers - too many government units, lack of communication across jurisdictional lines, lack of bibliographical tools and controls, incompatibility of equipment and procedures and rules between libraries, lack of properly trained staff, lack of appropriate state enabling legislation, lack of creative administrative leadership, etc.

These barriers, bewildering as they may appear, are not representative of the absolute situation. In different environments (in the developing countries, for example) the conditions might be essentially different. But listed here, they are a forceful indication that the road to networks and resource sharing can be a long and arduous one. But the barriers are not wholly insuperable and with the right amount of effort, dedication and understanding from all concerned - be they librarians, users or administrators - an effective solution could be achieved.

CHAPTER 3

THE DEVELOPMENT OF LIBRARY AND INFORMATION SERVICES IN ENGLISH-SPEAKING WEST AFRICA; A HISTORICAL SKETCH

3.1 The Sub-region - Its Geography and History

The history of the development of library and information services in English-speaking West Africa has been relatively well documented. ⁽¹⁾ All the same, there are some grounds for repetition in order to provide the right background and conceptual framework within which to appraise the existing library and information resources and services in the sub-region. A highlighting of the salient features in the development of these resources and services, which are reviewed

(1) See for example:

- i) ARMSTRONG, C. Wesley. A short history of libraries in Liberia. Monrovia, University of Liberia, 1973.
- ii) BELL, S. Library development in Africa; a study of its foundations and administrative policy in Ghana, Nigeria, Sierra Leone, Uganda, Kenya, Tanzania and Zambia. A thesis presented for Part II of the Diploma in Librarianship, University College, London, September 1967. (Unpublished).
- iii) EVANS, E.J.A. A tropical library service; the story of Ghana's libraries. London, Andre Deutsch, 1964.
- iv) KOTELI, S.I.A. The social determinants of library development in Ghana with reference to the influence of British traditions. Thesis submitted for the M.Phil (Arts), University of London, April 1972. (Unpublished).
- v) ODERINDE, N.O. Public library development in Nigeria; past, present and future. A Master's thesis submitted... for the award of Master of Arts, Loughborough University of Technology, May 1978. (Unpublished).
- vi) PARKER, J.S. Library development planning; a comparative study of the development, diffusion and application in developing countries of the concept of integrated national planning of library services with special reference to the work of Unesco. Thesis submitted for [the] Fellowship of the Library Association, February 1978. (Unpublished).
- vii) THOMPSON, J.S. Post-war development of librarianship in former British West Africa; a historical description of library development in Ghana, Nigeria, Sierra Leone and The Gambia. Master's Thesis, University of London, 1968/69. (Unpublished).

later, may therefore not be an unwarranted repetition.

English-speaking West Africa comprises The Gambia, Ghana, Liberia, Nigeria and Sierra Leone, all of which, with the exception of Liberia, were British Colonies and belonged to the politico-geographical entity which was known as British West Africa before its disintegration with the attainment of political independence at different stages in the histories of these countries. Liberia, the only black African state not to have been subjected to colonial rule, is the oldest among the West African countries and is, indeed, the oldest republic on the African continent. It was settled by negroes (historically known as Americo-Liberians) who migrated from the United States of America after the suppression of the transatlantic slave trade. Most of the migration took place between 1820 and 1865, and its capital, Monrovia, was founded in 1822.⁽²⁾ Liberia was declared an independent republican state in 1847.

Of the four former British West African countries, Ghana was the first to achieve independence from colonial rule. With independence in 1957, Ghana (area 238,539 square kilometres; population 8,545,561⁽³⁾) became the first black African country south of the Sahara to attain that status. It adopted a republican constitution in 1960.⁽⁴⁾ The second country to achieve independence was Nigeria which, with an area of 923,773 square kilometres and a population of 55,074,000 (1970), is

(2) Encyclopaedia Britannica, 15th ed. Vol.10, 1974, 851-856.

(3) 1970 preliminary census.

(4) Encyclopaedia Britannica, 15th ed. Vol.8, 1974, 136-145.

the most populated country in Africa. It became independent in 1960 and, like Ghana, adopted a republican constitution three years later. ⁽⁵⁾ Sierra Leone followed with its independence in 1961 and a republican constitution in 1971. It has an area of 72,325 square kilometres and an estimated population of 2,600,000 (1972). ⁽⁶⁾ The last to gain independence, the smallest in the group (as well as being the smallest country on the African continent), was The Gambia which became independent in 1965 and like the others, also adopted a republican constitution. It has a total area of approximately 11,500 square kilometres and an estimated population of 375,000 (1971). ⁽⁷⁾

The region is thus composed of countries with diversified characteristics. The implication of these diversifications (in size, population and, in the case of Liberia, in history also) will become apparent in the appraisal of the resources in the individual countries and, by implication, in the region as a whole.

3.2 Library and Information Services - the Beginnings

3.2.1 Academic Libraries

Ogunsheye ⁽⁸⁾ dismisses the notion that there was no library in Nigeria before 1948, the year often quoted as marking the beginning of librarianship in Nigeria. She writes:

(5) Ibid., vol.13, 1974, 85-96.

(6) Ibid., vol.16, 1974, 734-739.

(7) Ibid., vol.7, 1974, 863-866.

(8) OGUNSHEYE, F.A. Presidential address: planning for nation building. Nigerian Libr., 6(1 & 2) Apr & Aug 1970, 11.

It would be wrong to assume... that libraries were introduced into Nigeria in 1948. The history of libraries in Nigeria can be traced back to the Arabic collections that existed in various parts of the North for centuries as extensions of the Timbuctoo centre for learning. The inhabitants of Lagos have had some form of library service in the Tom Jones Library founded between 1910 and 1920. This library by 1932 had become an established subscription library...

She states further, however, that:

The period of proper library history can be said to start with the establishment of the University College Library in 1948 ... This library has been the pivot of library development for Nigeria ever since.

She thereby agrees with Harris (9) that:

It was with the establishment of the University Library at Ibadan that Nigeria acquired a library in the fullest sense, equipped for reference and research, permanently established, professionally directed and staffed, and provided with an assured budget and an appropriate building.

Although the situation in Ghana (then The Gold Coast) was not too dissimilar from that of Nigeria, Ghana, on the whole, was able to achieve a lot more than the other colonies, thanks, inter alia, to "a more enlightened leadership...[and] a comparatively buoyant economy." (10) Kotei (11) traces the growth of book clubs, literary societies and private libraries from the seventeenth to the twentieth century but there is no evidence of any properly organised library until the founding of Achimota School in 1924 and the development of its library under professional guidance into "the most extensive College library in West Africa in terms of subject range as well as volume." When the University College was established in 1948

(9) HARRIS, J. Libraries of learning and research in Nigeria. Libr. Wld., LXI(746) Aug 1962, 68.

(10) KOTEI, S.I.A. op cit., 267-268.

(11) Ibid, 96-130.

(the same year as Ibadan) it inherited 25,000 volumes from the Achimota School Library, ⁽¹²⁾ and a Librarian of the "right calibre" was appointed the same year. ⁽¹³⁾

It was not a matter of coincidence that the Gold Coast and the Ibadan University Colleges (now University of Ghana and University of Ibadan respectively) were both established in 1948; they share a common history up to a point. In 1943 the British Government appointed two Commissions to enquire into the possibility of establishing universities or university colleges in West Africa. The Elliot Commission reported in 1945 and recommended the establishment of university institutions in each of the three colonies of the Gold Coast, Nigeria and Sierra Leone. A minority report was, however, submitted by some members of the Commission, favouring the establishment of one university at Ibadan, Nigeria, for the whole of West Africa. The Asquith Commission, which also reported in 1945, concentrated on the fundamental principles which should guide the development of higher institutions in all colonial university colleges, and recommended the establishment of an Inter-University Council to advise on how best to achieve those principles.

On the question of the type of university institution to establish, official inclination was towards one university at Ibadan for the whole of West Africa. Local reaction in The Gold Coast was against the idea and as "the economy was buoyant enough to provide for a university", the establishment of one was recommended. ⁽¹⁴⁾ In the event, a university

(12) Ibid., 189.

(13) Ibid., 401.

(14) Ibid., 393-400.

college each was established in The Gold Coast and Nigeria.

Both reports stressed the importance of the role of the library in a university and as the Asquith Report stated:

we cannot emphasize too strongly the paramount importance of ... the building up of a university library ... to rank with university libraries elsewhere. (15)

The developments in Nigeria and Ghana contrast with those in Liberia and Sierra Leone. The University of Liberia had its foundation in Liberia College which was established in 1862. And although plans were formulated for the establishment of a library

that would support the curriculum of the College ... the library's development lagged for a long period. (16)

There is no indication as to what progress had been made towards the establishment of the library by 1949 but whatever had been achieved was unfortunately destroyed in that year by fire (together with all records of Liberia College) so that when the University of Liberia was created in 1951, there was no library to inherit. As a result of an appeal for assistance, the Ford Foundation sponsored a study into the needs of the library. The resulting report, the Lancour Report, (17) was published in 1960 and represented:

(15) As quoted in DEAN, A.J.E. Organisation and services of university libraries in West Africa. In Comparative and international librarianship; essays on themes and problems, edited by Miles M. Jackson. London, Bingley, 1970, 116-117.

(16) ARMSTRONG, C. Wesley. op cit., 14.

(17) This report, The University of Liberia Library: report of a survey, should be distinguished from the Lancour Report of 1958 on Libraries in British West Africa which was commissioned by the Carnegie Corporation of New York, and was concerned with the education of librarians in West Africa. Dr. Harold Lancour, the author of both reports, was Associate Dean of the University of Illinois Graduate School of Librarianship.

the first systematic plan for the development of the University of Liberia Libraries. (18)

As part of the implementation of the Lancour Report, a team of library consultants from Cornell University assisted in the organisation of the library from 1962 to 1968, and the library has been under professional direction since then.

The second, and the only remaining, higher institution in Liberia began as the Cuttington College and Divinity School and was established in 1889. It was closed down in 1929 and was re-opened in 1949 as the Cuttington University College.

Armstrong ⁽¹⁹⁾ reports that:

For almost 60 years this institution existed and operated its academic programs without a library ... However, those scholars who were in charge of academic planning used their private library resources, and in some cases, made these resources available to students.

The fortunes of the College changed for the better and through a series of donations - books collections and particularly grants - the library had acquired some 6,650 volumes by 1956. In 1962, twenty-two years after its establishment, the College appointed its first professional librarian. Even though the library was not to be spared the fate of Liberia College, in that fire destroyed most of its resources in 1965, it survived the ordeal, once again through generous grants, and in fact moved into a new building in 1968, the construction of which was made possible through a grant from the Ford Foundation.

The development of the Fourah Bay College Library, Sierra Leone, was more akin to the Liberian pattern than to those of its "sister colonies"

(18) ARMSTRONG, C. Wesley. op.cit., 15.

(19) Ibid., 30-31.

of Ghana and Nigeria. Fourah Bay College (now a constituent College of the University of Sierra Leone), was founded by the Church Missionary Society in 1872 and was affiliated to the University of Durham in 1876. The library dates from the inception of the College but "it had a slow start" and it was not until 1955 (eighty-three years later) that a professional librarian was appointed, and steps were taken to develop the library. (20)

The Gambia has no university institution.

3.2.2 Special Libraries

Factors like the enthusiasm generated by nationalists, the encouragement and help of successive British governments and the impact of international organisations, metropolitan cultural agencies, and foundations contributed to the progress of higher education and library development in English-speaking West Africa. (21) Special libraries, on the other hand, were established as the direct result of the creation of a number of scientific research institutions by the colonial governments in fields related to their specific needs. (22) The needs (or interests) were mainly in the areas of tropical medicine, agriculture and geology.

The first of such institutes to be established in Ghana (then The Gold Coast) was the Medical Research Institute in 1908 to cater for the health needs of the government and the people. (Early on in 1902 a medical service had been established). A year after the establishment of

(20) THOMPSON, J.S.T. Library development in Sierra Leone, Sierra Leone Libr. J., 1(1) Jan 1974, 12.

(21) DEAN, A.J.E. op cit., 115-118.

(22) OGUNSHEYE, F.A. Nigerian library resources in science and technology. Ibadan, University of Ibadan, Institute of Librarianship, 1970, 2. (Occasional Paper No.2).

the Medical Research Institute, its counterpart was established in Nigeria.

In the agricultural and mining sectors, the interests cannot be said to have been altogether altruistic; they can be seen to have been export-oriented. The oldest of the research institutes was the British Cotton Growers Association Research Station which was established (with its library) in Ibadan, Nigeria, in 1905. (It was later (1910) to become the Department of Agriculture, and the National Department of Agricultural Research in 1924). For the same purpose, other research stations were established over the period to carry out research into cocoa, cotton, oil palm, forestry and other exportable commodities while Geological Survey Departments featured prominently in the colonial research policy.

Another feature of the colonial policy was the regionalisation of research activities where topics were of regional or interterritorial interest. Thus there were, for example, the West African Cocoa Research Institute at Tafo, Ghana; the West African Fisheries Research Institute in Freetown, Sierra Leone; the West African Institute for Oil-Palm Research in Benin City, Nigeria, etc. The West African Research Organisation (WARO), was established in Accra, Ghana, as the administrative and co-ordinating centre for the regional programmes.

Most of the colonial research programmes (and therefore their libraries) were sited in Ghana and Nigeria. These libraries have become rich sources of information in their specific subject areas. The library of the Cocoa Research Institute in Ghana, for instance, is thought to be the best in the world on that subject. In the other countries where there was less intensive research activity (one would imagine because they held less economic promise than Ghana and Nigeria) the foundations

for special library development were minimal or virtually non-existent. This is particularly so of The Gambia which is the smallest and the poorest country in natural and economic resources, and the one with the least developed library and information resources of any kind.

The above observations do not relate to Liberia which was not part of British West Africa and which, indeed, has had no past colonial affiliations as has already been noted. Like The Gambia, however, the special library sector of its library and information resources remains largely underdeveloped (very much like the entire information resources themselves). In addition to reasons like the absence of trained personnel, proper funding and space which have hindered the organisation and growth of special libraries, (23) the absence of an active research environment in Liberia must also be considered as one of the most important contributing factors. The only research institutions of any significance are the Institute of Tropical Medicine at Harbel and the West Africa Rice Development Association (WARDA) in Monrovia.

3.2.3 Public Libraries

Public library development in Ghana had an active twenty-two-year gestation period which began with the efforts of the philanthropist, the Rev. John Aglionby, Lord Bishop of Accra, and culminated in the establishment of the Gold Coast Library Board by legislation in 1950.

As early as 1928, the Bishop had considered the question of libraries for The Gold Coast and had provided an open 6,000-volume

(23) ARMSTRONG, C.Wesley. op cit., 91.

library in Accra, the capital, "for anyone who wished to make use of it." (24) Later on he was to donate £1,000 towards the establishment of a library. These, and the Bishop's other efforts, were matched by corresponding interest by the Government and in a matter of one year (1938) two official committees had been appointed to advise on the establishment of a public library. An appeal to the Carnegie Corporation of New York for a grant for the provision of books for the proposed library led the Corporation to appoint two missions, first the Vischer-Wrong mission of 1939, and a follow-up mission, the Fegan mission of 1942, to look into the question of library provision in British West Africa as a whole.

For The Gold Coast the two reports of the missions recommended the establishment of a library to serve the whole of the country although whereas the Vischer-Wrong Report recommended the development of a national circulatory library to supplement the existing Achimota School Library which would eventually become more general in nature, the Fegan Report favoured the establishment of a national lending library. Unfortunately, the war prevented the Carnegie Corporation from implementing the recommendations. It, however, happened that the British Council had about that time opened its offices in the West African colonies, and offered to help. That was in 1943 and that was to mark the beginning of the British Council's involvement in public library development in West Africa.

One of the recommendations of the Fegan Report was the establishment of a library school to train the personnel that would be required to administer the lending library if the scheme was to succeed. The British Council decided to take this as a starting point and, jointly

(24) EVANS, E.J.A. op cit., 7.

with the Governments of the four colonies, established the school at Achimota in 1944, the first of its kind in Africa. Under Miss Ethel Fegan (of the Fegan Report) who had been employed by the British Council, the School started with a student body of fourteen from The Gold Coast, Nigeria and Sierra Leone. After one year, however, it was closed down because the Government considered the prospects of an expanding library service to absorb the trained assistants very remote at that time. (25)

In 1944, the British Council set up a Library Advisory Committee which in 1945 was to become The Gold Coast Library Advisory Committee - an Advisory Committee to the Government. Although much of the Committee's discussions and decisions within the four years that it functioned was later rejected or altered:

few of the members of the Committee could have realised how rapidly the library services they were considering would spread, or how soon they would be accepted as an essential part of the educational development of the country. (26)

The decision to close the Library School was, sooner than later, to prove a rather premature and short-sighted one.

The Advisory Committee concluded its work in January 1949 with the drafting of a bill establishing the Gold Coast Library Board, a statutory corporation that would control the library service. On 1st January 1950, the bill became law and the Gold Coast Library Board was empowered to "establish, equip, manage, and maintain" libraries in the country. (27)

(25) KOTEI, S.I.A. op cit., 237-242.

(26) EVANS, E.J.A. op cit., 23.

(27) The clause was misleading because of the seemingly sweeping nature of the authority it endowed on the Library Board over all types of libraries in the country. The intention was to make the Library Board the sole authority over public library services in the country. This anomaly was to stand for twenty years before being corrected.

The British Council had opened its library and reading room (in Accra) in February 1945 and had appointed a librarian to run the service. In 1950 the Council presented the Board with some 27,000 books, and its sole expatriate librarian became the first Director of the Board.

The establishment of the Board was unique in the history of librarianship in tropical Africa; it was the first of its kind, and was significant in the sense that it made the provision of public library services a central government, and not a local government, responsibility. It also provided:

a working example of a nationally-organised service, established on a firm legislative basis and with centralised policy-making and administration... [and has] acted, in varying degrees, as a model for the subsequent development of similar national libraries in other former British colonies in Africa... (28-29)

The existence of libraries in Nigeria (the Tom Jones Library, etc.) at the beginning of the century has already been noted. For all intents and purposes, however, such libraries as existed were for the "privileged class" (30) and bore no relationship to Bishop Aglionby's "libraries for the people" movement in The Gold Coast. A parallel development had failed because of the lack of support from the Government. Sir Allan Burns, one-time Chief Secretary to the Government, tried unsuccessfully to get the Colonial Administration interested in the provision of a public library for Lagos. During his first service in

(28) PARKER, J.S. op cit., 90.

(29) The countries are: Botswana, the former Eastern Nigeria, Kenya, Malawi, Sierra Leone, Swaziland, Tanzania, Uganda and Zambia.

(30) ODERINDE, N.O. op cit., 19.

Nigeria he had tried in vain to persuade the Governor that Government funds could well be spent on a public library. As a result of this failure the Lagos Book Club, a subscription service, was started.

When he returned to Nigeria in 1929 (after a period of service in the Bahamas) he found that "the need for a library was more than ever evident" but the Government remained unconvinced of the need. Sir Allan was more successful with the Carnegie Corporation than he had been with his own Government. In 1932 he was given a \$6,000-grant "for library development in Nigeria". With this he expanded the Book Club into the Lagos Library which still exists as a subscription library albeit with a dwindling membership. (31)

A much broader-based library, the Lagos City Library, was established in 1946 jointly by the Lagos Town Council and the British Council, which, as has been observed, had established its offices in West Africa in 1943. By 1944 discussion had already begun between the two organisations about the possibility of establishing a library in Lagos. Recommendations by the British Council, particularly stressing the need for the involvement of the Government in the provision of the service, were adopted and the library was opened in August 1946. A change in the constitution of the British Council prevented it from continuing with its financial assistance to the library and, in 1950, the Lagos City Council was forced to take over its management completely, running it on grants provided by the Government. In August 1952, the library was re-named the Lagos Municipal Library. (32)

These developments had taken place in Lagos, the capital and the seat of Government of Nigeria which, at this moment in its history, had the three major administrative units of the Eastern, Western and Northern

(31) Ibid. 19-27. See also AGUOLU, C.C. Foundations of modern libraries in Nigeria. Int. Libr. Rev., 9(4) Oct 1977, 461-483.

(32) Ibid., 29-32.

Regions. Public library services in all three regions had their origins in "reading rooms" which were a common feature of nearly every town, and which served principally as the media for the dissemination of war information, ⁽³³⁾ and also as the dumping ground for the discarded reading material of the colonial administrators. ⁽³⁴⁾ These "reading rooms" continued to exist after the war and although from 1946 the British Council had embarked on the provision of public library services, it was the Ibadan Seminar which marked the turning point in public library development in Nigeria.

The Ibadan Seminar, the Unesco-sponsored Seminar on the Development of Public Libraries in Africa, was held at Ibadan, Nigeria, in 1953. The purpose was to study the public library problems in Africa and to draw up plans and proposals for their development. And as Bell ⁽³⁵⁾ records, the Seminar:

inspired the Eastern Nigeria Government to undertake library development

and, as an initial action, to invite Miss Evans of the Gold Coast Library Board to advise on legislation for its development. ⁽³⁶⁾ In November 1955, the Eastern Nigeria Library Board was set up by ordinance as a statutory body "to establish, equip, manage and maintain libraries in the Eastern Region". The Board's Regional Central Library at Enugu was

(33) ADEGOKE, A. The evolution of libraries in Nigeria. Int.Libr.Rev. 5(4) Oct 1973, 414.

(34) ODERINDE, N.O. op cit., 87.

(35) BELL, S. op cit., 223.

(36) Miss Evans writes that delegates to the Seminar were advised to visit The Gold Coast on their way to Ibadan to "see the excellent public library services operated by the Gold Coast Library Board in Accra and throughout the territory". It became obvious at the seminar, she continues, that although the Board had been in existence for a short period of time what it had already achieved was "far in advance of any other African territory". See EVANS, E.J.A. op cit., 46.

"adopted" by Unesco as the third of its pilot public library projects in 1957 (37) and was in many ways the most successful of Unesco's projects:

not least because, with some judicious encouragement from the British Council, a sound foundation for the project had already been laid... (38)

The Eastern Nigeria Library Board continued to flourish until the division, and further division, of Nigeria into different States in 1967 and 1975 respectively and the Civil War (1967-1970), in particular, halted its progress.

The Western Region was also spurred on by the Ibadan Seminar to develop its public library services but without the articulation, and the success, of the Eastern Region. The Regional Library was established in 1954 originally as part of the Western Region Literature Committee. It was later put under the Ministry of Education in 1955 where:

[it began] to establish children's libraries without expert advice [and also was] spending money on building up a collection of books in Ibadan, but again without a plan or the benefit of librarians. (39)

A Library Working Committee which functioned for three years (1956-1959) recommended the appointment of qualified librarians but the provision of public library services within the Region continued to be unsystematic and unco-ordinated. A Committee on Library Development was appointed by the Regional Government in October 1961 to enquire into the state of library development in the Region and to make recommendations for

(37) OKORIE, K. The new Regional Central Library, Enugu, WALA News, 3(4) Feb 1960, 184.

(38) PARKER, J.S. op cit., 20.

(39) As quoted in ODERINDE, N.O. op cit., 88.

improvement. The Committee's report was issued in 1962 and the implementation of the recommendations would have considerably raised the level of public library services within the region. The political changes in Nigeria may have genuinely prevented the report from being implemented but it is a reflection on the type of prevailing concern for the development of library services in the region that Oderinde (40) makes the following remarks:

On the whole, however, in spite of the break-up of the country into States, the problem is still with that part of Nigeria.

He explains the "problem" as the absence of effective and efficient legislative instrument (for library development), slow Government machinery ("it takes a lot of persuasion and hard lobbying to obtain Government action on any recommendation"), and inadequate financial support.

Notwithstanding the possible existence of early Arabic and other collections in the North, public library services in the Northern Region began with the establishment of reading rooms or war information dissemination centres as had been the case in the other regions. In 1952 the Northern Regional Library Service was established in order to help Native Authorities in the region develop their reading rooms into libraries and, in the process, evolve a co-ordinated library system for the region. Originally established under the Ministry of Education, the service was placed under the Ministry of Information in 1960. (41)

It was mainly a book distribution service and was operated from the Regional Library at Kaduna. With the exception of the Kaduna

(40) ODERINDE, N.O. op cit., 91-112.

(41) MOID, S.A. Northern Regional Library. Nigerian Libr., 1(4) Sep 1965, 175.

Lending Library which was started in 1957, and a Regional Reference Library which was opened in 1963, the service remained essentially the same, albeit with the active support and encouragement of the Regional Government. In 1962 a Library Adviser was appointed to conduct a survey into the library needs of the region. In his report, published in 1964, the Library Adviser formulated a completely new policy for the library service to meet the increasing educational and recreational needs of the region. (42) The report was accepted by the Government but once again the creation of the new States prevented its implementation. The development of library services has become the responsibility of the individual States.

Modern public library development in Sierra Leone started in 1959 when legislation, modelled on that of the Ghana Library Board, was passed establishing the Sierra Leone Library Board and empowering it "to establish, equip, manage and maintain libraries" in the country. Before then, however, and as in Ghana and Nigeria, earlier attempts had been made towards the provision of library services.

The earliest of such attempts was in 1936 when the Directors of Education and Agriculture planned a library and community centre for Freetown, the capital, and the Commissioner for Rural Areas also set up four libraries with books received on appeal from the United Kingdom. In her Carnegie-sponsored tour of West Africa in 1942, Miss Fegan visited Sierra Leone but as has been noted, the war prevented the implementation of her report which, in the case of Sierra Leone, she had recommended the co-operation of the Carnegie Corporation, the British Council and the Colonial Development Fund in the provision of library

(42) SHARR, F.A. Library needs of Northern Nigeria. Unesco Bull.Lib., 18(6) Nov-Dec 1964, 259-262.

services, and had also called on the Carnegie Corporation to provide funds for a library and a book van service for Freetown.

The next significant event was in 1958 when the Government issued a White Paper on Educational Development envisaging the establishment of a national library service whose functions would include the support and reinforcement of programmes of adult and fundamental education, the provision of much needed information and reference services, and the promotion and stimulation of reading for pleasure and recreation. (43) A year later, the Sierra Leone Library Board was established by legislation and Miss Evans, who had advised on the establishment of the erstwhile Eastern Nigeria Library Board, was again invited to carry out a survey of existing library provision in Sierra Leone and to draw up a programme for its implementation. Her plan was submitted in October 1959 and was drawn up along the lines of the Ghana Library Board. As recommended, an experienced librarian was appointed to direct the service. The librarian (previously Deputy Director of the Ghana Library Board) assumed office in December 1960.

In its library development programme in Sierra Leone the British Council had established a library at its centre in Freetown and a branch service at Bo. These were handed over to the Sierra Leone Library Board at the beginning of the Board's service. First to be handed over was the Freetown Library and later the branch at Bo which was to form the nucleus of the Board's first Regional Library. (44-45)

The British Council was again to provide the foundation for the public library system of The Gambia. In keeping with its policy of the

(43) SIERRA LEONE LIBRARY BOARD. First [Annual] Report, June 1959 - March 1961. Freetown, Gov't. Printing Dept., [1961] 1.

(44) BELL, S. op cit., 200-205.

(45) THOMPSON, J.S.T. Library development in Sierra Leone. op cit., 7-10.

provision of reading rooms and the developing of libraries "as a principal part of the Council's work in [the] colonies,"⁽⁴⁶⁾ the British Council established a library in Bathurst (now Banjul), the capital, in 1946 and thus gave The Gambia its first public library service.

In April 1962, the British Council withdrew from The Gambia and the library was handed over to the Gambia Government with the arrangement that the Gambia Government should be responsible for staff, maintenance of the library building, etc. while the British Council would continue to supply books, periodicals, newspapers, etc.⁽⁴⁷⁾ The library was put under the Department of Education and an Advisory Committee was appointed to run it, there being no trained librarian at that time. The trained librarian (a Gambian) arrived early in 1963 (and was to remain for a long time the only trained librarian in The Gambia).

The arrival of the trained librarian did not make much difference to the library service since:

[the Department of Education was] more concerned with [its] schools and college than with a public library service.... [and] the Gambia Government did not... seriously... consider building up the library stock and [training] more staff. ⁽⁴⁸⁾

The apparent lack of support from the Government made the librarian appeal to the British Council for assistance. The appeal resulted in a visit by Mr. Roy Flood to The Gambia in 1969. The report on the visit

(46) FLOOD, R.A. The British Council in Africa: its role and its libraries. Libr.Mater.Afr., 10(1) Jul 1972, 14.

(47) N'JIE, S.P.C. A study tour of Ghana, Nigeria and Sierra Leone, 7th January to 6th February 1975; an evaluation [with a section on The Gambia]. Banjul, The Gambia National Library, 1977, 18.

(48) Ibid., 18.

was issued in 1970,⁽⁴⁹⁾ and the library has since been given a grant for a new building, the purchase of equipment and books, the training of one member of staff and a replacement for the mobile library. On 20th October 1976, the Gambia Library Board was established by legislation and was made responsible for the establishment, equipment and maintenance of the Gambia National Library Service.

The history of Liberia once again gives its public library development a background that is different from that of the other countries. The first public library in Liberia dates from 1826 and was opened in the agent's house⁽⁵⁰⁾ in Monrovia, its capital, which had been founded only four years earlier. The library consisted of some 1,200 volumes and files of papers of the American Colonisation Society. By 1838 the library had increased to 1,500 and another library of 1,200 had been established at Bassa Cove. During this period missionaries were also busy publishing textbooks in the various local languages as well as in English.⁽⁵¹⁾

However, it was in 1926 that a national service was started with the establishment of the National Public Library:

- i) to provide general library services to the reading population of Monrovia and its environs, and
- ii) to co-ordinate the activities of the branch libraries in the system.⁽⁵²⁾

Although it was established in 1926, it was only in 1958 that the

(49) FLOOD, R.A. [A report on the] Gambia library service. [London, The British Council], April 1970 (Typescript).

(50) "Agent" was the term used for the representative of the American Colonisation Society in Liberia. The Society was formed in 1816 for the purpose of establishing a country on the West Coast of Africa for the freed slaves after the suppression of the slave trade.

(51) EVANS, E.J.A. Liberia libraries. Paris, Unesco 1967, 6. (Serial No.198. MBS. RD/COM).

(52) ARMSTRONG, C.Wesley. op cit., 56.

National Public Library had its first trained librarian. Little progress was achieved before then and, because of almost total official indifference to the library and its services, not much has been achieved since.

At the request of the Government of Liberia, a Unesco consultant was sent to Liberia in 1967 to help formulate a plan for library services throughout the country. The consultant's report ⁽⁵³⁾ showed the extent of neglect of the services. A few extracts from the report might aid a better appreciation of the situation:

Libraries have been built, but there has been no provision made for bookstock or trained staff. There are five public libraries.. only on one occasion has the librarian been able to make his own selection of books [and] that was in 1963 when a grant of £15,000 was made by USAID/L...

...In 1965 a qualified assistant was appointed but he was very soon transferred to the State Department to work on the archives. The need for qualified staff seems to have been realised only by the librarian...

...Although the librarian is responsible for supervision of the libraries which have been established in various parts of the country, lack of transport has limited his coverage. Some of the libraries have not been visited since 1962, and regular reports are not received from them, so that there is little idea of how much they are being used - if at all... ⁽⁵⁴⁾

The request by the Government of Liberia for Unesco's assistance in the formulation of a national library service could have been seen as a reversal of official attitude towards the provision of the service but the consultant's recommendations remain unimplemented and, thirteen years after the report, the current situation (i.e. in 1980), is remarkably similar to the situation as it was in 1967. ⁽⁵⁵⁾

(53) EVANS, E.J.A. Liberia libraries. op cit.

(54) Ibid., 6-7.

(55) Personal interview with the Director of the National Public Library in Monrovia, Liberia, on January 28, 1980.

3.3 Further Library and Information Services Development Since Independence

With the obvious exception of Liberia, and in instances where the significant events happened after independence, the above sketch on the development of library and information resources in English-speaking West Africa has been confined to the pre-independence period. Independence is seen here as marking the end of an era and the beginning of another. The sketch has also been confined to academic, special and public libraries not because the other sectors (i.e. government, national, school/college libraries, information/documentation centres, etc.) are not important but because they have a development history that is linked more with the post-independence than with the pre-independence era.

The post-independence era has seen the former colonies go through a series of experiences and changes that have affected their political, educational, social and economic systems. Some of these changes have come about as the result of deliberate government policies; others have not been so deliberately planned and, indeed, could have been least wished for. At any rate, whatever the nature of the changes, they have directly or indirectly dictated the growth pattern of the library and information systems of these countries.

Let us, as an example, consider education - an area in which post-independence growth has been phenomenal, particularly in Ghana and Nigeria. The growth has resulted from the recognition of the pivotal role of education in the social, cultural and economic development of a nation, and therefore the need for a properly directed policy for its development. Planning programmes have covered both formal, and informal types of education, and have ranged from compulsory fee-free

education and free-textbook schemes to the establishment of new educational institutions. It may be recalled that in the discussion of the development of academic libraries, it was noted that there was one university each in pre-independent Ghana, Nigeria and Sierra Leone. The statistics were to change soon after independence. Ghana was to create two additional universities within fourteen years of independence, the first of the two having been created four years after independence. Sierra Leone was to have an additional university college three years after independence, and Nigeria now has a total of thirteen universities, seven of them having been created within the past five years.

There has been comparable growth in the pre-university sector also. Schools, colleges, technical institutes and polytechnics have been created to meet the increasing demand for education.

Nor has growth been confined to education. The other sectors of the economy have also gone through a period of rapid post-independence growth. Research institutions have been established to carry out both basic and applied research; Government Departments and Ministries have been created to formulate and implement Government policies and industries and corporations have been established to meet specific user-needs.

The real and potential library and information needs of these institutions are immense. Their rapid growth, the diversified nature of their information requirements (and therefore the different types of library and information services that have been created to support them) have had an equally immense impact on the library and information resources and services of these countries. But whereas the growth of

these institutions has been the result of planned national development programmes, the library and information resources owe their growth to no such co-ordinated plans; they have mostly been established to meet the specific needs of their individual parent organisations.

Information, as was discussed in Chapter 1, is a resource that is vital to the social and economic well-being of a country, and that for its true worth to be realised, it has to be systematically nurtured, developed and used. Such unco-ordinated development as has been narrated above does not only deny the country the full benefit of information, but it also results in unnecessary duplication and dissipation of efforts.

In the above account, an attempt has been made to trace the development of library and information services in English-speaking West Africa and to highlight some of the significant events that have shaped the growth of the services. With this background, the library and information resources in the sub-region will now be reviewed with a view to formulating plans for their co-ordinated development and utilisation.

CHAPTER 4A SURVEY OF EXISTING LIBRARY AND INFORMATION
RESOURCES IN ENGLISH-SPEAKING WEST AFRICA - I:
DOCUMENT RESOURCES4.1 Methodology

In Chapter 2, ⁽¹⁾ the characteristics of library and information networks were discussed and the variety of ways in which they may be organised were also noted. As may be recalled, it was observed that networks may either be built on existing resources or that they may be established as completely new organisations. As was observed further, networks are usually built on existing resources, one of the advantages in this being that the existing and already functioning services and resources would provide a take-off base for the network. Additionally, the resources could accelerate the growth of the network and could also reduce the initial capital expenditure. But the most important advantage in a network evolving out of an existing system, as was noted, is that such an arrangement facilitates the achievement of one of the important conditions in networking, namely, the ability of members to retain their identity and, with it, any services that they may already be providing, while they strive as a group towards the realisation of their common goals and objectives.

A further observation was that in order to ascertain the existing resources and identify their strengths and weaknesses, a survey (or inventory) would inevitably have to be the first step to be taken in the planning of a network. Without this crucial step, it would be difficult, if not impossible, to plan a rational programme for the network.

(1) The characteristics of networks as enunciated in Chapter 2 will be drawn on in the analysis and appraisal of the existing library and information resources in the sub-region.

4.1.1 Collection of Information

In conformity with these considerations, a comprehensive questionnaire ⁽²⁾ was designed and copies were mailed to libraries and information centres in the English-speaking countries of The Gambia, Ghana, Liberia, Nigeria and Sierra Leone. Of the available survey methods (e.g. documentary sources, observation, questionnaire and interviews) the questionnaire method was found the most appropriate because of the wide geographical area and the large number of institutions covered by the survey. Although some amount of information was obtained from documentary sources, these sources proved largely inadequate and in most cases lacked the currency that is an important requirement in a survey of this nature. Again, although the two survey methods were supplemented with visits (and interviews) because of the large size of the survey area, and also of the "survey population", the visits had to be selective particularly in the case of Nigeria. Therefore the mail questionnaire, with its known disadvantages, ⁽³⁾ had to be resorted to as the main method for the collection of the information.

(2) A copy of the questionnaire is included as Appendix 2.

(3) As already discussed in Chapter 2 (Section 2.3.4.1 - Identification of Needs). See also i) MOSER, C.A. and KALTON, G. Survey methods in social investigation, 2nd ed. London, Heinemann, 1971. 256-269; ii) LINE, M.B. Library surveys. London, Bingley, 1967, 41-68.

Working from published directories, (4-10) copies of the questionnaire were circulated to a total of 211 libraries and information centres in the sub-region (11) and, to make up for one of the disadvantages of mail questionnaires, covering letters were attached explaining the purpose of the survey. Accompanying notes also explained terms as they had been used in the context of the questionnaire or those that it was thought might not convey an immediately apparent meaning.

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- (4) The African Book World and Press; a directory. Compiled by the African Book Publishing Record. Editor: Hans M.Zell. Oxford, Hans Zell Publishers Ltd., 1977.
 - (5) AGYEI-GYANE, L. Directory of special libraries in Ghana. Accra, Central Reference and Research Library, CSIR, 1974.
 - (6) Commonwealth Universities Yearbook, 1979. London, Association of Commonwealth Universities, 1978. 4 vols.
 - (7) NIGERIA. National Library. Major libraries in Nigeria; [a directory]. In National Library of Nigeria's official diaries for 1978 and 1980. (These two sources were found to be more current than the National Library's publication no.38. Libraries in Nigeria; a directory, 1974).
 - (8) NITECKI, A. Directory of libraries in Ghana, Legon, University of Ghana, Dept. of Library and Archival Studies, 1974. (Occasional Publication no.11).
 - (9) THOMPSON, J.S.T. comp. and ed. Directory of libraries and information services [in Sierra Leone]. Freetown, Sierra Leone Library Association, 1971.
 - (10) The World of Learning, 29th ed. London, Europa Publications Ltd., 1978, 2 vols.
 - (11) Copies of the questionnaire were actually distributed to some of the libraries during the present writer's tour of the English-speaking countries from December 1979 to April 1980. In those cases the mailed questionnaires had either not been received (some had received the reminders but not the questionnaires!), the libraries had not been listed in the directories or, where there is no known directory (e.g. The Gambia), some of the libraries were "discovered" during the tour.

4.1.2 Coverage

Since the declared purpose of the survey was the determination of the existing library and information resources in the sub-region, copies of the questionnaire were sent to all types of libraries in the area: academic (including university departments and institutes), government, national, public, school and college (including polytechnics and technical institutes), and special libraries as well as information centres. "Information centre" was used to include documentation centres and information centres of similar nature whose main concern is the management and supply of specialised information.

In the context of the survey, "library and information resource" was given the broad interpretation of the sum total of all the elements (i.e. materials, functions and services) that constitute a library or information centre. Information was therefore sought on the following topics: administration, subject coverage, staffing, budget, stock and accommodation, classification and cataloguing schemes used, services provided, users, publications issued, equipment, automation, co-operation, and membership of information systems and networks.

4.1.3 Response

The questionnaires were mailed (from Loughborough, England) in July 1979 and, giving allowance for the long distances involved and the rather erratic nature of the postal services in some of the countries, an interval of four months was given before a follow-up letter was sent in November 1979. Out of the 211 questionnaires circulated, 148 had

been returned at the end of the collection period in April 1980, thus representing an overall regional response rate of 70.14%. (12)

Overall regional response by type of library ranged from 42.86% (public libraries) to 100% (information centres), while overall response by country ranged from 53.19% (Nigeria) to 89.33% (Ghana). Country response by type of library varied from Nigeria's 15.79% for public libraries to 100% for the Gambia's public and school and college libraries, Ghana and Liberia's academic and public libraries as well as information centres, and Sierra Leone's public and school and college libraries. (See Table 1 (i - iv)).

4.1.4 Limitations

The survey was originally planned to cover the entire West African sub-region (that is, both the English- and French-speaking sectors) but because of poor response (15.06%) from the French-speaking countries, it was considered advisable to exclude them.

Without the benefit of published directories, it was difficult ascertaining exactly what libraries and information centres existed in The Gambia and Liberia. However, the problem was substantially resolved with the present writer's tour of the English-speaking countries, and what has been reported for The Gambia and Liberia may be said to constitute an essentially accurate representation of the situation in those countries. The same is true of Ghana and Sierra Leone where directories existed but were too old to be relied on entirely. (The directory for Ghana was published in 1974 and the one for Sierra Leone in 1971) .

(12) The present writer's tour, already referred to, was responsible for some 40% increase in the response rate.

The exception to comprehensive coverage was Nigeria whose enormous size and the large number of its libraries made comprehensiveness impracticable within the limitations of time and support. Selectiveness was therefore adopted in place of comprehensiveness for Nigeria, and the 94 libraries to which copies of the questionnaire were sent were selected mainly from the 142 that have been listed by the National Library of Nigeria as the "major libraries in Nigeria". (13) Selection was made to include all university libraries (including the major institute and departmental libraries), the public (state) libraries, the major special libraries (including the Ministry of Science and Technology which until recently (February 1980) was known as the National Science and Technology Development Agency), major government, school and college libraries and the National Library of Nigeria. The selection was planned to be as representative of the Nigerian library situation as possible.

As may be seen from Table 1 (iv - d) (Country Response by Type of Library : Nigeria), the planned national balance was tilted particularly by the poor response of the public library sector where only three out of nineteen libraries responded to the questionnaire. This low response may be seen to be consistent with the problems associated with mail surveys. But the reason probably goes beyond that. In the previous chapter, the political changes that have taken place in Nigeria in recent years and the effects they have had on the development of library and information services in the country were noted. It may probably not be wrong in assuming that the effects of these political upheavals, particularly the Civil War, may not have worn off completely; the newly-created States and their newly-created institutions may as yet be establishing firm roots; and the Librarian of the University of

(13) NIGERIA. National Library. op cit.

Sokoto may not be speaking for himself alone when he writes:

this library has not got much to offer you for your investigation as it has come into being recently and is struggling hard to establish itself on its temporary campus. Unless we move on to the new campus, construction of which has yet to start, it might not be possible for it to grow as planned in the programme of the University. (14)

While it will be worthwhile being mindful of this poor response, the analysis of the survey results (including those of Nigeria) will show that there are many issues that are basic to the development and use of library and information resources in the sub-region. Therefore in view of the encouraging response from the other countries, the relatively low response recorded for Nigeria should not detract seriously from the validity of the survey results and the general observations deriving from them.

4.2 Document Resources - Subject Coverage

As was discussed in Chapter 2 (Section 2.3 - Characteristics of Networks) a library and information network needs certain characteristics or attributes to make it function. These characteristics were treated in some detail under the five main headings of: formal organisation, document resources, bibliographical organisation and accessibility of document resources, users and manpower for networks. Of these major attributes, document resources (i.e. collections of documents or data, etc.) and users, as was noted, are often erroneously treated as the Cinderella of networks. Their importance is often obscured by the disproportionate consideration that is accorded the other attributes which, vital as they are to the success of the network, are only aids for the achievement of the aim of the network which is the satisfaction

(14) Correspondence from the Librarian, University of Sokoto, Nigeria, dated November 29, 1979. (Founded in 1975, the University is one of the seven to be created in Nigeria within the past five years).

of the users. It is appropriate then that in analysing the existing library and information resources in the sub-region, precedence is given to these two attributes over the others.

First, the existing document resources in the sub-region will be reviewed, together with any collaborative arrangements there may be for their development and use.

The field of knowledge was divided into the following four main categories:

- i) Natural Sciences, i.e. the basic sciences, e.g. physics, chemistry, earth sciences, space sciences, mathematics, etc.
- ii) Engineering and Industrial Technology, i.e. the applied sciences, e.g. engineering (civil, electrical, mechanical, etc.), technology (construction, manufacturing industries, etc.)
- iii) Medical Sciences, e.g. medicine, pharmacy, dentistry, etc.
- iv) Social Sciences and the Humanities, e.g. economics, law, statistics, political science, etc.
- v) Agricultural Sciences, e.g. agriculture, animal husbandry, forestry, etc.

Considering their subject coverage, library and information centres were asked to indicate which category or categories they would identify themselves with and to specify in each category of identification areas of specialisation or any special collections they may be holding.

The analysis of the answers on the subject coverage was done by category of subject (as listed above). Each category was sub-divided by country and then by type of library. The sub-division was carried on further to show the number that responded to the questionnaire by type of library and within each type the number that hold collections in that particular category of subject. (See Table 2 (i - v)). Areas of specialisation of the responding libraries or any special collections that they may hold are indicated in Table 3 (i - v).

A quantitative analysis is presented with Table 4 (a - e) showing the total bookstock (books and bound periodicals) of the responding libraries. And, to give an indication of the rate of stock growth, annual book accessions are given for the past three years (1976/77 - 1978/79). The number of books received as gifts or on exchange is shown to establish the relationship between such acquisitions and the actual purchases in the acquisition programmes of the libraries. Similarly, periodical holdings ⁽¹⁵⁾ (titles held, current subscriptions, number received as gifts or on exchange) are given in Table 5 (a - e) together with microforms held. Table 6 (a - e) shows the number of books and periodicals withdrawn or discarded during the survey period (1976/77 - 1978/79).

It is hoped that with the analysis of the survey results, of which the above information is only a part, it will be possible to have a good indication of the extent of the library and information resources in the sub-region, and to see what roles the libraries and information centre can play in their collaborative development and use. The analysis begins with the subject coverage of the responding libraries and information centres. (The statistics are given to show the number of libraries with holdings in the various subject groups in each country. They do not represent a qualitative or quantitative comparison of the holdings either by type of library, individually or collectively, or by country).

4.2.1 Natural Sciences

The numerical representation of libraries and information centres in The Gambia and Liberia is rather modest. The three out of the seven

(15) As was explained in the Notes accompanying the questionnaire, the term "periodicals" has been used in preference to "serials". See Appendix 2. (Item 10 of Explanatory Notes on Questionnaire).

responding libraries for each of the two countries, however, give them a national coverage of 43% in the natural sciences. The Gambia National Library, one of the three Gambian libraries with collections in the natural sciences, gives mathematics and botany as its areas of specialisation in the natural sciences. Liberia does not report any specialised areas or special collections. (See Tables 2 (i-a) and 3 (i-a) - The Gambia; Tables 2 (i-c) and 3 (i-c) - Liberia).

Out of Ghana's sixty-seven responding libraries, twenty-six (39%) have collections in the natural sciences. With the exception of the public library and information centre sectors, all the sectors report areas of specialisation. Areas common to most of the sectors are mathematics, physics, chemistry, botany, zoology and, to a lesser extent, geology and microbiology. (See Tables 2 (i-b) and 3 (i-b)).

With twenty six of its fifty responding libraries reporting holdings in the natural sciences, Nigeria has a coverage of 52% and has all the sectors adequately represented except the government library section where only one (13%) of the eight responding libraries indicates holdings in the natural sciences. The public library and government library sectors do not report any areas of specialisation. In the remaining sectors, mathematics, physics, chemistry and biology predominate as the areas of specialisation. Others are botany, biochemistry and zoology, although they are less predominant. (See Tables 2 (i-d) and 3 (i-d)).

Sierra Leone has the highest national percentage of representation in the natural sciences with twelve (71%) of its seventeen responding libraries reporting holdings in that subject area. The pattern of

specialisation is similar to those of Ghana and Nigeria, i.e. mathematics, physics, chemistry and botany, except that specialisation is mainly confined to the school and college library sector, with two libraries in the government library sector specialising in zoology and geology. (See Tables 2 (i-e) and 3 (i-e)).

4.2.2 Engineering and Industrial Technology

As in the natural sciences, The Gambia's three libraries (the same libraries, in fact) keep the national representation in engineering and industrial technology at 43%, and the Gambia National Library remains the only library with an area of specialisation: electrical engineering. Liberia has two (29%) of its seven libraries with collections in engineering and industrial technology but no areas of specialisation or special collections. (See Tables 2(ii-a) and 3 (ii-a) - The Gambia; Tables 2 (ii-c) and 3 (ii-c) - Liberia).

Ghana has a slight increase over its holdings in the natural sciences; thirty (45%) of its sixty-seven responding libraries report holdings in engineering and industrial technology and all the sectors, except the public library and the information centre sectors, indicate areas of specialisation. The areas of specialisation are varied especially in the special library sector but the common areas are civil, electrical, electronic and mechanical engineering. (See Tables 2 (ii-b) and 3 (ii-b)).

Out of Nigeria's fifty responding libraries, twenty (40%) have holdings in engineering and industrial technology, a 12% decrease as compared with its holdings in the natural sciences. The government and

public library sectors report no special holdings. The others do, and civil, electrical, electronic and mechanical engineering are the common areas. The school and college sector has the highest number of libraries with areas of specialisation (six out of eight or 75%), followed by the academic library's sector of seven out of fourteen (50%). (See Tables 2 (ii-d) and 3 (ii-d)).

With six (35%) of its seventeen responding libraries indicating holdings in engineering and industrial technology, Sierra Leone records the sharpest decrease (35%) in holdings over the natural sciences. There are no areas of specialisation except one library in the public sector which has a special collection of textbooks and other works in support of vocational, technical and middle-range studies. (See Tables 2 (ii-e) and 3 (ii-e)).

4.2.3 Medical Sciences

The Gambia maintains its 43% national representation with its three libraries holding collections in the medical sciences. However, in addition to the Gambia National Library which gives nursing and clinical pathology as its areas of specialisation, the Gambia College Library indicates special collections in nursing and public health. Liberia has two (29%) of its seven responding libraries with collections in the medical sciences and no areas of specialisation. (See Tables 2 (iii-a) and 3 (iii-a) - The Gambia; Tables 2 (iii-c) and 3 (iii-c) - Liberia).

In comparison with the number of libraries with holdings in the other subject groups, Ghana and Nigeria record their lowest numerical representation in the medical sciences. Ghana's sixty-seven reporting

libraries have eighteen (27%) with collections in the medical sciences, with all the sectors represented but the school and college library and information centre sectors. Areas of specialisation vary and are hardly duplicated even within sectors. This is due to the highly specialised nature of the collections which include tropical medicine, medical statistics, nuclear medicine, forensic medicine and manufacturing of medical and pharmaceutical goods. (See Tables 2 (iii-b) and 3 (iii-b)).

Of the fifty responding libraries from Nigeria, eighteen (36%) report holdings in the medical sciences and give good sectoral coverage. The areas of specialisation also vary and show a minimum of duplication. The specialised areas include tropical medicine, clinical science, anatomy and physiology, public health and parasitic diseases in Nigeria. (See Tables 2(iii-d) and 3(iii-d)).

Sierra Leone's collections in the medical sciences are held in eight (47%) of its seventeen responding libraries and, with the exception of the government library sector, are representative of all the sectors. There is only one library (in the special library sector) with an area of specialisation: medical materials on Sierra Leone. (See Tables 2 (iii-e) and 3 (iii-e)).

4.2.4 Agricultural Sciences

With economies that are basically agricultural, the overall increases in the number of libraries and information centres with holdings in the agricultural sciences are not to be unexpected. The Gambia has four (57%) of its seven responding libraries with holdings in the agricultural sciences, and has two libraries with special

collections in the subject, one in horticulture and the other in tropical agriculture. As many as five (71%) of Liberia's seven responding libraries have collections in the agricultural sciences, two of which have special collections, one in agriculture as relating to rural development and the other on rice - its agronomic, economic, sociological and technological aspects. (See Tables 2 (iv-a) and 3 (iv-a) - The Gambia; 2 (iv-c) and 3 (iv-c) - Liberia).

There are thirty-three libraries in Ghana (49% of the responding sixty-seven) with collections in the agricultural sciences. Although all the sectors hold collections in the subject, the highest proportion is in the special library sector where eighteen (60%) of the thirty libraries report holdings in the agricultural sciences. Again, the special library sector holds the highest concentration of collections which are as special and as varied as the institutions of which the libraries are a part. The areas of specialisation include tropical agriculture, agricultural statistics, agricultural meteorology, animal husbandry, fisheries, forest products, crop science, irrigation and "drawndown" agriculture. (See Tables 2 (iv-b) and 3 (iv-b)).

The majority of the twenty-one (42%) of Nigeria's fifty responding libraries also come from the special library sector where ten report holdings in the agricultural sciences. Areas of specialisation are varied as well and include the following: grain legumes, fisheries, forest products, farming systems, cereals, tropical agriculture and rubber and rubber technology. (See Tables 2(iv-d) and 3(iv-d)).

In Sierra Leone eleven (65%) of the seventeen responding libraries have holdings in the agricultural sciences. But unlike Ghana and Nigeria, the majority of the holdings do not come from the special library sector

but from the school and college library sector where all five libraries report holdings in the agricultural sciences. One library from the government library sector has collections on fisheries while another, from the public library sector, reports a collection of textbooks and other works in support of vocational, technical and middle-range studies. (See Tables 2 (iv-e) and 3 (iv-e)).

4.2.5 Social Sciences and the Humanities

It is in the social sciences and the humanities that all the countries record their highest numbers both in libraries and information centres with holdings in the subject and in the areas of specialisation and special collections. In the Gambia six (86%) of the seven responding libraries report holdings in the social sciences and the humanities and have special collections in their specific areas of subject interest which include law, government, political science, history and culture of The Gambia, education, economics and banking. Liberia also has six (86%) of the seven responding libraries which have holdings in the social sciences and the humanities and areas of specialisation that include mass communication, international relations, management training and public administration relating to developing countries. (See Tables 2 (v-a) and 3 (v-a) - The Gambia; 2 (v-c) and 3 (v-c) - Liberia).

As many as forty-six (69%) of Ghana's sixty-seven responding libraries have collections in the social sciences and the humanities. All the sectors are strongly represented as exemplified by the eight out of nine academic libraries, thirteen out of sixteen government libraries and eighteen out of thirty special libraries which have collections in the social sciences and the humanities. There are many areas of specialisation and special collections quite a few of which are common to some of the libraries, even within the same sectors.

Areas of specialisation and special collections include Africana, education, law, statistics, administration, banks and banking resources and government official publications. (See Tables 2 (v-b) and 3 (v-b)).

Of Nigeria's fifty responding libraries thirty-nine (78%) hold collections in the social sciences and the humanities. Like Ghana, there is overall strong sectoral representation and the areas of specialisation and special collections are many and common. Examples are law, economics, political science, education, statistics and management. (See Tables 2 (v-d) and 3 (v-d)).

The pattern is not different in Sierra Leone where there are fourteen (82%) of the responding libraries with holdings in the social sciences and the humanities. Again, all the sectors have libraries with holdings in the subject and areas of specialisation and special collections most of which are common to the libraries. There is a Sierra Leone Collection which is unique but collections in areas like statistics, law, political science and education are a common occurrence in almost all the sectors. (See Tables 2 (v-e) and 3 (v-e)).

4.3 Document Resources - Co-operative Acquisition Programmes

The above analysis cannot claim to be an in-depth exposition of the strengths and weaknesses of the existing document resources in the sub-region. But even at this level of treatment, one fact emerges clearly: that there are many subject areas that are common to most of the libraries and information centres and that if their acquisition programmes were not co-ordinated and rationalised, there could be a lot of duplication in terms of effort and materials.

The survey sought to find out what co-ordinated programmes existed in the sub-region for the acquisition of materials. Schemes for the collaborative development of document resources, as may be recalled, are important to networking and may be realised through co-operative acquisition programmes. The survey results are treated under the following headings: acquisition by purchase and acquisition through gifts and exchanges.

4.3.1 Co-operative Acquisition by Purchase

4.3.1.1 Existing Arrangements

As was noted in Chapter 2 the two major co-operative acquisition schemes often practised are subject specialisation and joint purchase, of which there are varying forms. Both systems were found to be practised to some extent in three of the five countries under review, The Gambia and Sierra Leone being the exception. (See Table 7(a - c)).

In Ghana, the Balme Library, University of Ghana, reports a specialisation scheme with the School of Administration and the Institute of African Studies (both of the University of Ghana), while the Population and Social Sciences Library also has a subject specialisation arrangement with the Ghana National Family Planning Programme, which the University of Ghana Medical School Library is expected to join eventually. The Research Library on African Affairs has a pre-purchase arrangement with the Balme Library and the Institute of African Studies, and the Volta River Authority Library exchanges information on purchases relating to the Volta Lake with the Volta Basin Research Project of the University of Ghana. No further details were given on these programmes

by the responding libraries except that they are all organised on informal bases.

The WARDA Documentation Division is the only institution in Liberia participating in a co-operative acquisition arrangement and is engaged in a subject specialisation scheme with the Centre de Documentation in the Republic of Niger. This makes the WARDA Documentation Division the only responding institution having a co-operative acquisition arrangement with an institution from another country. It is also organised on an informal basis.

With one notable exception the co-operative acquisition schemes reported from Nigeria are all organised on informal bases. Information given on the schemes is also scanty and not particularly precise. The University of Port Harcourt has a scheme involving the "purchase of books and periodicals" with the College of Science and Technology, the College of Education Library and the Central Library, all in Port Harcourt. The International Institute of Tropical Agriculture (IITA), is engaged in the purchase of backruns of periodicals with the University of Ibadan Library and "various [other] agricultural institutes in the Ibadan area", while the National Science and Technology Development Agency (NSTDA) Library and Documentation Centre jointly purchases backruns of periodicals and expensive collections with the research institutes under the NSTDA. (The Library and Documentation Centre is the main library and co-ordinating centre for the NSTDA - now known as the Ministry of Science and Technology).

The notable exception to these informal arrangements is the co-operative acquisition scheme organised under the auspices of the Nigerian Committee of University Librarians for the comprehensive acquisition of African government publications. The aim of the scheme,

as the Working Paper ⁽¹⁶⁾ of the Committee declares, is to ensure that somewhere in the university system in Nigeria, a complete and comprehensive collection of the publications of each African government is available. The scheme came into effect on November 1, 1975, the participants being the then six universities ⁽¹⁷⁾ each of which was allotted areas of the African continent for comprehensive coverage. Additionally, each university is expected to collect the publications of at least one such intra-continental organisation as the ECA, ECOWAS, OAU, etc. The publications of international, commercial, study, research or training centres are also to be collected by member universities as may be found necessary.

In addition to the above scheme, Aje ⁽¹⁸⁾ also mentions the existence of a co-operative agreement between the University of Lagos Library and the Nigerian Institute of International Affairs for the joint purchase of British Parliamentary Reports. Although both libraries responded to the survey questionnaire, none of them indicated their participation in such a programme. Its existence cannot therefore be confirmed.

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- (16) NIGERIA. Committee of University Librarians. Co-operative acquisition of African government publications. Working Paper. [1975]. (Typescript).
- (17) The Universities are: Ahmadu Bello University, Zaria, University of Benin, University of Ibadan, University of Ife, University of Lagos and University of Nigeria, Nsukka. It is expected that the newly-established universities will all be eventually incorporated into the programme.
- (18) AJE, S.B. Co-operative acquisition programme in Nigeria. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries. Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G. Saur, 1979, 27-29. (IFLA Publications, 14).

The National Library of Nigeria is currently engaged on a programme for the co-ordination of acquisition activities in the country, and an Advisory Committee on Library Co-operation has been set up to advise on the implementation of the programme. As an initial step in the planning process, the National Library has commissioned a survey of existing library resources in Nigeria. (19)

4.3.1.2 The Need for Co-operative Acquisition Programmes

What all these attempts in co-operative acquisition programmes denote is a felt need for the co-ordination, and thereby the rationalisation, of acquisition policies. The reasons are not too far to find. Foremost, and the one which actually underlies all such co-operative ventures, is the impossibility for any library to attain self-sufficiency in meeting the information needs of its users - a condition which continues to be made even more absolute with the ever-increasing mass of information being produced.

Then there are economic considerations. The growing world-wide economic recession has exacted its toll on most countries forcing them, in the process, to re-schedule their economic development plans. Patterns of organisational funding have changed and libraries and information centres have not been the exception. The declining financial fortunes of libraries on both sides of the Atlantic were the expressed concern of at least two delegates at the SCOLMA Conference on Progress in African Bibliography which was held in London in 1977.

(19) Ibid., 29-32. (The national plan, and the steps already taken, were confirmed during an interview with the Director of the National Library in Lagos on February 12, 1980. The survey results were expected to be published in March 1980, and a national conference on library co-operation had been scheduled for May 20, 1980 to discuss the plan and its implementation).

Armstrong ⁽²⁰⁾ remembered (with apparent nostalgia) "the heyday of ample funds in [American] university library budgets", and noted the decline in overall book budgets in many American institutions. Similarly, Clarke ⁽²¹⁾ traced the inception of the SCOLMA scheme to a time when [British] universities, and their libraries, had considerable financial confidence, and were expanding. He went on:

Now, however, university libraries are faced with a very different situation in which their resources are declining in real terms and economy measures, sometimes involving reductions of staff or extensive cancellations of periodical subscriptions, are in force.

These reductions in budgetary allocations are happening in the face of an increase in the quantity of materials which are only commercially obtainable, and an increase in prices as well. In addition to these financial problems, which are neither confined to university libraries nor to the industrialised nations, the developing countries have problems peculiar to them with which they have to contend. There is, for instance, the almost total dependence of the developing countries on their industrialised counterparts for their published sources of information. A study by Oyelese ⁽²²⁾

- (20) ARMSTRONG, J.C. Current American acquisition policies for African materials. In Proceedings of the SCOLMA Conference on Progress in African Bibliography [held at the] Commonwealth Institute, London, 17-18 March 1977. London, SCOLMA, 1977 [1-8].
- (21) CLARKE, D.A. Library co-operation in the acquisition of materials from Africa, with special reference to the implications for the SCOLMA scheme of the UGC Report on "Capital Provision for University Libraries". In Proceedings of the SCOLMA Conference on Progress in African Bibliography... London, SCOLMA, 1977 [1-11].
- (22) OYELESE, W.O. Acquisition in university libraries: problems in developing countries. Unesco Bull. Libr., 31(3) May-June 1977, 82.

endorses an earlier observation by Dipeolu (23) that more than 90% of books purchased by African university libraries are imported from Europe and America. The implication of this in the context of the developing countries is that virtually the entire book budgets of these libraries have to be expended in the form of foreign exchange which, to most of the developing countries, could constitute a further strain on their already strained and perennially low foreign exchange reserves. In the attempt to conserve whatever foreign exchange they may have, governments in the most economically unstable developing countries are known to have instituted stringent laws (which at times may even be frustrating) to regulate the importation of goods - including books and periodicals. (24)

The undeveloped state of the book publishing industry of most of the developing countries will continue to make them rely on foreign books for a long time yet. (25) And since the foreign exchange problem looks far from being a short-lived phenomenon for most of the developing countries, it would seem as if the developing countries do have an intractable problem to grapple with.

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- (23) DIPEOLU, J.O. Problems of acquiring African published materials; the experience of African university libraries. In Publishing in Africa in the seventies; proceedings of an International Conference on Publishing and Book Development, held at the University of Ife, Ile-Ife, Nigeria, 16-20 December 1973, edited by E.Oluwasanmi, et al. Ile-Ife, University of Ife Press, 1975, 134.
- (24) OMBU, J.A. Acquisition problems in developing countries. Int.Lib. Rev., 9(1) Jan 1977, 83-91.
- (25) The 1973 estimate of Barker and Escarpit that out of every five books produced only one emanated from the developing countries has not altered much (BARKER, R. and ESCARPIT, R. The book hunger. Paris, Unesco, 1973, Preface). Latest available figures show that out of a world total of 1,159,000 titles produced in 1975 and 1976, 188,000 came from the developing countries, a ratio of 6:1. See Unesco. Statistical Yearbook, 1977. Paris, Unesco, 1978, 790.

These financial constraints make it increasingly apparent that if libraries and information centres, particularly those in the developing countries, are to ensure systematic coverage of their published sources of information, and if they are to avoid waste through unnecessary duplication, some form of co-ordination in their acquisition policies would be the logical line of pursuit. Co-operative acquisition programmes are being proposed here as some of the possible measures through which co-ordination may be achieved.

4.3.1.3 Conditions for Co-operative Acquisition

It would be naive for any proponent of a co-operative acquisition programme to suppose that its implementation would be easy or that it would not post its own problems. First, there are issues which are basic to all co-operative ventures and which must be resolved to give the venture any chance of success. The major considerations here are, as treated earlier in this work, an appreciation of the need for the co-operative venture, and the willingness to co-operate - a willingness which should transcend attitudinal barriers of which "individualism" or the "ego factor" ⁽²⁶⁾ is the principal impeding element. Then there are organisational problems to which must be added the problems which are peculiar to the developing countries.

One of the arguments often used against the participation of developing countries in co-operative acquisition schemes is the rather unfavourable economic situation in which most of them find themselves. Parker ⁽²⁷⁾ states that financial and other constraints have made

(26) MINDER, T.J. Organisational problems in library co-operation. Libr. J., 95(16) 1970, 3448-3450.

(27) PARKER, J.S. Regional co-operation in library services. IFLA J., 2(1) 1976, 16.

"librarians all over the world" turn to co-operative acquisition programmes as a means of achieving better coverage of material relevant to their readers and also of avoiding unnecessary duplication of expensive materials. He says of developing countries:

Such schemes have seemed particularly attractive to librarians of developing countries, whose financial problems are particularly severe; yet it is the severity of these financial constraints which makes effective participation in regional co-operative schemes so difficult to achieve.

The attraction is indeed great to librarians from the developing countries, as it ought to be. The very severe financial constraints under which they work should make them even more wary of unscheduled and wasteful duplication than their colleagues from the industrialised countries who work under comparatively more congenial financial circumstances. But it is not so much the severity of the financial constraints that frustrate their attempts to undertake co-operative acquisition schemes as the absence of the proper organisational medium in which the schemes are operated. The most successful and often-cited Scandia Plan did not make much progress during its first ten years of existence not because of severe financial constraints but because it lacked proper organisation:

Too much reliance had been placed on the voluntary principle, and too much had depended on the enthusiasm for the cause. Little or no check was ever made to ensure that member libraries were meeting their obligations under the scheme. Furthermore the plan had no headquarters... (28)

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- (28) HARRISON, K.C. Co-operative acquisition: formal and informal. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp, University, August 30 - September 4, 1977, edited by H.D.L. Vervliet. München, K.G.Saur, 1979, 34. (IFLA Publications, 14).

It was not until these organisational issues had been solved that the Plan began to show beneficial results.

Although the above example refers to a regional scheme, the organisational principles are equally valid for national schemes. The existing co-operative acquisition schemes in Ghana and Nigeria, which were described earlier, have not been particularly successful. This includes the formally organised Nigerian Universities' scheme for the acquisition of African government publications which, as Oyelese ⁽²⁹⁾ reports:

has made very little impact on the collection development of the participating libraries.

They have not been successful obviously because they have lacked the control and monitoring which are essential for the successful implementation of co-operative acquisition schemes. The Nigerian Universities' scheme, for instance, is run by a "Committee" of University Librarians with no permanent administrative arrangement to oversee the implementation of the programmes. Enthusiasm for the project alone has not proved sufficient. As may be learnt from the experience of the Scandia Plan, committed participation through a well-instituted system of control and monitoring stands a better chance of success.

For national schemes, it would be suggested that such control and co-ordination will best be provided by a single body entrusted with the requisite authority to co-ordinate the schemes. In this connection, co-operative acquisition programmes will be viewed

(29) OYELESE, W.O. op cit., 82.

as forming part of larger national schemes for resource development and sharing and not as single concepts organised without regard to the totality of national needs, and the benefit of nationally co-ordinated plans. Later on in this work recommendations will be made for the establishment of national bodies to whom these responsibilities will be entrusted.

4.3.2 Acquisition through Exchanges

4.3.2.1 Existing Arrangements

Acquisition through exchange arrangements offers an invaluable means of supplementing acquisition by purchase. It was observed in Chapter 2 (Section 2.3.2.3. - Gifts and Exchanges), how beneficial a properly planned gift and exchange programme can be in the acquisition of otherwise unobtainable material and how particularly useful it can be to countries with currency, and other financial, restrictions.

To find out how exchanges were being used to supplement regular purchases, respondents to the survey questionnaire were asked:

- i) to indicate the number of institutions (both local and foreign) with whom they had exchange arrangements, and
- ii) to give the names and addresses of six of the institutions (both local and foreign) with whom they exchanged publications most, indicating publications sent, and those received, on exchange.

The purpose, on the first count, was to permit an assessment to be made of the volume of exchange transactions in each country, i.e. the total number of libraries and information centres engaged in exchange

programmes and the extent to which such arrangements are local or international. On the second count, the aim was to find out the degree of interaction among libraries and information centres within the individual countries, the interaction, if any, at the sub-regional level and the amount of duplication of exchange material at both the national and international levels. Unfortunately because of poor response, arising apparently out of equally poor house-keeping practices, it has not been possible to carry out any in-depth analysis of the exchange programmes. As the survey results show (Table 8 (a - e)), there were quite a number of libraries which could indicate their participation in exchange programmes but could not give the number of institutions with whom they have the programmes! Asking for further details about the exchange programmes (as in (ii) above) was, to most of the libraries, obviously stretching their administrative practices beyond their limits.

The available results indicate, however, that most of the responding libraries, particularly those in Ghana and Nigeria, are engaged in exchange activities. The exception is Sierra Leone where only five (29%) out of the seventeen responding libraries reported exchange programmes. One fact that stands out is the large number of international exchange programmes in which the libraries are engaged. In all five countries, local exchange programmes are far out-numbered by international programmes. Ghana's thirty-seven libraries with exchange programmes have exchange arrangements with 1,066 international as against 650 local institutions; Nigeria's thirty-four libraries conduct exchanges with 1,111 international as against 495 local institutions, etc. Thus it would seem that a substantial amount of

foreign material is acquired through international exchanges. Having established the almost total dependence of the developing countries on foreign sources of published information and the need to co-ordinate acquisition by purchase, a plausible sequel to such a programme of co-ordination would be the co-ordination also of acquisition by exchange, particularly international exchange - a fact which is often over-looked in co-operative acquisition programmes. The National Library of Nigeria's planned co-operative acquisition programme for Nigeria, for instance, omits the part that exchanges will play in the programme. (30)

4.3.2.2 Co-ordination of Exchange Programmes

The co-ordination of international exchanges has in fact been advocated for a long time. The Brussels Conventions of 1886 made the establishment of national exchange bureaux mandatory so as to facilitate the exchange of publications between participating countries. The [Unesco] Conventions on the International Exchange of Publications of 1958 relaxed the rigidity of the Brussels Conventions by not insisting on the establishment of national centres or bureaux. They, however, recommended the use of existing machinery such as national centres (where they had already been established), national libraries, or any appropriate authority, as the centre for international exchange activities.

Centralisation has its advantages and disadvantages. A centralised system arranges all exchanges on behalf of the participating libraries, does the forwarding, receipt and distribution of all exchange

(30) AJE, S.B. op cit., 29-32.

material, can enter into general (national) agreements, and has the advantage of effecting national co-ordination. But a centralised system can easily degenerate into bureaucracy, it can be very vulnerable and a malfunctioning at the centre can easily invalidate the system. A decentralised system, on the other hand, has the advantage of allowing participants to select their own exchange partners in a manner best suited to their needs and interests. But without the advantage of national co-ordination, a decentralised system can result in a lot of wasteful duplication. A compromise would be the decentralisation of exchange arrangements but the existence of an appropriate national authority to co-ordinate all exchange activities. Such an authority would collect and publish data on exchanges, provide information and advice on the state of exchanges in the country, act as the national bibliographic centre for exchanges and compile lists of material available for exchange. For effective co-ordination and implementation of the co-operative acquisition programme, one national authority should, preferably, be responsible for the co-ordination of both the exchange and the regular purchase programmes.

As Parker ⁽³¹⁾ has rightly pointed out, co-operative acquisition schemes do not end with the acquisition of the materials. The materials thus acquired have to be processed and made available for use. In the next chapter the bibliographical organisation and the accessibility of document resources will be discussed.

(31) PARKER, J.S. op.cit., 16.

CHAPTER 5A SURVEY OF EXISTING LIBRARY AND INFORMATION RESOURCES
IN ENGLISH-SPEAKING WEST AFRICA - II: BIBLIOGRAPHICAL
ORGANISATION OF DOCUMENT RESOURCES5.1 Classification Schemes Used

If the acquisition of document resources is an important function of a library and information network, so also is their bibliographical organisation which enhances their physical and intellectual accessibility. Like all activities of a network, co-ordination of efforts remains a primary consideration. The survey investigated how the document resources are bibliographically organised and whether there is any co-ordination in their organisation. This section deals first with the classification schemes used and then the cataloguing principles which are followed.

The three classification schemes mostly used in the sub-region are the Dewey Decimal Classification (Dewey), the Universal Decimal Classification (UDC) and the Library of Congress Classification (LC) in a descending order of popularity of use. While Dewey is used by all categories of library, UDC is used mostly by special libraries and LC by academic libraries.

Dewey is the only scheme used in The Gambia and is used by four (57%) of the seven responding libraries. The remaining three libraries (two government and one special) do not use any classification scheme at all. (See Table 9 (a)).

The majority of the responding libraries from Ghana use Dewey - twenty-six out of sixty-seven or 39%. As may be seen from Table 9 (b),

it is used by libraries in all the sectors but mostly by special libraries nine of which classify by it. The rest are: six government libraries, six school and college libraries, three public libraries and one information centre. After Dewey, UDC is the most used scheme. Sixteen libraries (24%) reported using it, all of which are special libraries. Out of the eight (12%) libraries that classify by LC, five are academic libraries, two are special libraries and one is a government library. Only one library, an academic library, uses Bliss. Eight libraries classify by special schemes for the narrower fields of literature as follows: Bodleian Law Library Scheme (one academic and one government library); Barnard Classification for Medical and Veterinary Libraries (one academic library); Moys' Classification Scheme for Law Books (one government library); International Trade Centre Classification Scheme (one government library); Oxford System of Decimal Classification for Forestry (one school and college, and one special library); AGRIS(FAO) scheme (one special library). There are eight libraries which do not use any classification schemes. Six of these are government libraries, one is a special library and the other is an information centre.

Three classification schemes (two general and one special) are used in Liberia. Three of the seven responding libraries (two public libraries and one government library) classify by Dewey, while another three (two academic libraries and one special library) classify by LC. The seventh, an information centre, uses the AGRIS(FAO) scheme. (See Table 9 (c)).

Out of Nigeria's fifty responding libraries, sixteen (32%) each use Dewey and LC. Of those which use Dewey, five are school and college libraries, four are special libraries, another four are government

libraries while three are public libraries. LC, on the other hand, is used predominantly by academic libraries eleven of which classify by it. Of the remaining five using LC, three are special libraries while two are school and college libraries. Ten libraries (i.e. 20% of the responding libraries) classify by UDC. Of these eight are special libraries, one is a government library and one is a school and college library. As in Ghana, Bliss is used by only one academic library. Special classification schemes are also used as follows: Barnard Classification for Medical and Veterinary Libraries (one academic and one government library); "Greaves Classification Scheme" (one academic library); National Library of Medicine Scheme (one academic and one special library); Moys' Classification Scheme for Law Books (one academic, one government and one special library). Adefidiya's "A Practical Classification Scheme for Nigerian Law Libraries" (one government library); Oxford System of Decimal Classification for Forestry (one special library). (See Table 9 (d)).

Proportionately, the largest use of any one scheme in the sub-region is in Sierra Leone where twelve (71%) of the seventeen responding libraries classify by Dewey. It is used by five school and college libraries, three public libraries, two government libraries, one academic and one special library. The only other general scheme in use is UDC by which two government libraries classify. Moys' Classification Scheme for Law Books is also the only special scheme in use and is used by one government library. Two libraries (one government and one special library) use no classification schemes. (See Table 9 (e)).

5.2 Cataloguing Principles Followed

5.2.1 Cataloguing Rules

Although all the major cataloguing rules are used in almost all the countries, the Anglo-American Cataloguing Rules, 1967 (AACR) stand out as the rules most followed. As Table 10 (a) shows, three of the seven responding libraries in The Gambia follow AACR. The three are: one public library, one school and college library and one special library. Additionally, the public library (The Gambia National Library) uses the International Standard Bibliographic Description (ISBD). The four remaining libraries (four government libraries and one special library) do not follow any cataloguing rules.

The AACR are used by twenty-seven (40%) of the sixty-seven responding Ghanaian libraries, making them the most used cataloguing rules in Ghana. Out of the twenty-seven which use AACR, seventeen are special libraries, eight are academic libraries and two are public libraries. The Library of Congress (LC) and the ALA rules are followed by thirteen (19%) libraries each. Eight academic libraries, three special libraries and two government libraries use LC, while five school and college libraries, five special libraries, one academic and one public library as well as one information centre use ALA. The ISBD has been adopted by three libraries: two special libraries and one government library. One special library uses the FAO Subject Headings, while one government library uses the Bodleian Library Cataloguing Rules. There are ten libraries and one information centre which follow no cataloguing rules. Of the ten libraries five are government libraries, three are special libraries and two are school and college libraries. (See Table 10 (b)).

Liberia's two academic libraries, one special library and one information centre use AACR, making it four out of the seven responding libraries using AACR in Liberia. Three (one public library, one information centre and one academic library, with the last two additionally using AACR) follow ALA. One government library and one public library use LC. Only the information centre has adopted ISBD. (See Table 10 (c)).

As many as forty-five (90%) of Nigeria's fifty responding libraries follow AACR. The largest groups of users are special and academic libraries with fifteen and thirteen respectively using it. Eight school and college libraries, seven government libraries and two public libraries also use AACR. Six libraries (four special libraries, one academic and one government library) use ALA, with two of the four special libraries also using AACR. Only one library, a public library, uses LC. Altogether, seven libraries have adopted ISBD. Three of these are academic libraries, the rest being one academic, one government, one school and college and one special library. (See Table 10 (d)).

In Sierra Leone, as in all the other countries, the majority of the libraries use AACR. As may be seen from Table 10 (e), eleven (65%) of the responding seventeen libraries use AACR. Of these, five are government libraries, three are school and college libraries and the remaining three comprise one academic, one public and one special library. While two libraries (one public library and one school and college library) use ALA, one library (a public library) uses LC. The ISBD has been adopted by one academic library, the only library to have done so in Sierra Leone. One government library, one school and college library and one special library do not follow any cataloguing rules.

5.2.2 Subject Headings

As with the classification schemes and cataloguing rules, there is a variety of subject headings in use in the sub-region but the most commonly used are the Library of Congress Subject Headings (LC) and Sears' List of Subject Headings (Sears').

There is only one library in The Gambia which uses subject headings. The remaining six do not. The only exception is the public library (The Gambia National Library) which uses Sears'. (See Table 11 (a)).

Sears' and LC are used almost equally in Ghana. Nineteen libraries use Sears' while eighteen use LC. Of the libraries that use Sears', eleven are special libraries, five are government libraries and there is one each from the academic, school and college and the information centre sectors. Special libraries also constitute the largest group using LC, with nine out of the eighteen being special libraries. The rest are: four government libraries, three academic libraries, and two public libraries. Other subject headings used are: The Bodleian Law Library Subject Headings (one academic and one government library); OECD Macrothesaurus, and the Population and Family Planning Thesaurus (both of which are used by one academic library); Building Research Thesaurus (one special library which also uses Sears'); FAO Descriptors (AGRIS) (one special library). Twenty-six (39%) of the responding libraries do not use any subject headings. (See Table 11 (b)).

Almost all the responding libraries in Liberia use LC. With the exception of two (one public library and one information centre) which use Sears', the remaining five libraries, made up of two academic libraries, one government, one public and one special library, use LC. In addition to Sears', the information centre also uses FAO Descriptors (AGRIS). (See Table 11 (c)).

Forty-one (82%) of Nigeria's fifty responding libraries use subject headings. Nineteen use LC, fourteen use Sears' while eight use special subject headings. Eleven of the nineteen using LC are academic libraries, four are special libraries, three are school and college libraries and one is a public library. The fourteen that use Sears' comprise six special libraries, four government libraries, two public and two school and college libraries. The special subject headings used are: "Greaves Subject Headings" (one academic library); Medical Subject Headings or MeSH (one academic and one special library); Sainsbury Legal Subject Headings (two government libraries); Thesaurus of Engineering and Scientific Terms (one special library); Subject Index, Oxford System of Decimal Classification for Forestry (one special library); Agricultural/Biological Vocabulary (one special library). Nine libraries (three school and college libraries, three special libraries, two government libraries and one academic library) use no subject headings, as Table 11 (d) shows.

In Sierra Leone, LC, Sears' and BNB-Chain Indexing are used by the twelve (71%) libraries which use subject headings. Six libraries (three school and college, two government libraries and one public library) use Sears', while three (one government, one public and one school and college library) use LC. One academic, one public and one special library use BNB-Chain Indexing. Five libraries, comprising three government libraries, one school and college and one special library, do not use any subject headings. (See Table 11 (e)).

5.2.3 Reproduction of Catalogue Cards

In addition to finding out the methods used in the reproduction of catalogue cards, the survey was also interested in assessing the amount of original cataloguing that is undertaken by the libraries and information

centres. The results show that catalogue cards are reproduced mostly by typing and stencilling and that virtually all the responding libraries and information centres do their own cataloguing. Only ten (7%) of the overall sub-regional total of 148 responding libraries were found either not to undertake any original cataloguing at all, or to supplement their cataloguing with the services of external processing agencies. Of the ten, only four are "indigenous" libraries the remaining six are libraries of foreign cultural institutions - the British Council and the International Communication Agency (ICA) of the United States of America (formerly known as the United States Information Services).

In The Gambia, two libraries reproduce all their cards, while one (The Gambia National Library) obtains some cards through book suppliers, e.g. Wiltshire Book Co. (See Table 12 (a)). It may also be seen from Table 13 (a) that as many as four of the seven responding libraries in The Gambia keep no catalogues of any form at all. Three of these are government libraries and one a special library.

Only two out of Ghana's sixty-seven responding libraries do not reproduce their own catalogue cards. These are the British Council Library, which obtains its cards from the BNB, and the American Center Library (ICA), which gets its supply from the Ohio College Library Center (OCLC). The majority of the remaining sixty-five libraries reproduce their cards by typing while a few do so by stencilling. (See Table 12 (b)). As Table 13 (b) shows, five government libraries, one school and college library and one information centre do not keep any form of catalogues.

In Liberia only a slight majority of the libraries (i.e. four out of seven) reproduce all their catalogue cards. Of the three that do not, one (the American Center Library - ICA) subscribes to the Library of Congress printed card service for all its cards, while two (the

University of Liberia Libraries and the LIPA Library and Information Centre) supplement their local cataloguing also with Library of Congress printed cards. Cards reproduced locally are typed with only one library reproducing its cards by stencilling. (See Table 12 (c)).

Forty-eight of the fifty responding libraries from Nigeria do their own cataloguing and reproduce all their cataloguing cards. The exceptions are the University of Port Harcourt Library, which uses the services of Blackwells North America for some of its cards, and the American Center Library (ICA), which depends on OCLC for all its catalogue cards. Again, the majority reproduce their cards by typing, a few by stencilling and only three by offset. (See Table 12 (d)).

In Sierra Leone, only the British Council and the American Center (ICA) obtain their cards through processing centres. The British Council uses the services of BNB for some of its catalogue cards, while the American Center obtains all its cards from OCLC. One of the remaining fourteen libraries reproduces its cards by stencilling; the others do so by typing. (See Table 12 (e)). Two libraries (one government and one special library) do not use any catalogues. (See Table 13 (e)).

5.3 Co-operation in Cataloguing

One of the purposes of the survey, as set out at the beginning of this chapter, was to establish the existence of any co-operative arrangements with regard to the bibliographical organisation of the document resources in the sub-region. The above analysis shows not only the absence of any such arrangements but also the negligible use of the services of foreign processing agencies. Under such unco-ordinated conditions, it is difficult not to assume duplication of effort and,

particularly, the lack of standardised processes which are an important hall-mark of any library and information network. However, the attainment of uniformity in bibliographical organisation will be possible only through the concerted effort of all participants. Ways through which this uniformity may be achieved, and wasteful duplication eliminated, are discussed below.

5.3.1 Processing Centres and Centralised Cataloguing

Centralised cataloguing has for a long time been regarded as a means of achieving economy of effort. As early as 1876, Melvil Dewey, an ardent advocate of centralised cataloguing, is said to have decried:

the folly and sheer extravagance of having highly paid librarians in thousands of libraries each cataloguing the same book when this could be done centrally. ⁽¹⁾

With the advent of library and information networks, the relevance of this advocacy has extended beyond the achievement of economies to include the attainment of standardised processes on which the efficiency and reliability of the networks hinge.

Centralised cataloguing, or cataloguing done by a central agency, may take one of several forms. It may, for instance, be undertaken by a processing centre or by a centralised cataloguing agency. When undertaken by a processing centre, centralised cataloguing becomes just one aspect of the functions of the centre. These functions have been

(1) LIM, H.T. A technical processing centre for Malaysia. In National and academic libraries in Malaysia and Singapore. Proceedings of a PPM & LAS Conference held at Universiti Sains Malaysia, Penang, 1-3 March 1974, edited by Lim Huck Tee and R.Begum. Penang, Persatuan Perpustakaan Malaysia and Library Association of Singapore, 1975, 155.

described by Finzi ⁽²⁾ as all the functions normally carried out from the time the material is selected to the time it is made available to the user. This would make such traditional chores as ordering, accessioning, cataloguing, classification and subject analysis, pasting book and spine labels, etc. functions of the processing centre.

A processing centre may also take one of several forms. It may either be part of a library system comprising branch or departmental libraries, it may be established by a group of independent libraries (at a national, regional or international level), or it may be set up by a commercial agency. The discussion on processing centres will relate to the last two alternatives.

5.3.2 Centralised Processing - Advantages and Disadvantages

Centralised processing has its inherent advantages and disadvantages. One of the most important advantages, in terms of network development, is the opportunity it offers for the standardisation of the bibliographical record. Even though great strides have been made towards the achievement of uniformity in cataloguing, as in the formulation and adoption of such rules as AACR, LC, etc., there still remain inconsistencies in their application. While some of these inconsistencies may be attributable to human error or differences in the interpretation of the rules, others may be the result of deliberate policies to reflect a definite subject bias in the presentation of the material. Whatever the reasons for the differences may be, at times they may be so wide that, as testified from the experience of the [American]

(2) FINZI, J.C. Processing. In Resource sharing in libraries: why, how, when, next action steps, Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973, at Pittsburgh, Pennsylvania... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 110.

National Union Catalogue, it is "difficult to identify many of these records as being for the same item." (3) The uniformity of bibliographical description, as may be obtained through centralised cataloguing, eliminates these inconsistencies, and also prevents much duplication of effort and waste of manpower. The amount of duplication in the work of both the professional as well as the clerical staff in the sub-region, as the analysis of the cataloguing practices has revealed, must be staggering. Relieved of the responsibility for most of the original cataloguing, the professional staff could devote more attention to public services, while the supporting staff could also be usefully deployed.

For participants of a centralised processing scheme, there is the benefit of direct savings resulting from the elimination of the need to buy bibliographic and other expensive tools, these being the stock-in-trade of the processing centres. Processing centres which undertake book ordering as part of their functions could again achieve some savings through bulk ordering and the benefit of vendors' discount facilities. Unnecessary duplication could also be easily checked since the centre would have an up-to-date and reliable record of the holdings of the entire network or group of libraries.

Of the disadvantages, the most cited is the delay in the receipt of the material caused by the interposition of an agency between the supplier and the user. This delay can cause some concern especially where materials are urgently required. Other equally forceful arguments advanced against centralised processing are the possible commission (and therefore the perpetuation) of errors in cataloguing, and also the

(3) As quoted in AVRAM, H.D. Bibliographic and technical problems in implementing a national library network. Libr. Trends, 18(4) Apr 1970, 493.

unsuitability of centralised cataloguing to local needs. They are both valid arguments, particularly the second. The question of local or custom cataloguing must be solved before centralised cataloguing can be beneficial. A step towards the solution would be the acceptance of a format that would meet the basic requirements of all participating libraries. It would be in the interest of the libraries if as few alterations as possible were made on the basic format since the essence of centralised cataloguing would otherwise be lost.

Some of the advantages claimed for centralised processing are often refuted. Savings made from bulk purchases may be dissipated through the despatch of processed material to the member libraries, and Tarver ⁽⁴⁾ is not sure if the processing of the material elsewhere would do the professional librarian any good. She argues that "good service hinges on a knowledge of the book collection" and it is the librarian "who has handled the book through all the processes" who stands a better chance of acquiring that knowledge.

A point which has already been used against centralisation, but which should bear repetition here, is the ever-present possibility of a relapse in efficiency of service or total collapse should the centre flex.

5.3.3 Processing Centres and the Sub-region

These theoretical considerations aside, the important question to ask is if the establishment of processing centres in English-speaking West Africa would be a viable proposition. A definitive answer to this question will depend on a thorough study of the acquisition and cataloguing

(4) TARVER, E. Regional processing: advantages and disadvantages for the college and university library. J.Cat. & Class, 2(4) Oct 1955, 215.

practices of the libraries in the individual countries. The study would have to cover ordering patterns, title duplication, cataloguing modification, processing time-lags, processing times, unit processing costs, etc. (5) Without the benefit of such a detailed study a categorical pronouncement on the feasibility or otherwise of processing centres in the sub-region would be premature. However, with the information available, an attempt will be made to look at some of the issues involved.

And the first is the book acquisition rate in the sub-region. A processing centre should cater for a large number of participants and handle large numbers of publications if it should attain economies in acquisition and cataloguing costs. Fig.6 (page 161), which is a summary of Table 4 (a - e), gives the statistics of book acquisitions over a three-year period (1976/77 - 1978/79) for the five English-speaking countries. Figures given are for volumes, not titles, and they exclude gifts and exchanges since these are normally not acquired through processing centres.

The statistics show, particularly for The Gambia, Liberia and Sierra Leone, that the rate of acquisition is not high enough to sustain processing centres. Ghana and Nigeria have a much higher acquisition rate but even then an average annual book accessions of some 67,000 volumes (Ghana) and 150,000 volumes (Nigeria) cannot justify the establishment

(5) An account of the feasibility study preceding the establishment of the Colorado Academic Libraries Book Processing Centre (CALBPC) is given by L.E.LEONARD, et al. in their book entitled Centralised book processings; a feasibility study based on Colorado academic libraries. Metuchen, N.J. Scarecrow Press, 1969. CALBPC went through a three-stage study. Stage 1 was devoted to the collection of information on the acquisition and cataloguing practices of the participating libraries; Stage 2 involved the designing of a prototype system; and in Stage 3, an operational centre was set up on a one-year trial basis. Unfortunately CALBPC has had to be closed down because of rising processing costs and faltering patronage. (See FREEDMAN, M.J. Processing for the people. Libr. J., 100(1), Jan 1976, 192).

Fig. 6 BOOK ACCESSIONS: 1976/77 - 1978/79

Country	Number of responding libraries	Total annual book accessions			Average annual book accessions	Average annual book accessions per library
		1976/77	1977/78	1978/79		
The Gambia	7	657	2,533	3,421	2,204	315
Ghana	67	77,323	80,860	45,633	67,939	1,014
Liberia	7	4,365	6,378	6,162	5,635	805
Nigeria	50	118,133	238,133	94,910	150,392	3,008
Sierra Leone	17	15,829	12,895	11,995	13,573	798

of processing centres. (6) Besides, processing centres are best operated in communications environments that are reliable. The long delays associated with centrally processed material would not be helped by a communications system that was not efficient. Efficiency and reliability cannot be claimed for the communications systems in the sub-region - particularly the postal services in this instance.

It would look as if, given the present circumstances, a better proposition would be the use of external services for printed cards. Although the existence of these services are widely known throughout the sub-region, they are hardly used. It may be recalled that only 7% of the libraries in the sub-region use external services either for their entire cataloguing needs or as a supplement to their original cataloguing. Soltani (7) ascribes some of the reasons for the non-use of the services to the smallness of some of the libraries, the meagreness of their budgets and, consequently, their inability to subscribe to the services. Administrators may also not appreciate the usefulness of the services and may in fact abhor the libraries' "dependence" on them. The establishment of processing centres is therefore suggested as the answer. These are important factors but they are factors which should rather encourage the use of these external services and not the reverse. The problem of the quantitative insufficiency of professionally trained librarians is common to most of the

(6) When it was established in 1968, the Tehran Book Processing Centre, for example, expected to be able to order or catalogue 200 volumes per day by 1971, 1,000 by 1981 and 3,000 by 1991. See HARVEY J.F. Iranian library studies 3: The Tehran Book Processing Centre. Int. Libr. Rev. 5, 1973, 41.

(7) SOLTANI, P. The role of processing centres in developing countries in relation to resource sharing. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 139. (IFLA Publications, 14).

developing countries. This, in most cases, has left the running of the "small libraries" in the hands of unqualified, or sub-professional, staff who lack the professional ability to organise their document resources. These libraries (the government, special, technical, school and college libraries, etc.) may be small but their importance to the social and economic development of their countries should never be overlooked. Their document resources should be as well organised as those of the well-established libraries, and the opportunity that the use of the card services provides in overcoming some of the professional deficiencies of the unqualified staff should be taken advantage of. The review of the cataloguing practices in the sub-region has shown how poorly organised some of these government, special and technical libraries, etc. are, with no classification schemes, catalogues or indexes of any kind. As will be shown later, these libraries are being run by staff with practically no professional training.

On the establishment of processing centres, it may again be recalled that the developing countries depend on the developed countries for a large proportion of their published information sources. It was noted that because of the embryonic state of the publishing industries of the developing countries, the period of dependence was likely to be a long one. The main sources of book supply for the English-speaking developing countries are Britain and the United States of America where there already exist reliable centralised cataloguing or processing agencies whose services may be purchased for a small additional fee. In terms of cost-effectiveness, it may be better to subscribe to these services for the extra fee than to have a processing centre established the services of which may be grossly under-used, be it a non profit-making government

concern. A case in point is the Tehran Book Processing Centre (TEBROC), a state-supported institution and the first of its type to be established outside the United States of America and Europe. Founded in 1968, it had been able to enlist only seven subscribers by 1972,⁽⁸⁾ and continues to be under-used. Subscribing to the services of a central processing agency should be more cost-effective under the prevailing circumstances of most developing countries, and should incur less administrative wrath, than the establishment of under-utilised institutions.

Until such time as it would be economically viable for the developing countries to establish processing centres, it would seem a better policy for them to encourage the use of existing centralised cataloguing services, and in the process also encourage the adoption of common cataloguing practices. An obvious avenue for the introduction of a nation-wide programme for the use of centralised cataloguing services would be through nationally co-ordinated acquisition programmes. Such programmes, as was observed in the previous chapter, should be considered as part of national schemes for resource development and sharing.

5.3.4 The Use of Centralised Cataloguing Services

Whereas centralised cataloguing has its advantages, its implementation presents certain problems. One such problem, as has already been noted, is the adoption of a basic cataloguing format by all the

(8) KHURSHID, A. Processing centres in South Asia: problems and prospects. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar.... edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 132. (IFLA Publications, 14).

participating libraries. The survey results have shown the diversity of cataloguing rules and classification schemes being used by the libraries in the sub-region. There are altogether eleven different kinds of classification schemes in use in Nigeria, ten in Ghana, three each in Liberia and Sierra Leone and one in The Gambia. Eight different kinds of subject headings are being used in Nigeria, six in Ghana, three each in Liberia and Sierra Leone, and one in The Gambia. In all the countries, four different cataloguing rules are followed. The exception is The Gambia where only two are currently in use. Getting all the different libraries in any particular country to adopt a common format would (with the possible exception of The Gambia) be an undertaking of no mean difficulty. It would demand the fullest appreciation, by all participants, of the the benefits of centralised cataloguing and the determination, thereby, to overcome what Briquet de Lemos ⁽⁹⁾ has aptly described as:

Byzantine arguments as to the advantages and disadvantages of codes of cataloguing rules and classification schemes [which have always been] associated with an inflexible resistance to the effective implementation of co-operation.

It is true that libraries can always modify centrally catalogued cards to suit their special local requirements. But it is also true that the more the modifications that are carried out, the more that the purpose of centralised cataloguing is defeated.

Another problem which has daunted many a librarian from the use of centrally produced cards is the conversion of the previous cataloguing which the adoption of the new system would necessitate. The seriousness

(9) BRIQUET DE LEMOS, A.A. On the feasibility of processing centres in Brazil. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar... edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 102. (IFLA Publications, 14).

of the problem will vary from one library to the other. For a large library, however, it would entail an enormous amount of work.

Although the ideal situation would be a re-cataloguing of the entire stock to conform with the new system, where this would be considered impracticable for one reason or the other, the existing catalogue could be closed and a new cataloguing sequence started with the adopted system. Having to consult two different cataloguing sequences would be an inconvenience, particularly to users, but it is a workable proposition. (10).

A frustrating problem is the frequent occurrence of books and catalogue cards failing to arrive at the same time, and the long delays often encountered for the subsequent arrival of the cards. The delays leave the librarian with one of three choices none of which offers a wholly satisfactory solution. The first choice is not processing the books until the arrival of the cards, which means the longer the waiting period, the longer the books are kept away from the users. The second is to shelve the un-processed books so as to make them accessible to the users. That would mean at least, assigning classification numbers to them but having no record of them in the library's own catalogue. The third, as a solution to the first two choices, is to give the books temporary entries in the catalogue. But that would constitute cataloguing of the books and would consequently defeat the purpose of subscribing to the centralised services. (11)

The unco-ordinated arrival of books and catalogue cards happens mostly where books and cards are ordered from different sources as in the use of BNB or LC cards. However, where both books and cards are

(10) PENNA, C.V., FOSKETT, D.J. and SEWELL, P.H., eds. National library and information services: a handbook for planners. London, Butterworths, 1977, 179.

(11) Ibid.

obtained from the same source (e.g. Blackwells) the incidence of delay may be very minimal. Developments in cataloguing practices, in particular the use of automatic data processing, are also helping to improve the situation. It may be appropriate at this stage to look at the relevance of automatic processing to developing countries, particularly English-speaking West Africa, with regard to the use of MARC in co-operative cataloguing programmes.

5.3.5 The Use of MARC in the Sub-region

Machine Readable Cataloguing (MARC) tapes have been in use for some fourteen years now, having first been created at the Library of Congress in 1966. MARC tapes have since then gained rapid acceptance and have not only been used in preparing and distributing the cataloguing output of the Library of Congress but the national bibliographies of other countries as well. In co-operation with the Library of Congress, the British Library has produced UK/MARC since 1967, and the national libraries of Canada and Australia now produce their own MARC formats: CAN/MARC for Canada and ANB/MARC for Australia. The three programmes have a combined data base of well over a million bibliographic records thus covering the bulk of monographs catalogued in the English language. MARC data bases are being used by networks, centralised cataloguing services and commercial organisations. The Ohio College Library Center (OCLC), the Birmingham Library Co-operative Mechanisation Project (BLCMP) and Blackwells North America are some of the organisations using MARC.

Interest in the use of MARC in English-speaking West Africa was first shown in 1974 when a seminar on National Planning for MARC in Nigeria was held at the Ahmadu Bello University, Zaria, Nigeria, from

23rd to 26th March, 1974. It was concluded at the seminar that because of the high costs, lack of adequate personnel, poor communications, and other difficulties, the use of MARC on a large scale might not be possible for some time yet. However, since some of the country's universities already had computers, or were in process of acquiring them, it was considered that the introduction of MARC into Nigeria might not be far ahead in the future. Among the resolutions adopted at the seminar was one which called for an early initiation of a feasibility study into the economic and social implications of the full-scale use of MARC in Nigeria. (12)

Unfortunately, the study has not yet been carried out so the implications are yet to be known.

What is known, however, is that development of the MARC programme continues and that the longer the delay in carrying out such feasibility studies, the greater the "implications" become. The closure by the Library of Congress of its card catalogues and their replacement with a machine readable version, and the adoption of the second edition of AACR, are indications to the users of LC cards, for instance, that developments will outstrip those who are slow to adapt.

Another of the resolutions at the MARC Seminar was that libraries in Nigeria should work towards national standardisation of technical processes with regard to international standards so as to facilitate the use of MARC and also national and international bibliographic exchange. In view of this, it was recommended further that a seminar on the use of ISBD(M) in Nigeria be convened by the National Library of Nigeria for the purpose of bringing it to the notice

(12) GREAVES, M.A. Nigeria plans for MARC. Int.Cat., 3(3) Jul/Sep 1974, 7.

of the librarians and urging its adoption throughout the country. (13)

The seminar was duly convened (jointly by the National Library of Nigeria and the Department of Library Studies, University of Ibadan, from 14th to the 18th April 1975 at Ibadan), and the adoption of ISBD(M) by Nigerian libraries was, inter alia, recommended. (14) As may be seen from Table 10 (d), the intentions of the seminar have not been realised. Out of a total of fifty Nigerian libraries which responded to the survey questionnaire, only seven (14%) indicated their adoption of ISBD. The rest of Table 10 shows that the adoption of ISBD by the other English-speaking West African countries has also been slow. Since the bibliographic information in MARC presupposes the application of AACR and the requirements of ISBD, the importance of adopting ISBD cannot be over-emphasised. AACR, on the other hand, are already being used by 61% of the libraries in the sub-region, albeit the 1967 edition. The adoption of the second edition would facilitate the use of MARC.

Nigeria, and indeed the rest of the sub-region, may not be ready yet for large-scale use of MARC. But that should not prevent them from taking advantage of the benefits of MARC even now. Massil (15) gives the following three levels through which the development of local MARC-based services can progress:

- i) reliance on external services with the minimum of interaction on the library's part;
- ii) reliance on external services for the supply of the data but also some involvement of local computer services in developing the output from MARC;

(13) Ibid., 7.

(14) AJE, S.B. Workshop on ISBD(M) and ISBD(S) in Nigeria. Unesco Bull.Lib., 30(1) Jan-Feb 1976, 62.

(15) MASSIL, S.W. The background to planning for co-operative use of MARC tapes. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar... edited by H.D.L.Vervliet, München, K.G.Saur, 1979, 236 (IFLA Publications, 14).

- iii) full maintenance of a data base and provision of catalogue services at the library with reliance on the MARC network merely for the regular supply of data.

The first level represents the simplest use of MARC and is basically a centralised cataloguing service. Libraries request data from an external service (e.g. the British Library's LOCAS, OCLC, BLCMP, Blackwells, etc.) by listing the ISBN's or LC card numbers of books being acquired. They inform the agency of their local requirements in terms of catalogues and receive a full card service on subscription basis. Cards are supplied in the MARC format which the libraries may use with the minimum of alteration.

At the second level, libraries request data again from an agency, using ISBN's or LC card numbers. But the requests are this time key punched locally and sent in tape form to the agency for processing. The results of the search are sent back to the libraries, also on tape, for processing and maintenance on a local computer. The advantage in this system is that it allows records actually needed to be obtained and manipulated locally while leaving the burden of full data maintenance to the agency.

The third level entails the acquisition of the MARC backfile en bloc and a subscription to the current exchange tapes. The maintenance, manipulation and development of the data base will then have to be undertaken locally. Being the ultimate stage in the use of MARC, this approach demands the expertise and infrastructural development which, as was rightly decided at the MARC Seminar, Nigeria, and indeed the rest of the English-speaking West African countries, lack at the moment.

The first two levels, however, are within the capabilities of the libraries in the sub-region. Level one should suit the circumstances of The Gambia, Liberia and Sierra Leone which have no, or very limited, access to computers. Ghana and Nigeria, on the other hand, have better access to computers and should find level two feasible. (Table 28 (a - d) shows libraries with access to computers). At both levels, the use of MARC should ideally be shared to reduce costs and also to form part of a nationally co-ordinated system. Co-ordination could be effected through the national co-operative acquisition schemes.

This may be a simple start in the use of MARC for both co-operative acquisition and cataloguing programmes. But it is a step that would ensure the developing countries the immediate use of the facilities of MARC while more elaborate systems, commensurate with anticipated developments, are planned.

CHAPTER 6A SURVEY OF EXISTING LIBRARY AND INFORMATION RESOURCES
IN ENGLISH-SPEAKING WEST AFRICA - III: ACCESSIBILITY
OF DOCUMENT RESOURCES6.1 Directory and Switching Capacity

Although bibliographical organisation enhances the accessibility of document resources, certain conditions must also exist, particularly in the frame-work of a library and information network, to make the resources truly accessible. As was discussed in Chapter 2, (Section 2.3.3.2 - Directory and Switching Capacity), one such condition is the existence of a directory look-up system or a bibliographic record that gives current and reliable information on the location of needed items within the network. This function is performed by union catalogues of books and union lists of periodicals. This therefore makes them key elements in a network. They constitute, as noted, the "navigational guides" to the resources; they facilitate resource sharing and thereby substantiate the philosophy of networking.

Additionally, the network should have a switching capacity. In other words, the network should be capable of directing queries or requests to the appropriate libraries or information centres and for the relevant information or material to be despatched to the requesting member, using the most convenient communication route. This may be achieved, as has been noted, through a switching or referral centre which is equipped with a complete record of the holdings of all the members of the network. These two conditions, as well as others which aid

accessibility of document resources, are discussed below in relation to the situation in English-speaking West Africa.

6.1.1 Union Catalogues of Books

Respondents to the survey questionnaire were asked if they possessed, or had access to, union catalogues of books, and if the catalogues were local (i.e. if they indicated only the holdings of departmental or branch libraries, etc.) or national. They were also to indicate the subject coverage of the catalogues and to state whether they were computer-based or they were manually operated.

The results show that a very small proportion of libraries possess, or have access to, union catalogues, either local or national, and that the catalogues are all manually operated. The small number of libraries possessing, or having access to, local union catalogues (as well as local union lists of periodicals as shown below), calls for special comment. As may be seen from Table 14 (a - f), fifty-three libraries in the sub-region have indicated that they have more than one service point, that is, they belong to systems of service that have branch and departmental libraries. Some of these are university libraries with institute or departmental libraries, public libraries with regional and branch libraries, special libraries of research organisations with several research institutes, etc. The location of needed items in such systems is made much easier and faster through union catalogues. Although sixteen libraries in Ghana reported having more than one service point, only four libraries possess, or have access to, local union catalogues, while only seven out of twenty-seven in Nigeria possess, or have access

to, them. Only one library in Sierra Leone possesses a union catalogue (the type of which was not indicated), while The Gambia and Liberia have no union catalogues, local or national, even though all three countries have libraries with more than one service point. (See Tables 14 (a - f) and 15 (a - c)). The compilation of local union catalogues should be a fairly straight-forward undertaking which, none the less, should be seen as an important guide to the resources. It is probably a reflection on the type of importance attached to union catalogues (and a reflection also on the services provided?) that so many library systems can claim to operate without them.

Accessibility is even further limited with regard to national union catalogues. There is only one library in Ghana (out of the sixty-seven that responded to the questionnaire) that possesses a national union catalogue, while nine out of Nigeria's fifty either possess, or have access to, them. As has just been noted above, there are no union catalogues in The Gambia and Liberia, and one library in Sierra Leone possesses an unspecified union catalogue.

6.1.2 Union Lists of Periodicals

Local union lists of periodicals are, like local union catalogues, available to a small number of libraries. Only three libraries in Ghana and four in Nigeria possess, or have access to, local union lists of periodicals and these, as has been observed, are out of sixteen and twenty-seven libraries in Ghana and Nigeria respectively which have more than one service point. One library in Sierra Leone has an unspecified local union list, while The Gambia and Liberia have no union lists of any kind. (See Table 16 (a - c)).

There are, comparatively, a greater number of libraries with access to national union lists of periodicals than national catalogues of books although, generally, accessibility is rather limited. Eleven libraries in Ghana reported access to, or possession of, national union lists, while in what is the highest rate of accessibility, twenty-one libraries in Nigeria reported possession of, or accessibility to, them. As Table 16 (a - c) shows, only one library in Sierra Leone possesses a national union list.

6.1.3 Switching Centres

Institutions which may be termed central agencies or "switching centres" and which have been instrumental in the compilation of the national union catalogues and lists are, for Ghana, the Council for Scientific and Industrial Research; for Nigeria, the National Library of Nigeria; and for Sierra Leone, Fourah Bay College, University of Sierra Leone on which, unfortunately, no further information could be obtained in connection with the compilation of the union catalogues and lists.

In Ghana, the Central Reference and Research Library of the Council for Scientific and Industrial Research (CSIR) has, since 1965, been responsible for the compilation of the National Union Catalogue of Scientific and Technical Books, the country's only national union catalogue. The Central Reference and Research Library (CRRL) assumed this responsibility in consonance with a decision by the National Library Technical Advisory Committee which was established in 1963 to advise on the setting up of a National Library for Ghana. One of the functions of the National Library, as proposed by the Committee, was the

compilation and maintenance of a union catalogue of all books owned by the country's libraries (except light fiction). Preparatory to the establishment of the National Library and its Bibliographic Unit which was to be responsible for the compilation of the union catalogue, it was decided that two catalogues, based on the broad subject groupings of "science" and "non-science" be started. The CSIR (then the Ghana Academy of Sciences) would be responsible for the science catalogue, while the responsibility for the non-science catalogue would fall on the Balme Library, University of Ghana. The compilation of the union catalogues would be subject to a report by a sub-committee which was appointed to study the problems that might be encountered in the implementation of the decision.⁽¹⁾

In its report, the sub-committee decided in favour of one union catalogue, instead of the two, in that the creation of one union catalogue would simplify the problems of notification of material by reporting libraries. The sub-committee also looked at the compilation of the union catalogue in its long-term, rather than short-term perspective, and recommended that the national union catalogue should be:

a separate organisation whose work would not be subject to exigencies of work of another organisation.⁽²⁾

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- (1) GHANA LIBRARY BOARD. National Library Technical Advisory Committee. Minutes of the Meeting of the Ghana National Library Technical Advisory Committee held ... on Wednesday 20th January 1965, 5-6.
 - (2) GHANA LIBRARY BOARD. National Library Technical Advisory Committee. Report of the Sub-Committee on the National Union Catalogue. [Minutes of] Meeting held on Wednesday, 27th January, 1966, 1.

Nothing seems to have come out of this recommendation. The CRRL has continued to maintain the National Union Catalogue of Scientific and Technical Books, although inadequate patronage from the participating libraries and shortage of staff at the CRRL have greatly impeded its compilation. Similarly, problems with finance, staff and defaulting contributors have prevented the Balme Library from actively pursuing the compilation of the non-science catalogue.

The CRRL has also been responsible for the compilation of the Union List of Scientific Periodicals in Ghana, the first edition of which was published in 1966. Since its establishment, the CRRL has been concerned with co-operation among scientific and technical libraries in Ghana and sees the publication of the Union List as one of the positive moves towards the achievement of this objective. A second, revised and enlarged edition of the Union List was published in 1976.

The compilation of Nigeria's Union Catalogue of Books started with the establishment of the National Library of Nigeria in 1963. The National Union Catalogue has had a chequered development the cause of which is not altogether due to inadequacy of staff and patronage, but also due, at least on an occasion, to a change in official policy. Work on the Union Catalogue was stopped in 1966 because the then Library Adviser to the Federal Government, and effectively the Director of the National Library, did not consider union catalogues important. Compilation of the Union Catalogue was resumed after the interruption and has since expanded from the original sixteen participating libraries to include, currently, the major libraries in Nigeria. At a meeting of a Working Group on Interlibrary Lending at Ile-Ife in 1974, the production of the Union Catalogue was seen as an essential function of the National Library. The National Library was therefore urged to pursue its

uninterrupted development as a matter of policy. (3) The Union Catalogue now contains about one million items, and the recently established Data Processing Unit of the National Library hopes to automate its production by the end of 1980.

Nigeria's only national union list, Union List of Scientific and Technical Periodicals in Nigerian Libraries, had, until 1973, been based at the International Institute of Tropical Agriculture (IITA), Ibadan, whose librarian had been responsible for the two editions in which it has appeared. The National Library has assumed the responsibility for its production and has planned its automation.

While these institutions may not as yet be functioning as switching centres in the strictest interpretation of the term, they may be said to have identified themselves as the central agencies as far as the compilation of the union catalogues and lists in their respective countries go. With proper support and development, they could have more effective roles to play not only in the compilation of union catalogues and lists but also in assuming other functions of switching centres.

6.2 Communication Systems

As Jackson (4) observed at a Conference on Communication Policy and Planning for Development:

The extent of the sophistication of a nation's communication system is considered an important index to its development.

(3) NIGERIA. National Library. Meeting of the Working Group on Interlibrary Lending, Ile-Ife, April 24 & 25, 1974, 7. (National Library Publication no.30).

(4) JACKSON, M.M. Libraries and documentation centres and the communication environment. Int.Lib. Rev., 8(4) Oct 1976, 361.

As a corollary to this statement, it may also be said that the level of development of a nation's communication system determines the level, and the rate of development, of its library and information services. An efficient national communication system contributes to an efficient library and information service while, conversely, a poor and unreliable communication system adversely affects its efficiency and rate of development. The switching centres of library and information networks (and indeed the networks themselves) are essentially concerned with the transmission of two categories of information: bibliographical information (or the description of library materials), and the library materials themselves (as in interlibrary lending). Both of these categories can be transmitted with speed and efficiency only if the media for transmission, i.e. the postal and communication services, on which the switching centres mainly depend, are themselves efficient and reliable.

Characteristic of most developing countries, the communication systems in English-speaking West Africa are largely underdeveloped. Postal services tend to be slow and inefficient, while telephone systems are erratic and unreliable. So although only a few libraries in the sub-region do not have access to, or possess, telephones (as Table 17 (a - e) shows), it would be wrong to assume that as an assurance of a reliable and efficient communication environment. It is not unknown for telephone systems to be out of commission for long periods of time for reasons which range from equipment failure to over-loaded national grids. Letter and parcel delivery systems are slow, and telegrams may not be any faster than letters.

The redeeming factor is that the governments in the sub-region are conscious of these problems and have plans, some already being

implemented, to solve them. One of the reasons for the plan to move the Federal Capital of Nigeria out of Lagos is that the traffic generated by telephone subscribers has so exceeded the capacity of the networks that telephoning inside Lagos has become extremely difficult. A completely new system is seen as the only solution to the problem. (5) In Ghana, a satellite earth station is currently under construction as part of the Government's plan to improve the telecommunication services in that country. The multi-faceted project includes an international switching centre to cater for telephones, telex and telegraphy via satellite, the rehabilitation of the existing internal telecommunication network (with planned extensions) and, as part of the Organisation of African Unity's Pan-African Telecommunication System, the provision of high-quality direct intra-African telecommunication links. The last provision is an attempt to eliminate the current expensive and time-consuming process of routing intra-African messages through Europe. (6)

These are long-term government projects which will improve the efficiency of the tele-communication systems when completed. In the meantime, however, specific short-term plans would also be needed to solve the pressing problems of the moment. The institution of such plans are particularly important to library and information networks if they are to function efficiently. Some of these, such as the shuttle or courier service, have been tried (or proposed) and are discussed below.

(5) SHOYINKA, P.H. The potential of MARC for Nigeria: the North American example (Part 1). Int.Cat., 6 (3) Jul/Sep 1977, 34.

(6) [STANDARD CHARTERED BANK LTD.] Post and Telecommunication projects (Ghana). Standard Chartered Rev., July 1979, 33-34.

6.2.1 The Shuttle Service

Variously known as the courier service, vehicle/truck delivery service, transport scheme, etc., the shuttle service (which is a special delivery service outside the national postal service) has been used successfully by library systems in the developed countries. In Canada, for example, the estimate, a few years ago, was that about 47% of 352 libraries active in interlending use such delivery services. (7) Several state, academic, public and other library authorities and networks in the United States of America operate their own delivery services, (8) and in the United Kingdom, the British Library has been investigating alternative means of document delivery and has been supporting regional transport schemes. (9) These services are used either because they are found to be cheaper or more efficient than the normal postal services, or both.

With the exception of Nigeria, the shuttle service is not known to have been tried by any of the countries in the sub-region. The only other country in which its use has been proposed is Ghana. In 1976, a Joint Consultative Committee of the CSIR/US-NAS/IDRC investigated the role of the CSIR in developing a national scientific and technical information network in Ghana. The Committee's "action report" recommended an investigation into the possibility of using existing transport means (e.g. daily shuttle between CSIR Institutes or

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- (7) STUART-STUBBS, B., FRIESEN, M. and McINNES, D. Interlibrary loan in Canada; a report of a survey. Ottawa, National Library of Canada, 1976, 177.
 - (8) See, for example, JENKINS, H.R. Vehicle delivery service - courtesy ACLCP. Penn. Libr. Ass.Bull., 26, 1971, 97-100, and JUDD, J. van der. Interlibrary loan delivery experiment. The Bookmark, 31, Sep-Oct 1971, 11-14.
 - (9) RUSSON, D. Transport schemes for interlibrary loans. Interlending Rev., 6(4) 1978, 115-117.

university campuses) in delivering library materials. Where found appropriate, the Committee recommended that the arrangements should be formalised. (10) As of now, no action has been taken on the recommendation.

The courier service in Nigeria was started in 1971 as a joint venture between the University of Benin and the erstwhile Midwest State Library:

to expose the two libraries to the book resources at Ibadan, that is, the University of Ibadan Library and Bookshop, and the Bookshop of the University of Ife, Ibadan Branch. (11)

The service was later extended to the Ile-Ife campus of the University of Ife, and the University of Benin Library additionally extended the range of its route, by taking advantage of the University's weekly courier service to its Lagos Office, to carry out interlibrary loans and other transactions with the Lagos University Library.

A cost analysis of the scheme showed that it was more expensive to run than the use of the national postal service. It was, however, found to be more reliable and, although only a weekly service, incomparably faster than the national service. The Benin/Ile-Ife/Ibadan courier service provided a 48-hour round trip service while correspondence between Benin and Ibadan would normally take more than one week. Despite the cost, the service proved invaluable. (12)

In areas where good communication systems are wishes rather than realities, some reality could be injected into the system if such schemes

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- (10) GHANA. Scientific and Technical Information (STI) Ghana: role of the CSIR in developing a national STI network; an action report by the Joint Consultative Committee of the CSIR/US-National Academy of Sciences/International Development Research Centre (Ottawa). Accra, CSIR, 1976, 16.
- (11) ESEZOBOR, J.E. A critical examination of a functional network of courier service for a national lending service. In Nigeria. National Library. op.cit., 15.
- (12) Ibid., 17.

as these were encouraged and supported. If the shuttle services could be made more cost-effective, say, by the reduction of costs through more institutional participation, their worth would be even more appreciated.

6.2.2 Telecommunication Services

As with the postal services, the telecommunication services could also be improved through the use of supplementary communication media. Over the past decade or so the use of telex and other communication equipment have become fairly common as a means of rapid and reliable communication between institutions, and quite a few libraries in the developed countries use them for interlibrary communication and other transactions. In Canada (for which information was readily available) about 40% of libraries active in interlibrary lending are said to use telex regularly for those purposes. (13) About three-quarters of university libraries, half of the public and regional libraries and a third of the government libraries make use of telex. To facilitate the use of telex for interlibrary lending the Canadian Library Association has developed protocols which have been generally accepted by the participating libraries. (14-15)

Telex and similar communication equipment are hardly used as means of communication between libraries in the West African sub-region.

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- (13) STUART-STUBBS, B., FRIESEN, M. and McINNES, D. op cit., 173.
 - (14) CANADA. National Library. Canadian Union Catalogue Task Group. Final Report to the National Librarian of Canada. Ottawa, National Library of Canada, 1976, 56.
 - (15) IFLA has also published a code to overcome language difficulties and to facilitate telex communication between libraries. See IFLA-IATUL telecode and telex address book for libraries in ten languages. London, IFLA, 1966. (International Manuals, no.1).

The reason is not difficult to find: there are very few libraries which have access to, let alone possess, these telecommunication equipment. From Table 18 (a - c) it may be seen that only one library in Nigeria possesses its own radiotelephone, while a sub-regional total of only fourteen libraries (Nigeria nine, Ghana four and Sierra Leone one) have access to radiotelephones. No library in The Gambia or Liberia has access to, or possesses, a radiotelephone. And for telex, only three libraries (all in Nigeria) have their own installations, while another twelve in Nigeria, eleven in Ghana, two in The Gambia and one in Sierra Leone have access to it. There is no library in Liberia which has its own telex installation, or has access to one. (See Table 19 (a - d)).

In order to facilitate interlibrary communication, including interlibrary lending, a policy for the use of telex, radiotelephones or similar equipment could be systematically pursued as an essential part of the development of the national programmes for library and information resource development and sharing. It may not be possible, or indeed necessary, to have telex or radiotelephones installed in all the participating libraries. But the switching centres (the primary nodes on the networks, that is, and possibly the secondary nodes also) should ideally be linked by such equipment.

6.3 Interlibrary Lending

A network for library and information resource sharing works on the principle that materials requested within the system will be available with the minimum of delay. A library will be willing to participate in a co-operative acquisition scheme, for example, if only there is the assurance of an efficient scheme for the supply of needed

items. An efficient interlending arrangement is therefore a sine qua non for a library and information network. Indeed it gives practical meaning to the concept. Some of the conditions which make for efficient interlending arrangements have been discussed above. Others will be discussed later. But at this point, a look at the existing interlending pattern in the sub-region might be appropriate.

6.3.1 Existing Interlibrary Lending Pattern

The analysis of the survey results on interlibrary lending has been confined mainly to an account of the number of books borrowed or loaned by type of library because most respondents did not supply the requested information which would have permitted a more detailed analysis of the interlibrary lending pattern. Respondents were asked to indicate:

- i) the libraries/information centres (both local and foreign) which they borrowed from most (up to six names were to be given);
- ii) the libraries/information centres (both local and foreign) which they loaned to most (up to six names were also to be given); and
- iii) the number of items borrowed and/or loaned for the years 1976/77 - 1978/79.

The aim was to ascertain if, for local borrowing, there was a balanced pattern or if there was any dependence on any particular library or libraries. If there was, the intention was to investigate the nature and extent of such dependence, that is, how heavily those libraries were depended on, and by which type or types of library. Another objective was to find out how much borrowing there was between libraries of identical interest, either by subject specialisation (e.g. law, medicine, agriculture, etc.) or by type of library (e.g. academic, special, school

and college, etc.). The statistics on foreign libraries were to establish the amount of interlibrary lending between local and foreign libraries, and the type of libraries mostly involved. Of particular interest was an establishment of the range of interaction that existed among the libraries in the sub-region. But, as was the case in the analysis of publication exchange programmes, most libraries were unable to provide the information apparently because statistics on interlibrary lending are not kept. It is hoped, however, that the following analysis will provide some useful insight into the existing interlibrary lending pattern in the sub-region.

As may be seen from Table 20 (a), there is no active inter-library lending in The Gambia. Only one library, the Attorney-General's Department Library, reported occasional loans to the Judicial Library. No records are kept but lending, over the three-year survey period of 1976/77 - 1978/79, is estimated at about thirty books.

Slightly under half (i.e. thirty-one or 46%) of the sixty-seven responding libraries from Ghana are engaged in interlibrary lending. Almost all the lending activity is centred around the academic, government and special library sectors. The information centre and school and college library sectors reported no interlibrary lending, while only one of the three responding public libraries indicated that it was engaged in interlibrary lending.

As far as can be deduced from the available statistics, the academic libraries, as a whole, loaned more than they borrowed (138 books borrowed as against 215 loaned), the government libraries borrowed more than they loaned (165 borrowed and 123 loaned), while the special libraries, as a group, borrowed less (1342) and loaned more (2762).

Most of the international interlibrary lending was conducted by the academic libraries, five of which borrowed a total of 451 books and loaned four. Only one government library loaned an unspecified number of books, and two special libraries borrowed some twelve books and loaned some books (number not indicated). (See Table 20 (b)).

Although six of the responding Liberian libraries are engaged in interlibrary lending, information given on local interlibrary lending is rather scanty and not very helpful. Only two libraries could give any interlending statistics: one academic library which borrowed sixteen books, and a special library which loaned forty-five books.

Information on international interlibrary lending was, however, clearer. The two responding academic libraries were the only institutions which borrowed from foreign libraries. Between them, they borrowed 368 books and loaned ten. (See Table 20 (c)).

With forty-three (or 86%) of the fifty responding libraries recording their engagement in interlibrary lending, Nigeria has the most active interlibrary lending programme in the sub-region. Local interlibrary lending is equally engaged in by all the sectors and is not confined, as in Ghana, to any particular sectors.

The statistics again indicate that the academic libraries borrowed less than they loaned (484 borrowed, 565 loaned). The government library sector, however, loaned more than it borrowed, having borrowed a total of 1146 books and loaned 2486. The public library and school and college library sectors also loaned more than they borrowed while the special libraries, with 767 books borrowed and 632 loaned, borrowed 135 books more than they loaned.

International interlibrary lending follows the pattern, with academic libraries as the principal participants. A total of six academic libraries borrowed some fifty-four books, and loaned an unspecified number, while one special library loaned five books, and another borrowed and loaned some books but could not indicate how many. (See Table 20 (d)).

In Sierra Leone; only six (35%) out of the seventeen responding libraries indicated their participation in interlibrary lending. The only responding academic library loaned forty books and borrowed none, the government library sector borrowed 174 and loaned 225, while the public libraries borrowed and loaned some books but have no record of their transactions. The school and college and special library sectors reported no interlibrary lending during the three-year survey period.

In what is a change in the international interlibrary pattern, only one library, a public library, borrowed from a foreign source. None was loaned. (See Table 20 (e))

The analysis shows a fair amount of interlibrary lending in the sub-region, particularly in Ghana and Nigeria where access to some union catalogues and lists might have contributed to the higher rates of activity. Generally, however, interlibrary lending lacks proper co-ordination and direction, and is conducted in an informal, ad hoc way. Because most libraries do not have access to union catalogues, and also because there are no recognised switching centres, most of them would merely guess the location of needed items and send requests. This invariably leads to the few easily identifiable libraries being disproportionately burdened with requests. It also causes delays where requests have to be re-directed to the appropriate sources. Overburdening and unnecessary delays may be avoided if, as has been observed, there are

up-to-date directory look-up systems and central agencies, whose possible roles are discussed below.

6.3.2 Central Agencies and Co-ordination of Interlibrary Lending

A central agency, as used in this context, refers to a switching centre which is basically concerned with the promotion of conditions which will facilitate an efficient interlibrary lending scheme. It is not used to denote a central agency like the British Library Lending Division (BLLD) which concentrates on building up a central lending collection.

A system of that kind has its virtues, as the BLLD has demonstrated, and the success of the BLLD has occasionally prompted the thought for the adoption of a similar system by the developing countries.⁽¹⁶⁾ Such suggestions are made in good faith, one would like to believe. But what is probably often lost sight of, or taken for granted, is that the BLLD has attained its near-production line efficiency because it operates in an environment that would normally encourage such efficiency. Unlike the developing countries, there is a developed book industry which means that a substantial proportion of its stock is obtained locally; importation of the foreign element of its stock is not impeded by cumbersome currency restrictions and bureaucratic practices; postal and communication services are sufficiently reliable to promote efficiency. Generally, conditions are far less inhibiting than they are in the developing countries. Some of the problems that the developing countries

(16) BROOME, E.M. Do developing countries need processing centres? In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G. Saur, 1979, 106 - 107. (IFLA Publications, 14).

face have been discussed in this and earlier chapters and need not be repeated here. Suffice it to say that under their prevailing unfavourable conditions, rather than develop centralised, monolithic collections, it would serve the developing countries better if they concentrated on the development and use of existing collections. Located as they are in response to specific user needs, the existing collections present a better chance of reaching their user populations through the established channels of service than an incapacitated, centralised nation-wide service.

A central agency as envisaged then, is one that has as its role, the co-ordination and direction of interlibrary lending. One of the important functions of the central agency (or national centre) which will make this possible is the compilation of union catalogues and union lists. Others concern the operation of the interlibrary lending mechanism itself, and include the formulation of codes specifying the conditions under which the system may operate. The code may cover such subjects as the responsibilities of both requesting and lending libraries, the types of material to be excluded from the lending arrangements, costing (if applicable), the length of loan period, the design of loan request forms, and similar measures which seek to ensure the smooth running of the scheme.

As regards loans, requests may either be made through the central agency (as in a centralised system) or sent directly to the lending library (in a decentralised system). Centralisation, as has already been noted elsewhere, has its advantages and disadvantages. However, in interlibrary lending, probability and speed of satisfaction, simplicity of procedures (for requesting and lending), and costs should

be the main factors to be considered more than anything else.⁽¹⁷⁾ It follows, therefore, that it should be possible for a request to be made directly if the location of the needed item is known, and for the item to be sent to the requesting library without the intervention of the central agency. On the other hand, requests and loans may be routed through the central agency where this is considered a better alternative. If the former method is used, the borrowing and lending procedures should be such that the central agency will be notified of all transactions not routed through the agency.

A well-organised national interlibrary lending system should provide a sound basis for an efficient international interlibrary lending arrangement. The survey results have shown that there is some amount of international interlibrary lending in the sub-region. But its operation, like its local counterpart, is unco-ordinated. Rightly has Nortier⁽¹⁸⁾ observed that:

A country where the internal lending system works well is also the one which will best meet requests from abroad. There will be no appreciable improvement at the international level so long as inter-library loans are not better organised within each country.

In international interlibrary lending, as in national lending, quick transmission of requests and documents, simple accounting and simple and standardised procedures and forms are required to evolve an efficient system. Moreover, national channels should normally be used first, and

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- (17) LINE, M.B. Centralised versus decentralised loans system for international lending. Paper presented at the Western European Seminar on Library Interlending, Banbury, England, March 10-15, 1973, 1. (mimeo.)
- (18) NORTIER, M. Inter-library loans: some problems and possible solutions. Unesco Bull.Lib., 28(2) Mar-Apr 1974, 68.

each country must have a national centre (or centres) to plan, co-ordinate, and monitor the lending scheme. (19) The establishment of national centres (or central agencies) with special responsibilities for international loan requests has, in fact, been a long-standing recommendation of IFLA which has for many years been concerned with the efficient organisation of international lending schemes, (20) and has initiated programmes to that effect. (21)

International interlibrary lending may also be centralised or decentralised, and Line (22) delineates the following four possible channels (ranging from the wholly decentralised, through the partially centralised to the wholly centralised) through which international loans may pass:

- i) local library may send requests directly to foreign local library (wholly decentralised);
- ii) local library may send requests to foreign national centre (partially centralised);
- iii) local library may send requests to its own national centre, which then sends them directly to foreign local library (partially centralised); and
- iv) local library may send requests to its own national centre, which then sends requests to foreign national centre (wholly centralised).

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- (19) LINE, M.B. Universal availability of publications and developing countries. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar.. edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 163-164. (IFLA Publications, 14)
- (20) TVETERAS, H.L. International loans. Unesco Bull.Lib., 19(6) Nov-Dec 1965, 297-301.
- (21) As a measure of its concern with international interlibrary lending, IFLA established an Office for International Lending at the BLLD in 1975, to facilitate and improve international lending by collecting statistics and noting trends, and by devising and encouraging improved requesting and lending procedures (e.g. the new IFLA request form). IFLA also carries out studies into problems that generally affect international lending. See LINE, M.B. The British Library Lending Division. In British librarianship to-day, edited by W.L.Saunders, London, The Library Association, 1976, 105. (A Library Association Centenary Volume).
- (22) LINE, M.B. Centralised versus decentralised loans system for international lending. op.cit., 1.

Again as in local lending, choice of system of requests must be influenced by probability and speed of satisfaction, and cost. A little bit more centralisation would, however, be required for international lending to ensure that locally available items were not requested from abroad. To perform this function successfully, and also to be able to direct in-coming requests to the appropriate sources, the national centre would have to be equipped with reliable national union catalogues and lists. The centre would also have to be informed of transactions not conducted through it to enable it to maintain accurate records, monitor progress, identify problems and work towards improved efficiency in international interlibrary lending.

6.3.3 Interlibrary Lending and the Supply of Documents

Once an item has been located and a request has been sent, it becomes the responsibility of the lending library to despatch it (either the original copy or its surrogate, i.e. photocopy, microfilm, etc.) as quickly as possible.

It may not always be possible, or indeed advisable, to send original copies of requested items. Copies may be rare, unique, or too fragile to be posted, or it may be cheaper and faster to send the surrogates instead of the original copies. Whenever this is considered possible, photocopies or microfilms should be used. There are good reasons for this:

- i) availability is increased, as the original does not have to leave the library;
- ii) single copies of some items may be able to serve the needs of both reference and lending;
- iii) for items that cannot be lent, photocopying or microfilming is the only means of supplying copies to other libraries;

- iv) photocopies of journal articles can usually be sent more quickly and cheaply than the originals;
- v) copies do not have to be returned. (23)

Using photocopies and microfilms for interlibrary lending presupposes that the libraries have the facilities for photocopying and microfilming, and in the case of the later, facilities for reading them also. Apart from photocopying or microfilming requested items for economy and speed of transmission, there are certain types of material, report literature, for example, which are being increasingly produced in microfilm only. The ability to use such material will, needless to say, depend on the availability of the requisite facilities.

The survey investigated the availability of reprographic equipment in the sub-region, and the results are reported in Tables 21-24. From Table 21 (a - e) it may be seen that a very large proportion of the libraries in all the countries either possess, or have access to, photocopying equipment - the most easily accessible reprographic equipment in the sub-region. Worked out in percentages, the number of libraries with access to, or possessing, photocopying equipment in the individual countries are as follows: The Gambia 57% (four out of the seven libraries); Ghana 81% (fifty-four out of the sixty-seven); Liberia 71% (five out of the seven); Nigeria 92% (forty-six out of the fifty), and Sierra Leone 71% (twelve out of the seventeen responding libraries).

The rate of accessibility changes rather drastically with respect to the other types of reprographic equipment. Table 22 (a - d) shows considerably reduced availability of microreading equipment. No

(23) LINE, M.B. Principles of international lending and photocopying. Int.Lib. Rev., 9(3) Jul 1977, 374.

library in The Gambia possesses, or has access to, a microreading equipment, while only sixteen (24%) do in Ghana. Liberia has 43% accessibility (three libraries); Nigeria, 34% (seventeen libraries) and Sierra Leone, only 12% (two libraries).

No library in The Gambia, Ghana or Sierra Leone possesses, or has access to, microreader/printers. There are only 26% (thirteen) and 14% (one) in Nigeria and Liberia respectively which do, as Table 23 (a - b) indicates.

Table 24 (a - c) shows that microreproduction equipment is the least available type of reprographic equipment in the sub-region. Only 4% (three) of the responding libraries in Ghana have indicated that they possess, or have access to, microreproduction equipment, while 29% (two) and only 4% (two) in Liberia and Nigeria respectively do. No library in The Gambia or Sierra Leone possesses, or has access to, one.

With the exception of photocopying (which generally represents the most popular reprographic medium in a library and information service) the results show rather limited accessibility to reprographic equipment in the sub-region. Price and maintenance costs may preclude all but the well-endowed libraries from possessing their own reprographic equipment - apart from facilities for photocopying and a simple mechanism for microreading. In any case for most of the libraries, these facilities will be adequate to meet most of their reprographic needs. What would be needed to supplement those would be the institution of a system that would guarantee them access to the other reprographic equipment. Access could be had through the switching centres or central agencies and the important nodes on the network which should be equipped with a wider range of reprographic facilities as a matter of absolute necessity.

6.4 Co-operative Storage Schemes

Interlibrary lending arrangements must be backed by efficient document storage facilities. These two conditions must co-exist, as was noted in Chapter 2, if programmes for the co-operative development and sharing of resources are to succeed. Two types of co-operative storage schemes may be distinguished. First, the one which is pursued as part of a co-operative acquisition scheme, under the principle that items co-operatively acquired are co-operatively stored; and second, the other which is carried out not as part of a co-operative acquisition scheme but as a cheaper or more convenient means of retaining low frequency use materials through shared storage costs. While the former does not necessarily entail the centralised storage or the "warehousing" of the items, the latter does, that being the essence of the co-operative venture. However, the distinction may, on occasion, be a fine one only. In co-operative acquisition schemes, considerations which are extrinsic to the factors which influenced the decision to operate the schemes may, in the end, cause the centralisation of the resources. Considerations like lack of adequate storage facilities and the need for improved accessibility come readily to mind. On the other hand, a scheme that was originally started as a means of sharing the storage cost of little-used material may have that function extended to include the acquisition of (still little-used but potentially useful) material to fill in apparent gaps in the collection, and thus assume the form of a co-operative acquisition scheme. Since it is possible for one type of scheme to "slip" into the other and, particularly, since there are currently no co-operative storage schemes in the sub-region, a review of some operating storage schemes might help the subsequent relation of the co-operative storage

notion to the needs of the sub-region.

6.4.1 Co-operative Storage - Panacea or Placebo?

The main reasons for which libraries usually participate in co-operative storage programmes have been summed up by Harrar (24) as follows:

- i) co-operative storage warehouses provide more economical storage than could be achieved if each member housed the same materials within its own main building and branches;
- ii) the materials stored receive little use and therefore generate low service costs;
- iii) co-operative storage warehouses reduce costs even though they necessitate duplication of records and impose additional costs in transporting materials between warehouses and the requesting libraries;
- iv) delays in provision of desired material are unimportant as compared with savings in costs;
- v) co-operative storage warehouses increase the research resources available to the co-operating libraries.

These points were used by Miss Harrar in investigating three of the most prominent storage schemes in the United States of America: the New England Deposit Library (NEDL), the Hampshire Inter-Library Center (HILC), and the Midwest Inter-Library Center (MILC - now known as the Centre for Research Libraries), each of them representing a different configuration of co-operative storage scheme. The first, NEDL, is a central storage and warehouse which is owned and operated by several participating members. The only feature which is common to

(24) HARRAR, H.J. Co-operative storage warehouses. In Reader in library co-operation, edited by M.Reynolds. Washington, D.C., NCR/Microcard Editions, 1972, 211-212.

them is the building which they jointly own. Each library otherwise determines how much space it needs, how it will be used, and each library maintains its own collections. The second type, as exemplified by HILC, is a consolidated warehouse owned and supported by a group of co-operating libraries, and used in storing little-used serials of members. The collections are completely integrated and are supported by contributed funds, as well as income from the disposal of duplicates. Part of the income is used in acquiring rarely-consulted serials and expensive sets. The third type, the most elaborate of the three, is illustrated by MILC in which members' holdings are absorbed into the collections, and duplicates are discarded. This type of co-operative employs professional staff which carries out approved programmes and undertakes co-operative acquisition schemes to supplement the collections, and to strengthen the library resources in the region.

The general conclusion arrived at (for all three different types of co-operative storage) was that the two basic aims of co-operative storage, that is, realisation of economies and the extension of resources had hardly been attained. Pre-storage processing of the materials had added to, rather than reduced, costs; the economies provided by a storage warehouse could be achieved by any library if the techniques for storage (e.g. compact storage, inexpensive maintenance and simplified processing) were used; duplication had been eliminated only to a limited extent, and although the projects had encouraged other forms of co-operation, like the joint acquisition programmes and co-operative specialisation in subject collecting, these forms of co-operation could be achieved independently of warehouses. (25) The three storage schemes, Miss Harrar

(25) Ibid., 214-216.

concludes, "should not... be looked upon as 'successful models upon which future storage facilities should be patterned" and that those seeking solutions similar to those supposed to be presented by storage warehouses should look at alternative co-operative schemes "including such recent developments as communications networks of all kinds". (26)

In a study of 125 academic consortia, also in the United States of America, Patrick (27) realised that co-operative storage was an activity in which few consortia were engaged: only 17% of the consortia indicated that they had developed a central resource or storage centre. Further, one consortium which considered a co-operative storage centre had, in a decision bearing close similarity to Miss Harrar's conclusion, opted for the development of a union list of periodicals since that was considered an activity of higher priority.

On the other hand, there are co-operative storage schemes that are considered to have proved viable. Muller, (28) for one, agrees only partially with Miss Harrar's conclusions on the analysis of the three co-operative storage schemes. While conceding that most of the objectives as originally set out may not have been achieved, he draws attention to the successes of the schemes in other directions. All the schemes are thought to have saved the participants some money in terms of postponed construction of new buildings and general reduction in running costs. But of particular interest is the Center for Research

(26) HARRAR, H.J. Cooperative storage. Libr.Trends, 19(3) Jan 1971, 327.

(27) PATRICK R.J. Guidelines for library cooperation; development of academic library consortia. Santa Monica, California, System Development Corporation, 1972, 187.

(28) MULLER, R.H. Toward a national plan for co-operative storage and retention of little-used library materials. In Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973, at Pittsburgh, Pennsylvania... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 120-121.

Libraries which, as the Midwest Inter-Library Center, was started as a regional project with an initial membership of ten libraries. Its scope of service increased gradually to match the steady growth in membership. Now, with over ninety institutions, the Center for Research Libraries is a major national bibliographic resource, and is claimed to have enabled member libraries to weed their collections, reduce subscription to foreign newspapers and little-used scientific journals and to reduce standing orders, etc.

The Medical Library Center is also cited by Muller ⁽²⁹⁾ as an example of a successful storage scheme. The Center is sponsored by the [American] Academy of Medicine and other medical libraries, and houses a collection of little-used periodicals, textbooks and monographs all of which were transferred from member libraries for shared storage and use. One feature which is unique to the Medical Library Center is its common subject interest (medicine). Muller takes this common subject interest, absent in the other schemes, to be an important contributory factor to the success of the Center. He therefore suggests that subject-based storage schemes (e.g. law libraries, engineering libraries, theology libraries, etc.) may prove more viable than those based on inter-institutional arrangements.

These cited examples of co-operative storage schemes represent a small portion of a subject of "a lengthy history and a voluminous literature", particularly in the United States of America where it is mostly practised. The different conclusions drawn also indicate the divided thinking on the subject. There are certain advantages in co-operative storage, as the above reviews have shown. The extent to which these benefits may be said to constitute a profitable venture must

(29) Ibid, 123-124.

obviously depend on individual appreciation of the totality of the benefits - an appreciation which should be based on the guiding principle that there is no special virtue in co-operative storage; it is only a means to an end and should be resorted to only if it can save money without causing too much inconvenience.⁽³⁰⁾

6.4.2 Co-operative Storage in the Sub-region

There is no evidence, either from the present survey or from published sources, of a co-operative storage scheme in English-speaking West Africa. This is probably because lack of space, the basic motivation behind co-operative storage, as yet does not seem to constitute a serious threat to the majority of libraries in the sub-region.

Of the seven responding libraries from The Gambia, five indicated that they had space problem. Two of the five hoped to move into bigger accommodation any time within the next five years. In effect, therefore, three libraries would need bigger accommodation.

In Ghana, forty-four (66%) of the responding sixty-seven libraries provided information on their space requirements. Of the forty-four libraries, twenty-one indicated that they were adequately housed; twenty-three said they were not but ten of them hoped to have new accommodation within the next five years, leaving thirteen with no immediate prospects of new accommodation.

Only two of Liberia's seven responding libraries did not answer the question on accommodation. Of the five that did, two have no immediate problem with space; three do, out of which one hopes to be

(30) Ibid., 119.

adequately housed any time within the next five years.

In Nigeria thirty-one (62%) of the fifty libraries answered the question on space. Nineteen out of the thirty-one have no space problem. Of the twelve which do, three indicated that there were plans for new accommodation within the next five years. For the remaining nine, there were no such plans.

In Sierra Leone, eleven (65%) of the responding seventeen libraries answered the question on accommodation. Five of the eleven libraries have no accommodation problem. Of the six which do, two have the promise of new accommodation, leaving two which do not.

Although only ninety-eight (66%) of the sub-regional total of 148 responding libraries provided information on their space requirements, all the same, the returns give some useful insight into the situation in the sub-region. Discounting the eighteen libraries which are likely to be provided with new accommodation, there are thirty-one with space problem. Most of these are government, special, and school and college libraries which have been established only within the past ten or fifteen years. But because of a general lack of library input at the planning stages of these institutions, the libraries have been put in "office" buildings and have therefore started with inadequate space provision. To most of these libraries, then, the question is not one of pressure on space per se but a lack of appreciation by management of the importance of the relationship of library functions to their physical environment. A little administrative understanding of the situation would eradicate most of the current "serious" accommodation problems.

Pressure on space is therefore not so acute as to warrant the establishment of centralised co-operative storage schemes in the sub-region. Besides, the huge investments that may be required to establish and run the schemes and the poor postal and telecommunication services, on which such schemes would greatly depend for their efficient running, would make them neither viable nor convenient.

Of the two types of storage schemes distinguished earlier on, the first, i.e. the type that is undertaken as part of a co-operative acquisition programme, would for the moment, be the better and more suitable alternative of the two schemes. As was observed, this scheme does not necessarily involve the centralisation of materials. Participants who acquire items in consonance with the co-operative acquisition programmes store the items and loan them to others on request. In other words, it is a scheme that makes use of existing storage facilities of which the libraries are currently not in short supply. Use of the available space may even be stretched further if such space-saving measures as the use of microforms (for back issues of periodicals, newspaper collections, little-used materials, etc.), and carefully orchestrated withdrawal and disposal policies were systematically pursued. (For number of microforms held by the responding libraries, and for stock withdrawals over the three-year survey period of 1976/77 - 1978/79, See Tables 5 (a - e) and 6 (a - e)).

Discussions in this, and the previous, chapter have been confined to the organisational processes that enhance accessibility of document resources. In the next chapter, accessibility is discussed with regard to the needs of users.

CHAPTER 7A SURVEY OF EXISTING LIBRARY AND INFORMATION RESOURCES
IN ENGLISH-SPEAKING WEST AFRICA - IV: USERS7.1 Users and User Surveys

An important attribute of a library and information network, but one which is often not recognised as such, is the user. Efforts are more often concentrated on the development of hardware, the analysis of software and the building and management of the network than on the user and his needs. If it is considered that the user is the ultimate beneficiary of all these efforts then he should be regarded as a focal element in the designing and planning of the network, and the satisfaction of his needs should be the primary objective of the network.

The satisfaction of the needs of the user will obviously depend on the identification of the needs. Although the problem of the determination of the exact needs of the user has always plagued the librarian or information scientist, in the absence of any fool-proof system, questionnaires, interviews, the diary method, observation and analysis of existing data continue to be the main methods used in obtaining information about user needs. A combination of methods, say, the questionnaire and interviews are often used for more beneficial results. The apparent ineffectiveness of these methods notwithstanding, they are a useful feed-back mechanism and assist in the assessment of the effectiveness of services provided, or in the planning of new ones. User surveys should therefore be considered as an important feature of any

library and information network. (For a more detailed discussion of this topic see Chapter 2, Section 2.3.4.1 - Identification of Needs).

7.1.1 Incidence of User Surveys in the Sub-region

User surveys have not been significantly employed in the provision of library and information services in the sub-region. Only eighteen (12%) out of the sub-regional total of 148 libraries and information centres surveyed have ever carried out user surveys. Of the eighteen, six are special libraries, five are academic libraries, four are public libraries, two are government libraries and one is a school and college library. Survey by questionnaire was the most popular method used, followed by interviews. In three cases, a combination of the questionnaire and interview methods was used. The observation method was used in two cases, and survey by analysis of data was used by only one library.

Where information on results of the user surveys has been given, there is a clear indication that the surveys have provided useful feedback on the particular aspects of the service that were investigated, and that they have helped in the provision of a more effective service. Thus, the Gambia National Library (the only library to have conducted a survey in that country) provided more African fiction and strengthened the science section of its holdings as the result of a general survey it conducted. (See Table 25 (a)).

Five libraries, out of the responding sixty-seven in Ghana, indicated that they have carried out user surveys. One academic library (the University of Cape Coast Library) carried out a survey in 1968 into the reading habits of students of the University, ⁽¹⁾ and a public

(1) The survey was undertaken as a thesis for the Fellowship of the (British) Library Association. See BEDIAKO, A.O. Reading habits of students at the University of Cape Coast. Thesis submitted for the Fellowship of the Library Association, July 1968. (Unpublished).

library (the Ghana Library Board) conducted a survey in 1975 to find out the socio-economic factors affecting membership of the library and also whether African readers read for self-improvement or whether they read to raise their professional status. The remaining three are special libraries. In 1968 the Volta River Authority Library conducted a survey into the effectiveness of its services, and in 1970 The Central Reference and Research Library (CRRL) of the Council for Scientific and Industrial Research (CSIR) also conducted a survey to test the effectiveness of its services. The third library, the Agricultural Development Bank Library, is currently (1980) compiling data on reference frequency and the type of resources referred to most.

Two of the libraries indicated the bearing of the survey results on their services. The Volta River Authority Library had its book budget doubled because of user complaint regarding the inadequacy of its bookstock. The survey also helped to end the practice whereby members of staff maintained little "libraries" in their individual offices; the books have all been added to the main library stock and a centralised service is now being provided. The CRRL survey, which was the first ever user survey of the scientific community in Ghana, showed that the library was not being used much because it was not "advertising" itself sufficiently. The survey was also meant to determine the usefulness of its fortnightly abstracts bulletin, the Literature Summary. The survey revealed that the Literature Summary was not comprehensive enough and that besides agriculture it did not cover the other disciplines in any great detail. The Literature Summary was therefore replaced by a more comprehensive, quarterly Ghana Science

Abstracts. (2) (See Table 25 (b)).

The only library to have conducted a user survey in Liberia, the Liberian Institute of Public Administration (LIPA) Library and Information Center sought user opinion on its hours of opening. The results showed that the majority of the users did favour extended opening hours, and this may be implemented later in 1980. (Table 25(c)).

In Nigeria, nine libraries (four academic, two special, two public and one school and college) out of the fifty responding libraries have carried out user surveys. Of the academic libraries, the library of the Department of Library Studies, University of Ibadan, conducts regular, informal interviews to ascertain user needs. The interviews are supplemented with a survey by questionnaire once a year. The Medical Library of the Ahmadu Bello University conducts occasional surveys into the use of journals in the library, while the University of Lagos Library undertakes occasional (general) user surveys, the last one having been conducted in 1976. The University of Ibadan has conducted two surveys, one on the use of the serials collection by undergraduate students, and the other on the use of the library generally.

The Forestry Research Institute of Nigeria Library, one of the two special libraries to have conducted user surveys, investigated the extension of its opening hours, while the other, the Nigerian Institute of International Affairs, is currently testing the use made of its current awareness service by suspending the service without prior notification. The two public libraries, the Kwara State Library and the Oyo State Library, both do carry out occasional surveys into the use of the libraries, and the College of Science and Technology Library, Port

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- (2) BOADI, B.Y. The provision of scientific and technical information in Ghana with particular reference to the requirements of UNISIST. A Master's dissertation submitted... for the award of the Master of Library Studies of the Loughborough University of Technology, May, 1977, 116. (Unpublished).

Harcourt, is currently carrying out a survey with a view to introducing a current awareness service.

Not much information was provided on the effect of the survey results on the services provided. The University of Ibadan Library was able to confirm a previously held impression that its serials collection, and the library itself, were used by less than half of the sample population, while the Forestry Research Institute of Nigeria Library had its opening hours extended to satisfy the wishes of the users. (See Table 25 (d)).

In Sierra Leone, two libraries out of the responding seventeen do undertake user surveys. The Geological Survey Library and the Law Library, Ministry of Justice, both of which are government libraries, interview members of staff periodically on their needs. There is no indication as to what the needs are, and the extent to which they are being met. (Table 25 (e)).

There is little evidence to suggest that most of the user surveys which have been carried out so far have been of direct benefit to the user. The majority of them have been concerned with managerial issues (e.g. opening hours), or trends in the use of the library stock (e.g. use of journals, reading habits, etc.) These surveys are in themselves important, and can be very useful tools in the formulation of operational policies. What have been mostly neglected, however, are user-centred surveys, that is, surveys that are directly related to the identification of the information needs of the users. It would seem that the concern has been much more on the provision of the vehicles (i.e. the books, periodicals, etc) that contain the information, than on assisting the user in the exploitation of the contents of the vehicles. It is true that some of the libraries and information centres do provide such user-oriented

services as current awareness, abstracting and indexing and selective dissemination of information (SDI) (as indicated below) but if these services are not based on reasonable knowledge of the needs of the users, there can be no guarantee as regards their usefulness. Such knowledge as would make the services useful can only be acquired through continuous, and not sporadic or "one-off", user surveys. In order to keep abreast of changes in user needs, which changing circumstances would occasion, user surveys should be a regular, uninterrupted feature of a library and information network.

7.2 Provision of Services

7.2.1 Formal Sources of Information

A user's information needs may be satisfied through two main sources: formal and informal. The formal sources are the primary, secondary and tertiary sources of information and levels of documentation which have, for a long time, served as the "traditional" sources of information. The informal sources consist of private correspondence at meetings and conferences, etc. They help in supplementing the formal sources and also in the transfer of information.

The rate at which the formal sources of information are growing, particularly the primary sources, has caused a deluge of information and serious concern about the resulting information explosion. As was noted in Chapter 1 (Section 1.3.2 - The Information Explosion), attempts to control this "flood" of information at the pre-publication level have been virtually ineffective because of the intractable nature of the factors that contribute to the problem. At the post-publication level, the control measures, which have taken the form of abstracting and indexing services (the secondary sources) and review publications (the tertiary sources), are in themselves being overtaken by the "explosion".

This situation has made it even more impossible for the user to see, let alone read, all the published materials that he would need. It therefore continues to be increasingly necessary for library and information services to draw the attention of their users to items of information that may be considered relevant to their needs.

These alerting, or current awareness, services take different forms and, as Table 26 (a - e) shows the majority of the libraries and information services in the sub-region do provide one form or the other of the services. The services provided range from the routing of periodicals and the circulation of books to the more personalised SDI service where knowledge of the user's information needs is a prerequisite for a useful service. The importance of systematic user surveys has to be emphasised again as of bearing direct relationship with the relevance of current awareness services, and also as a feedback mechanism in the assessment of services provided.

7.2.1.1 Membership of International Information Systems

It is worth noting that in an effort to extend the range of the current awareness services provided, some of the libraries and information centres in the sub-region are members of specialised information systems (See Table 27 (a - c)). Nine of the total of nineteen libraries which belong to the international systems are in Ghana, eight are in Nigeria, and there are two in Liberia. No libraries in The Gambia or Sierra Leone indicated their membership of any international information system.

With the exception of two academic libraries and two information centres, the remaining libraries which are members of international information systems are special libraries. And, belonging to economies that are agriculture-based, fifteen (79%) of the nineteen libraries and

information centres are, predictably, members of the agricultural information systems of AGRIS, AGLINET and CARIS. (3) These information systems operate on a reciprocal, but not necessarily on a quid pro quo, basis. The participating libraries and information centres contribute lists of relevant publications issuing from their institutions (or countries) to the system, and get back from it regularly, lists, abstracts or indexes of much wider subject and geographical coverage. In other words, members have at their disposal, the totality of the contributions to the system. Contributors to AGRIS, (International Information System for the Agricultural Sciences), for example, receive in return, Agrindex, a current awareness service which is comprehensive in its world-wide coverage, and includes all types of published and unpublished literature in the agricultural sciences.

As is discussed below, the mere citing of publications or drawing readers' attention to them without making provision for their physical accessibility when required can only frustrate the reader. To overcome this drawback from which Agrindex, being an alerting service suffers, AGLINET (World-wide Network of Agricultural Libraries) was established as an international co-operative movement to provide accessibility to cited documents through a system of inter-library lending and reprographic services. Like AGRIS, AGLINET has its international centre (its headquarters) in Rome (FAO). Additionally, it has four regional centres, the regional centre for West Africa being located at the Institute of Tropical Agriculture (ITTA), Ibadan, Nigeria. (4)

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- (3) The remaining systems to which some of the libraries and information centres belong are: AINAI (African Integrated Network of Administrative Information); ASFIS (Aquatic Sciences and Fisheries Information System); DEVSIS (Development Science Information System); IARCN (International Agricultural Research Centres Network); INIS (International Nuclear Information System); POPINS (Population Information System); ISONET (International Organisation for Standardisation Information Network); and TIS (Trade Information System).
- (4) The other regional centres are: Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia; Ministry of Agriculture, Fisheries and Food, London, England; National Agricultural Library (NAL-USDA), Beltsville, Md; USA).

A meeting of West African agricultural librarians and documentalists was held at IITA in 1975 to launch the West African Centre for AGLINET and to stimulate co-operation among agricultural libraries and documentation centres in West Africa. Country centres, which would co-ordinate activities within the participating countries and also to liaise with the regional centre were appointed (for English-speaking West Africa) as follows:

Ghana	:	Council for Scientific and Industrial Research (CSIR), Accra.
Liberia	:	University of Liberia Libraries, Monrovia.
Nigeria	:	The Agricultural Research Council of Nigeria (now the Ministry of Science and Technology and before then the NSTDA).
Sierra Leone	:	Njala University College, P.M.B. Freetown.

It was decided at the meeting that, as an important tool for co-operation, and also to enhance the efficiency, effectiveness and success of AGLINET, each country was to compile a national union of agricultural periodicals which would cumulate into a West African union list of agricultural periodicals, to be held at the regional centre, IITA. (5) A second meeting of West African agricultural librarians and documentalists has been scheduled for 1981/82 to review progress made.

In addition to the secondary sources of information, the tertiary sources (reviews of the literature, state-of-the-art reports, etc) help in guiding the reader through the maze of available publications. Several reports (6) have stressed the importance of reviews and state-of-the-art

(5) LAWANI, S.M. and DE CHANTAL, J. Report of the meeting of West African Agricultural Librarians and Documentalists, IITA, Ibadan, Nigeria, January 20-22, 1975. Ibadan, IITA, [1975].

(6) See for example: i) UNITED STATES. President's Science Advisory Committee. Science, government and information; the responsibilities of the technical community and the government in the transfer of information; a report...(Chairman, A.M.Weinberg). Washington, D.C., U.S. Gov't. Printing Office, 1963, 2. ii) UNITED STATES. National Academy of Sciences. Committee on Scientific and Technical Communication. Scientific and technical communication; a pressing problem and recommendations for its solution. Washington, D.C., National Academy of Sciences, 1969, 40.

reports in the information transfer process. Woolston ⁽⁷⁾, for one, believes that what scientists from the developing countries ("and what many of our own North American scientists") need are authoritative evaluation and condensations of what is known and how it may be applied and not more abstracts or magnetic tapes. The UNISIST Feasibility Study was also expressive in its recommendation for the establishment of information analysis centres to evaluate and synthesise current papers into "dependable, coherent systems of knowledge", as well as numerical data centres to collect, critically evaluate, organise and disseminate numerical data.

The establishment of information analysis and numerical data centres requires an infrastructure that is well developed to meet the material, financial and manpower demands that they depend on for efficient functioning. This is a situation that is currently beyond the capabilities of most developing countries. What they can do, however, is to participate in as many international information systems as possible so as to give them world-wide access to these sources of important information. They can also get their scientists involved in the information analysis process by commissioning them for reviews and state-of-the-art reports as local supplements to the international sources. As the Weinberg Report says: ⁽⁸⁾

We shall cope with the information explosion, in the long run, only if some scientists and engineers are prepared to commit themselves deeply to the job of sifting, reviewing and synthesising information, i.e. to handling information with sophistication and meaning, not merely mechanically. Such scientists must create new science not just shuffle documents: their activities of reviewing, writing books, criticising, and synthesising are as much a part of science as is traditional research.

(7) WOOLSTON, J. The future of international information systems. In Proceedings of the American Society for Information Science, Volume 9: A world of information; 35th Annual Meeting, Washington, D.C. 23-26 October 1972, edited by John H. Wilson. Washington, D.C. American Society for Information Science, 1973, 23-24.

(8) UNITED STATES. President's Science Advisory Committee. op cit., 2.

7.2.2 Availability of Publications

Current awareness services do not end with the notification of relevant items only. Once a reader has been made aware of the existence of a publication (whether it is a book, a periodical article or a patent) he may require to read the full text. The library or information centre must ensure that the reader has access to the original document, a photocopy or a translation if it is in a foreign language. Drawing a reader's attention to the existence of a document without the assurance of physical accessibility is of very limited use. Arrangements for the supply of locally unavailable documents through national or international interlending systems have already been outlined in the previous chapter and may therefore need no further elaboration here. (See Chapter 6, Sections 6.3.2 - Central Agencies and Co-ordination of Interlibrary Lending, and 6.3.3 - Interlibrary Lending and the Supply of Documents).

7.2.2.1 Translations

An important function of a library and information service is the supply of translations of requested items appearing in foreign languages. The increasing number of languages in use today has added to the problems already confronting the librarian or information scientist as a result of the information explosion. While until about a couple of decades ago the major media for the transfer of information were English, German and French, new languages like Russian, Japanese, Spanish, Chinese and Arabic have also assumed international significance as media for information transfer. In the scientific discipline it has been estimated that about 50% of the world's scientific and technical literature is published in

languages other than English. (9-11) Russian, now the second most important language, accounts for some 20% while about 6% is published in German. To put it in another way, the English-speaking scientific community faces the problem of selecting from well over 750,000 foreign language articles every year.

Like the attempts to control the information explosion, there have been measures taken to solve the problem of the foreign language article. Attempts have included the institution of cover-to-cover translation journals, the establishment of international translations services like those offered by Aslib and the BLLD in the United Kingdom, the National Translations Center (formerly the SLA Translations Center) located at the John Crerar Library, Chicago, the United States of America, and the European Translation Centre at Delft, The Netherlands. Helpful, indeed useful, as these attempts are, they have not been able to solve the problem adequately. The cover-to-cover journals often appear late (it takes between four months and one year for them to appear after the publication of the original journals), they are rather expensive and of limited use since only a few journals are covered. Although the international translations services, jointly and individually

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- (9) UNESCO. Scientific and technical translating and other aspects of the language problem. Paris, Unesco, 1957, 13.
 - (10) WOOD, D.N. The foreign language problem facing scientists and technologists in the United Kingdom - report of a recent survey. J.Doc., 23(2) Jun 1967, 118.
 - (11) LIEBESNY, F. Foreign language in industry. In ISLIC International Conference on Information Science, Tel Aviv, 29 August - 3 September 1971 (Proceedings) Vol.1, edited by Lydia Vilentchuk. Tel Aviv, National Centre of Scientific and Technological Information 1972, 178.

hold a large number of translations, the only guarantee of a request being satisfied is its availability at the translations service.

Another approach towards the solution to the problem is the establishment of local or national translations services to supplement the international services. In fact, these services are already available to some extent in the sub-region, and as Table 26(a - e) shows, with the exception of The Gambia and Sierra Leone, some of the libraries and information centres in the remaining countries offer some local translations services. In Ghana, eleven institutions altogether offer English translations from French, German, Russian, Spanish and Arabic, while two of Liberia's libraries both offer translations from French. Seven of Nigeria's libraries also offer translations from French.

The Central Reference and Research Library (CRRL), one of the libraries offering translations facilities in Ghana, maintains a list of translators composed mainly of research scientists and university lecturers who are willing to undertake translations for a fee. The CRRL offers translations from French, German, Russian and Spanish. This service is local at the moment but there are plans to expand it into a national service within the context of a proposed Scientific and Technical Information System for Ghana. The establishment of translations services, particularly at the national level, will be a useful supplement to the international efforts and will also help in giving a greater number of users access to otherwise inaccessible literature.

7.2.3 Informal Sources of Information

In their role as processors and disseminators of information, libraries and information centres should be concerned with both formal and informal sources of information, although their concern has been more with

the formal than the informal sources of information.

Informal communication among technologists and scientists (including social scientists) has always been an important means of information transfer. Derek J. de Solla Price's concept of "invisible colleges" and T.J.Allen and his associates' studies on "technological gatekeepers" (12) have contributed to a better understanding of the information transfer process among scientists, and an appreciation of the importance of informal communication as an effective medium for the transfer of information.

The informal information transfer process operates on a person to person level and is fostered through discussions with colleagues, private correspondence, attendance at meetings and conferences, inter-institutional visits, collaborative team research, etc. In an OSTI-sponsored survey, Meadows and O'Connor (13) found out that although astronomers and space scientists depended on published sources of information (journals mainly) as their principal source of information, they found informal discussion as the second most useful source and that over 50% used that medium frequently. De Solla Price (14) is even more explicit. He says:

...if we are speaking of the communication that is used by each research worker as an inspiration and as a data flow that makes his own work possible, then some 80 per cent of that input comes to him from other research workers at a stage before formal communication and through the informal channels of the grape-vine, the conference, the seminar, the pre-prints, and other tentacles of the invisible college.

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- (12) ALLEN, T.J. PIEPMEIER, J.M. and COONEY, S. The international technological gatekeeper. Tech.Rev., 73(5) 1971, 37-43.
 - (13) MEADOWS, A.J. and O'CONNOR, J.G. An investigation of information sources and information retrieval in astronomy and space science. OSTI Report 5044; 1969.
 - (14) DE SOLLA PRICE, D.J. The ends of scientific communication. In Communication in science, edited by Anthony De Reuck and Julie Knight. London, Churchill, 1967, 201. (A Ciba Foundation Volume).

The informal communication medium is found useful because it is fast, efficient and allows for direct interaction: the enquirer is able to explain personally, clarify and modify his information requirements - a situation which the printed literature does not permit. And, most importantly, such personal contacts often give the most current information since the delay element often associated with publishing is avoided.

The undoubted value placed on informal communication suggests that librarians and information scientists have a more than passive role to play in this aspect of the dissemination of information. Their role should be an active one, and should be geared towards the encouragement of these personal contacts through the dissemination of information on forthcoming conferences, seminars and meetings, directories of research institutions, lists of research workers, directories of on-going research and guides of similar nature. Such guides do not only encourage informal communication but they also help in avoiding unnecessary duplication of research programmes. Needless to say, a clear knowledge of users' needs is essential for a beneficial service.

7.2.4 Automation and the Provision of Services

In his study on future information needs and resources, Anderla⁽¹⁵⁾ warned, in view of the rising tide of information, that it would be possible to cope with the tide for a little while yet relying on manually operated systems "but after 15 or 20 years the choice must inevitably be between automation and suffocation". This prediction was made some seven years ago and there is still about twice that time left for the truth of the statement to be tested. But the literal interpretation aside, its figurative essence should not be lost. It is a fact that as the total amount of published information continues to grow, the more difficult

(15) ANDERLA, G. Information in 1985: a forecasting study of information needs and resources. Paris, OECD, 1973, 89.

(and the less efficient) it becomes for its processing to be done manually. The speed and flexibility of automated processes, as in the use of the computer, for instance, have proved invaluable assets in information processing. And in areas where manually operated processes are slow, inflexible and often repetitive, or where selectivity constitutes an important function, the speed and flexibility of the computer and its ability to select or conversely omit pieces of information or data as may be required, make the computer an extremely useful aid.

The advantages of the computer have been explored in the developed world where it is being used extensively in various aspects of information handling from house-keeping activities like acquisitions, cataloguing and circulation to literature searches, the compilation of bibliographies, Selective Dissemination of Information (SDI) services, etc. In the developing world, however, the computer has not as yet played any significant role in information processing. The relative newness of the computer in that part of the world must be partially responsible for that. The computer was virtually unknown in Africa before the late 1950's and it was not until the 1970's that it began to make its impact on African countries. Now, although not as widely used as in the developed countries, the computer has firmly established itself as an important technological device in the socio-economic set-ups of virtually all the developing countries.

7.2.4.1 Current and Projected Automation Programmes

As has already been seen from Table 28 (a - d), with the exception of The Gambia, some of the libraries and information centres in the remaining countries have access to some computers. Eleven libraries in

Ghana have access to a total of twenty-three computers, one information centre in Liberia has access to one, sixteen libraries in Nigeria have access to sixteen computers, while one library in Sierra Leone has access to one computer. This accessibility has, however, not evoked much use of the computer, either in the services provided by these libraries, or in their house-keeping activities. From Table 29 (a - e) it may be seen that no library in either Ghana or Sierra Leone has so far automated any of its activities, and that only the information centre in Liberia and three libraries in Nigeria have. (The information centre in Liberia has automated the production of its bibliographies, and of the three libraries in Nigeria, one has automated its (local) union list of periodicals, the other its acquisitions, and the third its SDI services).

A slightly more extensive future use of the computer is, however, indicated. As Table 29 (a - e) shows, an increased number of libraries plan to automate one aspect or the other of their services, or house-keeping activities. One library in The Gambia plans to automate the production of its bibliographies at an unspecified date, one in Sierra Leone its cataloguing in 1982, while the information centre in Liberia plans to expand its automated activities to include acquisitions, cataloguing, periodical processing, SDI and current awareness services in 1981. Seven libraries in Ghana and eight in Nigeria hope to automate activities which include the production of bibliographies, union lists, circulation, acquisitions, etc. between 1980 and 1985.

The trend in the projected automation programmes shows a pronounced inclination in the use of automation for house-keeping activities. A sub-regional total of eighteen libraries and information centres are involved in the planned automation programmes. Out of these, eleven

plan to automate their cataloguing processes, seven their acquisition programmes, another seven their periodical processing, and four their circulation systems - a total of twenty-nine programmes for house-keeping purposes. The "alerting" services take a total of thirteen programmes comprising seven in current awareness, four in SDI and two in abstracting and indexing services. For the production of "lists", twelve programmes are anticipated as follows: bibliographies, etc., five; union lists of periodicals, four; union catalogues of books, three.

The speed of the computer, its large capacity for storage as well as its flexibility have been noted. What should be noted also is that computerisation can be a very expensive process, often requiring heavy hardware and a considerable number of skilled personnel. A decision to computerise any library operation should therefore be based on a careful analysis of the practical usefulness and the cost-effectiveness of that operation rather than on the desire to automate. The automation of such house-keeping functions as have been mentioned above (i.e. acquisitions, cataloguing, etc.) can be extremely expensive and none but the largest libraries would find ample justification in terms of cost-effectiveness to embark on any of them on an individual basis.

On co-operative bases, however, there is no reason why libraries and information centres in the sub-region should not take advantage of modern processes to improve the quality and extent of the services they offer. The co-operative use of MARC tapes for acquisition and cataloguing has already been suggested (Chapter 5, Section 5.3.5 - The Use of MARC in the Sub-region). Other practical, immediate and less cost-intensive ways in which automation may be employed in the sub-region are in the production of union lists, union catalogues, directories and "listing" services of similar nature. Union lists and catalogues have been shown

to be some of the sustaining components of schemes for the co-operative development and sharing of library and information resources. The importance of lists and directories of various kinds has also been shown in the informal information transfer process. These are all useful sources of information which, however, get out-of-date quickly and therefore need constant revision and up-dating to retain their currency (and therefore their usefulness) in any information system.

Despite the established importance of union lists and catalogues (both local and national) and despite their dearth in the sub-region, the projected automation programmes pay little regard to them. Only two institutions in Ghana (one academic library and one information centre) propose to automate the production of their (local) union lists and catalogues. Similarly, only two libraries in Nigeria (both of them academic libraries) intend automating their (local) union lists and catalogues. On the national level the National Library of Nigeria is the only library which proposes to automate its National Union Catalogue of Books and its Union List of Scientific and Technical Periodicals in Nigerian Libraries.⁽¹⁶⁾ It may be recalled that the Union List was formerly based at the International Institute of Tropical Agriculture (IITA) before the responsibility for its compilation was taken over by the National Library of Nigeria. It had been manually produced in two editions, the first edition having been published in 1970, and the second edition, three years later, in 1973. There have been no new editions since its take-over by the National Library of Nigeria. It may again be recalled that in Ghana, the first edition of the Union List of Scientific Periodicals in Ghana was published in 1966 and that it took ten years for the second, revised and enlarged edition to be produced (in 1976). Both editions were manually produced and, like its Nigerian

(16) Interview with the Director, National Library of Nigeria in Lagos, Nigeria, on February 12, 1980.

counterpart, no later edition has appeared. Unlike Nigeria, though, there is no declared plan to automate the Union List of Scientific Periodicals in Ghana.

In contrast with the publication of these two union lists, Periodicals in East African Libraries: a Union List had had its fifth edition published within four years of the appearance of the first edition. One of the earliest examples of computer-based union lists in Africa, the first edition, which was published in 1965, contained entries from only eleven libraries. When the fifth edition was published in 1969, the number of libraries covered had increased from eleven to seventy-six. (17)

With regard to directories, in 1979 the National Science and Technology Development Agency of Nigeria (now the Ministry of Science and Technology) published the National Register of Scientific Manpower which was meant to serve as:

- i) a handy reference for scientists to know their colleagues, and have an idea of one another's field of specialisation;
- ii) a planning tool in scientific manpower needs of the nation, and
- iii) an indicator of the deployment of scientists resident in Nigeria. (18)

Earlier in 1972, the Council for Scientific and Industrial Research (CSIR) of Ghana had published a two-volume Survey of High-Level Scientific and Technological Manpower in Ghana, also as an aid to scientific manpower planning and as a medium for the encouragement of communication among scientists. These are useful tools which can easily be made to keep their currency through automation. The sub-region has the capability in terms

(17) MUNN, R.F. The use of modern technology in the improvement of information resources and services in developing countries. Int.Lib. Rev., 3(1) Jan 1971, 11.

(18) Nigeria lists scientists. West Africa, 3249, Oct 1979, p.1953

of the expertise and under-utilised computers⁽¹⁹⁾ to undertake such relatively simple computer processes as the production of union lists and catalogues, directories and the like.

7.2.4.2 Further Use of Automation

Indeed, the capabilities of the computer could be further explored, particular in Ghana and Nigeria, where the existing conditions would favour such exploration. As was seen from Table 26 (a - e) some of the libraries in the sub-region provide literature searches, current awareness, abstracting, indexing and SDI services. These are all, currently, manually produced. There are two conditions under which such personalised services, particularly SDI, could be manually produced. The first is where the service is operated for a limited number of people with any number of subject interests, and the second is where the service is operated for any number of people with a limited number of subject interests (say between eight and twelve). In the first case, because of the limited number of people, it is possible for the abstractor to remember the number of people and their interests (or to refer to them from a simple record) and direct the appropriate information to them. In the second category, few interests are shared by a large number of people. The emphasis for the abstractor is therefore on subject interests. A record (e.g. a simple card system) indicating the subjects and the people interested in them, could be kept to enable the right-type of information to be sent to the persons concerned. Under a third condition,

(19) A survey into the use of computers in Africa showed that most (government) computers, including those in Ghana and Nigeria, were being used fewer than 100 hours per month whereas 100% utilisation would require about 500 hours per month. See WALLACE, J.B. Computer use in independent Africa: problem and solution statements. In The computer and Africa: applications, problems and potential, edited by D.R.F.Taylor and R.A.Obudho. New York, Praeger, 1977, 13-41.

however, neither of these two systems works satisfactorily, and that is when (as in large information systems) there are any number of people with any number of subject interests. It is impossible for the abstractor to remember the people and their interests and a manually kept record would not only be extremely time-consuming, but it could also be inefficient and lack the specificity which is the essence of an SDI service.

The current awareness service provided by the Central Reference and Research Library (CRRL) and the recently created Information, Documentation and Publication Unit (IDPU) both of the Council for Scientific and Industrial Research, Ghana, comes under the third category. It has not been possible for the CRRL/IDPU to provide anything but a generalised current awareness service for its 300 users because the manually operated service cannot cope with a personalised service for such a large group of users with diversified interests.

The major current awareness service provided is the Ghana Science Abstracts which is produced quarterly and is based solely on material on Ghana. Apart from its restricted geographical coverage, the abstracts bulletin is rather general and is not geared towards the specific needs of any particular scientist or group of scientists. Moreover, in addition to specificity, speed is another essential element in a current awareness service. Ideally, such a service should be provided at a minimum of weekly intervals. As a current awareness service, the quarterly appearance of the Ghana Science Abstracts makes it most unsuitable for that purpose.

A computer-based system would provide a more effective and relevant current awareness service. There are two possible ways in which this may be done. The first, and the more readily applicable of the two, would be for the CRRL/IDPU to subscribe to the services of appropriate existing

computer-based information systems like COMPENDEX, BIOSIS, MEDLARS, etc. Profiles would be prepared for the individual scientists, or groups of scientists, representing their areas of continuing interest. The profiles would be matched against the current issues of the appropriate magnetic tapes and present the scientists with regular, personalised current awareness or SDI services. While the services would be centralised to permit co-ordination and also a reduction in costs, the librarians of the nine component research institutes of the CSIR would be trained in profile construction to provide the CRRL/IDPU with the current profiles of the scientists in their institutes, and to act as links between the services and the institutes. If found viable, the services could later be extended to the other sections of the scientific community in Ghana, as indeed the Ghana Science Abstracts is planned to be. The Ghana Science Abstracts would continue to be produced, still concentrating on the local materials which normally do not appear in the commercially produced computer tapes.

The second system involves considerable expense and expertise and is best planned as a national service. Under this arrangement, appropriate tapes are bought by the national centre (say, the CRRL/IDPU) and are processed locally. Local processing (as against a subscription service) will entail the necessity to build up a much larger staff with the requisite expertise in profile construction, the formulation of strategies for retrospective searches, etc. As regards expense, abstracting and indexing services on tape are more expensive than those in print. One estimate makes the tapes ten times as expensive as the printed version. But although the printed versions will continue to be available for some time yet, and will remain an easy and economic (but not necessarily an efficient) way of answering enquiries, Grogan suggests

that they may not be immortal, and repeats a warning by the United Kingdom Chemical Information Service (UKCIS) that:

it is possible to foresee a time when they will be largely or entirely replaced by combinations of electronic and photomicrographic systems of great power and flexibility. (20)

Moreover, the flexibility of the computer, its speed and its ability to carry out various in-depth analyses of the magnetic tape will make it an increasingly important and efficient means of disseminating information.

Planning the service on a national and centralised basis will ensure maximum utilisation of the facilities as well as a reduction in costs. An example in this regard is the Canadian Selective Dissemination of Information Service (CAN/SDI) of the National Research Council of Canada's Institute for Scientific and Technical Information (CISTI). Starting in 1969 with Chemical Titles on magnetic tape, the CAN/SDI service has grown over the years and now has among its repertoire, the CAS, INSPEC and MEDLARS among others, and provides a weekly personalised service for over 1,400 profiles. Of particular interest is the willingness of CAN/SDI to assist developing countries, through the UNISIST programme, in establishing a national SDI service. The offer, which is given by the Canadian Government to interested Member States of Unesco, includes the CAN/SDI software training needed to establish the national system.

Indeed, Nigeria has already taken steps towards the establishment of an SDI service and has sought the assistance of CAN/SDI. In 1974, a conference of African Member States of Unesco was held in Dakar, Senegal, to formulate a regional policy on information systems in the African region. The CASTAFRICA Conference (as it is now popularly known)

(20) GROGAN, D.J. A science information network for Korea; a report with recommendations. [Aberystwyth, College of Librarianship], 1974, 40.

recommended the establishment of a central data bank (in Africa, with sub-regional branches as appropriate) for the storage, analysis and dissemination of information on various imported or local technologies. Following a feasibility study by Unesco, it was decided that a one-year pilot project be initiated in Nigeria:

to provide.... representative technological information users engaged in research and development in Nigeria and neighbouring countries, computerised SDI services pointing to current technological literature relevant to their needs. (21)

Data bases to be used for the SDI service are COMPENDEX, INSPEC and FSTA (Food Science and Technology Abstracts). An evaluative study of the service will determine its continuation or expansion at the end of the pilot period.

A bilateral agreement was signed between Nigeria (represented by the National Science and Technology Development Agency - NSTDA) and Unesco for the implementation of the project. The one-year project was to have lasted from July 1979 to June 1980. Two Nigerian officials were attached to CAN/SDI for training, and the software (the magnetic tapes, etc) provided under the agreement had started to arrive by July 1979. But because of "a number of unnecessary administrative constraints"⁽²²⁾ (on the Nigerian side) it has not been possible for the project to be started.

Administrative inertia was isolated as one of the barriers against the implementation of library and information networks (Chapter 2, Section 2.3.6.2 - Barriers). The point is amply vindicated. Librarians and information scientists can diagnose the problems that hinder the development of library and information services. They can also prescribe the solutions to the problems. Very often, however, they are not endowed

(21) NIGERIA. National Science and Technological Development Agency. Regional data bank on technologies in Africa. First progress report (September 1979). Lagos, NSTDA, 1979, 39.

(22) Ibid., 4.

with the administrative power to apply the solutions to the problems. That is the prerogative of the politicians and the administrators - the decision-makers and the pullers of purse strings.

It is to be hoped that the administrators concerned will re-appraise the importance of this NSTDA/Unesco project in the assessment of their national priorities and remove the constraints which have held back the implementation of the project. Of the countries in the sub-region, Ghana and Nigeria, in particular, have the capability of taking advantage of projects of this nature. The opportunities should be seized; they should not be made to be whittled away.

7.3 User Education

The inability of the user to explore, effectively, the library and information resources provided for him, invariably at great expense and effort, has been a long-standing concern for those connected with the provision of the services. As was seen in Chapter 2 (Section 2.3.4.2 - Education and Training) as many commissions as have been set up to investigate the use made of the services have confirmed the ignorance of many a library user as to the extent of the services available to him. These commissions have, one after the other, stressed the importance of formal instruction in the use of the available literature resources. Recommended user education programmes have ranged from those geared to the specific needs of identified user communities, to the all-embracing, cradle-to-the-grave programme of NATIS Objective 2 (Stimulation of user awareness). Largely as a result of these proddings, librarians and information scientists have become even more conscious of the pressing necessity for the institution of user education programmes as vital features in the provision of library and information services. User education programmes of varying degrees of intensity and duration have therefore

been established, particularly in the higher institutions of education in Europe, America and Britain where, as was noted, they have generally been found useful.

The results of the survey questionnaire show that only a small proportion (fifty or 34%) of the responding 148 libraries and information centres have instituted user education programmes. Out of the fifty, the majority (twenty-one or 42%) are academic libraries, sixteen (32%) are special libraries, and eight (16%) are school and college libraries. Of the remaining five, four (8%) are public libraries, and one (2%) is a government library.

7.3.1 User Education Programmes in Academic Institutions

The fact that the majority of the user education programmes are conducted by academic libraries shows the importance that they, like their counterparts in the developed countries, place on user education programmes. Also, with their under-developed pre-university library systems, the university libraries provide a good starting point for user education programmes, the universities, like elsewhere, providing immediate sources for potential users of information products. It may be recalled that as the immediate reaction to the Royal Society's disclosure that the scientist is unable to use the literature of his subject after his academic training, the (British) Library Association recommended a three-point training programme at the university level for the scientist. The recommended training has formed the basis of most of the user education programmes currently being carried out for both the science and the humanities student and comprises:

- i) an introduction to the library for all new undergraduate and postgraduate students. This would consist of a lecture by a senior member of staff of the library, with illustrations where necessary, followed by a guided tour of the library;

- ii) at an appropriate stage in the student's education (the second or third year as may be deemed necessary) the student would be introduced to basic bibliography. In addition to the techniques and references common to all, references related to the student's field of study should, as far as possible, be used;
- iii) at the postgraduate level, and before he began his research project, the student would be introduced to advanced bibliographical methods. This final instruction could be undertaken partly by the library staff and partly by the academic staff.

A study of Table 25 (a - e) shows that with the exception of only a few, all the academic libraries seem to be content with stage one of the three-stage programme. The "user education programmes" that are carried out consist mainly of the "customary" introductory talks and conducted tours of the libraries that are organised for all new students at the beginning of the academic year. Organised for groups of between twenty and thirty students and usually led by a senior member of the library staff, the talks and conducted tours last about one hour. After this, the student is considered sufficiently acquainted with the library to be able to explore its resources effectively throughout the rest of his student days. Coming from backgrounds that are typical of developing countries, most of the students may probably be seeing a library as "complicated" as a university library for the first time. And if it is considered that introductory "courses" are held during their first few days at the university when the students would be struggling to adjust to a new pattern of life in a totally different environment, what these flashing talks and tours do to them is probably to add to their confusion and excitement. Under these circumstances, the "user education programmes" may create anything but the desired effect.

The few academic libraries which extend their library orientation programmes anything beyond the rudimentary level of talks and conducted tours include the Balme Library, University of Ghana. In addition to the

talks, tours and its hand-outs (Introduction to the Balme Library; Education for Library Use; and Students' Library Guide)⁽²³⁾ which form the first stage of its orientation programme, the Balme Library gives detailed instructions on the use of the library during the second term. These are organised in groups of students with similar subject interests and are conducted by librarians with the appropriate subject background. Final year and postgraduate students are given elementary lessons in the use of bibliographical tools. These are made to relate as much as possible to the students' subject areas.

The other academic libraries which offer extended user orientation courses are the Education Library, University of Lagos, the University of Ilorin Library and the Nnamdi, Azikiwe Library, University of Nigeria, Nsukka, all in Nigeria and all of which offer user instruction programmes as compulsory, examinable and credit-earning courses. Of the three user education programmes, the most interesting, in terms of its innovative and pioneering nature, is the one organised by the Nnamdi Azikiwe Library, Nsukka. Founded in 1960, Nsukka was itself something of a maverick in the established pattern of university administration in Nigeria, and, indeed, in English-speaking West Africa. The universities before then (e.g. the University of Ibadan in Nigeria and the University of Ghana) had been based on the British pattern and were (to a large extent they still are) being run as such. Based on the American credit-earning system, Nsukka was to mark a fundamental departure from the accustomed order.

One of the University's innovations was the General Studies Programme. This was found suitable to accommodate a formal credit-earning course in library use, and three credits were siphoned off the nine allotted the General Studies Programme (the Use of English) to the course in the Use of the Library. The course was started in 1972 as a ten-week, one hour

(23) KAFE, K. Problems of communication between the library and its users: academic libraries. In Symposia on Problems of Communication between the Library and its Users [held in] Accra, 10-12 February, 1972, edited A.N. deHeer. Accra, Ghana Library Assn., 1977, 2-8 (Communication Series no.2).

course for all freshmen, and it was decided, from the beginning, to make it compulsory and credit-earning so that it would be taken seriously. Now a six-week course and (still) organised during the first term, it covers subjects like the use of the catalogue, reference material, abstracts and indexes, bibliographical citation, writing of term's paper, etc. A course has been proposed for postgraduate students to consist of a general lecture and an intensive course of some three lectures in the bibliography of the student's area of specialisation.⁽²⁴⁾

7.3.1.1 Orientation and Instruction Stages

It is unlikely that the user education programmes of any two academic institutions will be exactly the same. The essential elements should, however, feature in any programme if it is to have the desired effect. The ideal user education programme should be fashioned around the (British) Library Association's three-point plan, or should at any rate be of two main stages - the orientation and the instruction stages.

The orientation stage, as has been observed, is essentially an introductory or a familiarisation one, meant to acquaint all new students with the library, its resources and services. Of the "traditional" methods adopted for this purpose, the most popularly used in the sub-region are talks, tours and brief instructions on how to use the library. Handouts (e.g. library guides, etc) are produced by only a few libraries - and probably so much the better since guides are generally thought not to be read and many librarians have questioned their usefulness in their present form.⁽²⁵⁾ Adequate guiding or signposting in the library is considered

(24) NWOYE, S.C. and ANAFULU, J.C. Instructing university students in library use: the Nsukka experiment. Libri, 23(4) 251-259.

(25) STEVENSON, M.B. Education in the use of information in university and academic environments. Aslib Proc., 28(1) Jan 1976, 18.

more important than library guides providing, as they do, instant guidance when needed. In fact it has been suggested that the only reason for including guided tours during orientation is to make up for inadequate guiding. Guided tours have therefore been omitted from orientation programmes by several libraries. (26) As an orientation activity guided tours are very much in use in the sub-region and rank second in popularity (after talks).

What are gaining increasing use as effective aids in orientation, but which are hardly used in the sub-region, are audio-visual devices, particularly tape/slides. Only two libraries reported the use of audio-visual aids in their orientation programmes. These are the University of Liberia Libraries, which use films or filmstrips in conjunction with conducted tours, and the Liberian Institute of Public Administration (LIPA) Library and Information Center which organises thirty to forty-minute orientation on available facilities, using video-tapes. Audio-visual presentation has the advantage of being economical in staff time; one member of staff can conveniently conduct an instruction programme for a much larger group of students than it would be possible on a conducted tour. The disturbance that groups on tour inevitably cause to other users of the library is also avoided. In effect, tape/slide presentation has had a decisively greater impact on the effectiveness of orientation programmes than straightforward lectures or tours. The SCONUL Tape/Slide Scheme (27) has proved this not only in Britain but also in Sweden where an evaluation of the tapes

(26) Ibid., 18.

(27) The Standing Conference on National and University Libraries (SCONUL) set up a series of committees in 1970 to co-ordinate the production of tape/slide guides to libraries of institutions of higher education in the United Kingdom. The SCONUL Tape/Slide Scheme was therefore established to effect this co-operation and also to sponsor the production of such guides as effective teaching packages.

for Swedish user instruction was carried out. Using one particular item (Guide to abstracting and indexing services), the experiment was carried out with two groups of ninety students each. Even though one group used the material with an English sound text and the other used the same material but with a Swedish version of the sound text, the results showed that in both cases, the "learning effect" was immediate, and very good. It was further concluded that the flexibility of the tape/slide material (i.e. it can be used for group or individual teaching), its constant availability and its relatively low cost make it particularly suitable for user orientation programmes. (28)

The second stage in the user education programme, the instruction stage, is to enable the student to make the maximum use of the library and its resources. It should take place at an appropriate time after the orientation stage. The time to be decided on as "appropriate" will largely depend on the university's calendar. However, it should be made to coincide with the period when student motivation is greatest. At Nsukka, for example, the course is organised during the first term which would normally be considered inappropriate. But because the freshmen would have to submit a term paper involving library research at the end of the second term, they would naturally want to be able to use the library effectively and no other time would be more appropriate than the first term for the institution of the programme.

The content and duration of the course will vary from one institution to the other. But it should, essentially, be bibliographical in nature and should be such as to enable the student to appreciate the existence, and the functions, of the various document resources. Suggested topics

(28) FJÄLLBRANDT, N. User instruction in the libraries of the technological universities in Scandinavia; some recent developments. IATUL Proc., 7(2) Dec 1974, 57.

for inclusion in the programme are: the growth in volume of the published literature and the problems of keeping abreast in any subject field; the information transfer process; types of literature: primary, secondary and tertiary; abstracting and indexing services and other current awareness services; the less familiar sources of information (theses, patents, reports); location of books, reviews and bibliographies and the location, also, of people and institutions. Citation practice, index keeping and report writing are further suggested topics for inclusion in the programme. (29-30) As the (British) Library Association's three-point user-education programme recommended, references relating to the students' field of interest should, as far as possible, be used in addition to any general references that may be cited. What should be stressed as essential also is the incorporation of practical work into the training programme since it would be difficult to become familiar with the literature without actually using it. As Line (31) has rightly observed:

Library information use is a practical skill, not something to be taught like history. It is a skill one picks up and acquires facility in through continued practice.

At the postgraduate level, the instruction programme should be of sufficient depth to enable the research student carry out an exhaustive search for information before embarking upon the research work - or before he has had the time to duplicate existing work or spend long periods searching for information in an unsystematic way. (32) In the wake of the

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- (29) LANCASTER, F.W. User education: the next major thrust in information science? J.Educ.Librarianship, 11(1) Summer 1970, 60.
- (30) STEVENSON, M.B. User education in the United Kingdom, IATUL Proc., 9, 1977, 8.
- (31) LINE, M.B. The case for information officers. In Educating the library user, by J.Lubans. New York, Bowker, 1974.
- (32) WOOD, D.N. Library education for scientists and engineers. Bull.Mech.Engng.Educ., 8(1) 1969, 7.

"information explosion", the possibility of duplicating existing work is considerably high and the unwary student can easily fall prey to it. Instruction programmes for postgraduate students should therefore be an important part of a university's user education programme. This does not seem to be the case in the sub-region. Out of the twenty-one academic libraries which offer user education programmes, only three (the Balme Library, University of Ghana, Legon; E.Latunde Odeku Medical Library, University of Ibadan; the University of Ibadan Library) mentioned specific programmes for postgraduate students. A fourth, the Nnamdi Azikiwe Library, Nsukka, has proposed one which is yet to be implemented. The institution of user education courses for postgraduate students will greatly help in minimising the daunting possibility of unscheduled and wasteful duplication of research programmes.

7.3.1.2 Co-operation in the Planning and Implementation of User Education Programmes

The successful planning and implementation of academic user education programmes will need the co-operation of the university administration as well as the academic staff. The allocation of appropriate time for the courses, their duration, nature and content will have to be worked out with the closest co-operation of the university authorities. (The Librarian of a school and college library in Sierra Leone remarked that the school's orientation "course" consisted of only a brief talk because the time allocated for it by the college authorities could not accommodate anything more than that). The form that the courses take and the importance attached to them in relation to other courses offered by the university are also matters in which the university administration has a decisive influence. The user education

programme of the University of Nigeria, Nsukka, was made compulsory and examinable for all freshmen because the University authorities accepted the proposal for the course in that form and were ready to accommodate it under the University's General Studies Programme. Before Nsukka, user studies programmes had been organised by several Nigerian universities but none had been as successful as Nsukka. The University of Lagos Library, for instance, has operated a library orientation programme since 1970. Although it is compulsory, the results have not been encouraging, one of the reasons being that:

since the course was not credit-earning, [the students] felt that they did not have to attend. When faced, for example, with a choice of an extra hour of practical work in a laboratory, which might contribute directly to their success in the first year examination and a lecture on doing research in the library when they had not as yet had much occasion even to consult a library book, most students inevitably chose the former alternative. (33)

This is a story that most of the university librarians who organise user education programmes in the sub-region will not find atypical. The "Nsukka experiment" might serve as a useful pointer to the way in which user education programmes could be successfully organised. All the programmes would, obviously, not have to follow the same pattern as Nsukka but once there is an element of compulsion, and especially the knowledge that the course would count towards the final examination, students would begin to take the user education programmes more seriously.

The idea of a "General Studies Programme" is not totally alien to most universities in the sub-region. All the universities in Ghana, for example, organise African Studies programmes which are compulsory and examinable for all under-graduate students. The universities could be

(33) OLANIYAN, B.F., ARIKENBI, J.A. and UGONNA, J.A. Instructing students in the use of the library in the University of Lagos. Nigerian Libr., 11(1 & 2) Apr & Aug 1975, 124.

prevailed upon to institute courses in the use of the library on similar lines. The co-operation of the Faculties and Departments will be needed in this exercise, and so will it be necessary to get the academic staff to appreciate the importance of these courses as a necessary part of the students' education.

7.3.2 Other User Education Programmes

The main thrust of user education programmes is located in university and academic institutions because of the suitability of the environment for the institution of the programmes. For one thing there are the facilities which aid the implementation of the programmes (i.e. the availability of good library facilities in most cases, and the personnel to organise the programmes); and for the other, there is the clearly defined teacher/student relationship between the "teacher" and the "taught" which probably more than anything else ensures the successful implementation of the programmes.

The situation is different outside the university environment. Although pre-university institutions (schools, colleges, polytechnics, etc) have the regimented teacher/student atmosphere, most of the schools and colleges are ill-equipped in terms of libraries and the personnel to institute user education programmes. And at the post-university or "professional" level, the diffused nature of the user population, the diversity of user interests and, particularly, the absence of the teacher/student relationship, make the institution of user education programmes much more difficult than they are at the university level.

7.3.2.1 Pre-university User Education Programmes

As was noted earlier, NATIS Objective 2 (Stimulation of user awareness) recommends that the use of libraries should form part of the educational process from the primary school level onwards. This, of course, pre-supposes the existence, or the purposeful development, of the facilities which will make the implementation of the recommendation possible. The mostly under-developed nature of the pre-university library systems in the sub-region makes the second of the two alternatives the obvious course of action to be taken. The NATIS recommendation can therefore only be looked at in its long-term perspective and will have to be implemented as part of a structured programme for the development of a national information system.

However, there are certain specific programmes being pursued and which should be encouraged and supported by the national governments to hasten the achievement of the NATIS objective. In The Gambia, Ghana, Liberia and Sierra Leone, the public library services have programmes geared towards the development of school and college library services. In Ghana, the Ghana Library Board established a School and College Libraries Department in 1972 to assist in the running of libraries in schools and colleges. Among its functions are the organisation of regular visits to schools and colleges to offer professional guidance and assistance in the organisation of their libraries; the ordering and processing of books and periodicals for schools and colleges whose library grants are paid directly to the School and College Libraries Department; and the organisation of workshops, seminars and training courses for heads of educational institutions, tutor-librarians and school library assistants. The public library systems of the other countries perform similar functions for their schools and colleges. The only exception to this system is Nigeria which, in what is a better administrative arrangement, operates its

school library services as "departments" under the State Ministries of Education and not, as in the other countries, as "services" of the public library systems which are themselves under their respective Ministries of Education.

A project worth detailed mention for its uniqueness in the sub-region, and also as an example of what may be done to achieve NATIS Objective 2, is the Abadina Media Resource Centre (AMRC) at Ibadan in Nigeria. The AMRC was established by the Department of Library Studies, University of Ibadan, in 1974 out of the wish to provide a model school library for the training of school librarians. A conglomerate of four fee-free primary schools at Abadina, a settlement in the neighbourhood of the University, was selected for the project. The settlement was provided by the University for its junior and intermediate staff, that is, artisans and unskilled workers who provide labour for the University, and the primary schools were provided by the Nigerian Government to meet the educational needs of the children of the workers. The schools are for children in the 7 - 12 age group and consist of over 3,000 children and some 90 teachers. (About 500 metres away from these schools, there is a fee-paying primary school consisting of about 800 children and some 28 teachers. This is the school where most of the senior staff of the University send their children. It is well-equipped and is staffed by teachers whose selection (early in the school's establishment) was "influenced by the possession of certification and training in the Montessori method of education" (34)).

Additional to its purpose as a training ground for the Department of Library Studies, the philosophy behind the project is that every child should learn the skills of the acquisition of information, that is:

(34) OGUNSHEYE, F.A. Abadina Media Resource Centre (AMRC), a case study in library service to primary schools. Unesco J. Inf. Sci. Libr. and Arch. Admin., 1(1) 1979, 29.

how to find it, how to use it, how to handle the formats in which it is offered, and how to be discerning and critical of the knowledge and information emanating from various sources. (35)

Library education helps in the acquisition and development of these facilities and should therefore be considered an important part of the school curriculum.

With this philosophy, and with the support of the University and a donor organisation, the Department of Library Studies expanded its original Abadina School Library Project into the Media Resource Centre to continue to serve as a teaching model for training school librarians, and also to provide a platform for research into the problems of school libraries and children's reading habits. The belief was that by organising library education and orientation programmes, in addition to the provision of normal library services, the Centre would foster in the children a love for books and the desire to read. It would also help to develop their listening, reading and information finding skills.

At the end of its first three years of operation, the Centre was able to report rewarding results, having witnessed:

the evolution of a new group of pre-school children of working class parents who are familiar with books and educational play materials and are responding positively to the idea of creative learner centred education. (36)

The Centre's clientele had increased from 3,445 to 4,293 (including pupils from the "privileged" staff school), and some 2,000 readers from thirty-eight other schools in and around Ibadan had also been registered. (37)

(35) Ibid., 30

(36) NIGERIA. University of Ibadan. Department of Library Studies. Abadina Media Resource Centre (School Library). Foundation Report, 1974-1977. Ibadan, University, Dept. Libr. Studies, 1977, 13.

(37) OGUNSHEYE, F.A. op.cit., 34.

The Abadina project is a clear illustration of the impact that library education and orientation programmes can have on users, and a confirmation of their importance in library and information systems. To national planning organisations, the Abadina Media Resource Centre should be visible evidence of the relevance of the often-neglected call for the provision of adequate library facilities in the planning of educational services.

7.3.2.2 Post-university User Education Programmes

User education at the post-university or "professional" level in the sub-region mainly takes the form of short talks on the services available and conducted tours of the respective government, technical or special library. According to the survey results, only in a few cases are seminars used to supplement the introductory talks and tours.

For reasons already given, it would be most unsuitable to institute (at this level) the straight user education programmes of the pre-university levels. Talks, lectures, demonstrations and seminars organised either on individual institution basis, as is the current practice, or on group basis will have to constitute the principal measures in stimulating user awareness. At the group level, the involvement of higher institutions and professional associations (e.g. the various departments of library studies, academic libraries, library associations, etc) will help in generating a better appreciation, and use, of the available facilities. Not to be left out in this programme are the managers, the secretaries and all those who have administrative influence on the provision of library and information services in their various organisations. An improved appreciation within the administrative cadre

will be an important step towards the removal of some of the barriers which have blocked the development of library and information services in the sub-region.

An attempt has been made to establish the user as the focal element in any library and information service. It is not enough for the services to be provided. The full development of librarianship and information science is not achieved until what is bought and catalogued or processed is seen to be used, and used effectively. (38) Effective use may be achieved through the institution of programmes which will make the user aware of the facilities available to him and how he can use them. It may also be achieved through the librarian or information scientist's ability to identify the needs of the user and his ability, above all, to satisfy those needs.

(38) HAVARD-WILLIAMS, P. and DOVEY, L.A. Reader instruction in Commonwealth university libraries. Libr.Ass.Rec., 62, Jan 1960, 12.

CHAPTER 8A SURVEY OF EXISTING LIBRARY AND INFORMATION RESOURCES
IN ENGLISH-SPEAKING WEST AFRICA - V: MANPOWER8.1 Manpower for Networks

In the previous chapters, the development of document resources, the provision of relevant user services and stimulation of user awareness were stressed as important aspects of a library and information network. Important as they are, the ultimate success of the network will also depend on the availability of staff, in quantity and quality alike, to plan and implement the services. A programme for the development and provision of library and information services cannot therefore be considered complete without a corresponding programme for the provision of adequate numbers of suitably trained staff.

Acknowledging the importance of this aspect of library and information services, both the UNISIST and NATIS elements of Unesco's General Information Programme emphasise the necessity for staff development programmes and incorporate this fact into their respective recommendations. UNISIST Recommendation 13 (Manpower development) underlines the need:

to develop adequate manpower resources of information specialists responsible for the operation of the systems to be involved in UNISIST, (1)

and calls for advanced training opportunities for personnel in both the developed and developing countries, particular attention being paid to the

(1) UNESCO. UNISIST; synopsis of the feasibility study of a World Science Information System. Paris, Unesco, 1971, 57.

needs of the latter. NATIS Objective 8 (Supplying manpower for NATIS) also recommends that:

National institutions and programmes of professional education for information manpower should be established as integral parts of the national educational structure at Universities or equivalent institutions of higher education... (2)

to ensure that there is an adequate supply of qualified personnel at all levels to operate the information system.

Before looking at the available facilities in the sub-region for staff education and training, a look first at the current situation with regard to the staffing of the libraries and information centres in the sub-region. Information was sought, inter alia, on the training status (professionally) of the librarians and information officers in administrative charge of libraries and information centres, the number of both professional and sub-professional staff ⁽³⁾ employed as in 1974/75, the number currently employed (i.e. 1979/80) and, as an indication of possible staff growth, the estimated staff requirements in 1984/85. The results are discussed below.

8.1.1 Training Status of Librarians/Information Scientists in Administrative Charge of Libraries/Information Centres

Administrative heads of library and information services must be suited for the work both in temperament and in training to enable them to plan, develop and implement the required services. Although this may be considered a general requirement of all administrative heads, it is a requirement that assumes greater significance in the context of a

(2) UNESCO. NATIS; national information systems. Objectives for national and international action. Paris, Unesco, 1975, 18.(COM-74/NATIS/3Rev)..
 (3) For the definition of "professional" and "sub-professional" staff as used in the context of this work, see Appendix 2 (Items 5-7 of Explanatory Notes on Questionnaire).

co-operative venture (as in a library and information network) where the appropriate insight, understanding and involvement are needed to enhance the success of the venture — qualities which may be acquired through the right professional training and orientation.

The number of trained librarians and information scientists in administrative charge of libraries and information centres in the sub-region (as Table 30 shows) ranges from national totals of one (14%) out of The Gambia's seven responding libraries to forty-eight (96%) of the fifty responding libraries of Nigeria.

The sole sector in The Gambia with a professionally trained librarian in administrative charge is the public library sector (that is, the Gambia National Library). (Table 30 (a)). With the exception of The Gambia, the majority of the library and information centres in the remaining countries are headed by professionally trained librarians and information scientists. In Ghana, the administrative heads of thirty-seven (55%) of the sixty-seven responding libraries and information centres are professionally trained. Of these, fourteen belong to the academic, public library and information centre sectors — the only sectors in which all the heads are trained librarians and information scientists. Seventeen (57%) of the thirty in the special library sector have had professional training. In the government library sector, only six (38%) of the sixteen are professionally qualified, while there is no professionally qualified librarian in charge of any of the school and college libraries. (Table 30 (b)).

In Liberia, with the exception of the government library sector where the only responding library is not headed by a trained librarian, the remaining six (86%) administrative heads (representing the academic,

public, special library and information centre sectors) are professionally trained. (Table 30 (c)).

With forty-eight (96%) of its fifty responding libraries headed by qualified librarians, Nigeria records the highest number of libraries with qualified librarians in administrative charge. The academic, government and school and college library sectors are all being headed by qualified librarians. The only two exceptions are the public library sector where two (67%) out of the three librarians are qualified, and the special library sector where all but one of the seventeen administrative heads (i.e. 94%) are qualified librarians. (Table 30 (d)).

In Sierra Leone, the academic and special library sectors are the only ones whose entire (three) administrative heads are professionally qualified librarians. Four (67%) out of the six in the government sector, one (33%) out of the three in the public library sector and three (60%) out of the five in the school and college library sector are qualified librarians. On the whole, out of the seventeen responding libraries, eleven (65%) are headed by professionally qualified librarians. (Table 30 (e)).

8.1.2. Staffing of Libraries and Information Centres

In Chapter 5 (Section 5.3.3 - Processing Centres and the Sub-region) reference was made to the dearth of professionally trained librarians in developing countries. This, as was noted, has caused most of the so-called "small libraries" (i.e. the government, special, technical, school and college libraries) to be run by unqualified, or sub-professional, staff. The discussion above on the training status of librarians in administrative charge of libraries in the sub-region and this section on the staffing of

the libraries substantially prove the assertion, as will be seen presently, and do not therefore make the sub-region an exception to the rule.

The Gambia in particular provides a classic example of the situation under review. Of its seven government, public, school and college, and special libraries which responded to the questionnaire, only one (the public library) has professionally trained staff. In effect, The Gambia currently has only two professional librarians, both of whom belong to the public library (i.e. the Gambia National Library). The remaining libraries (three government, one school and college, and two special libraries) are all being managed by untrained staff. (See Table 31 (a) (Summary) and Table 32 (a) (Full Table)).

In Ghana, it is also the government, special, and, particularly, the school and college libraries which are poorly staffed. Only six of the sixteen government libraries are professionally staffed, while thirteen out of the thirty special libraries are under the care of non-professional staff. None of the seven responding school and college libraries is staffed by a professional librarian. The "big libraries" (i.e. the nine academic and university department/institute libraries, the three public libraries and the two information centres) are, on the other hand, professionally well staffed. (See Tables 31 (b) and 32 (b)).

In contrast to The Gambia and Ghana, Liberia has a proportionately high level of professional staffing. The only library without a professional librarian is the only one responding government library. The remaining two academic, one special, and two public libraries as well as the information centre are all professionally staffed. (See Tables 31 (c) and 32 (c)).

Like Liberia, almost all the libraries in Nigeria (i.e. the academic, government, and school and college libraries) are staffed by professionally trained librarians. The only exceptions are the public and special library sectors where one of the three public libraries and only one of the seventeen special libraries have no professionally qualified librarians on the staff. (See Tables 31 (d) and 32 (d)).

In Sierra Leone, only the academic library sector (represented by only one responding library) and the special library sector (two responding libraries) are professionally well staffed. Two out of the six government libraries, two out of the three public libraries and two out of the five school and college libraries have no professional librarians. (See Tables 31 (e) and 32 (e)).

The shortage of trained librarians in the sub-region has led to the situation where, as has already been observed, some of the libraries are being operated without the aid of classification schemes, cataloguing rules or, in some instances, without any catalogues or indexes of any kind. Those libraries can hardly perform their basic functions let alone provide any essential services. It goes without saying that if they are to be effective links in their respective national library and information networks (and consequently in any international schemes) they have to be under the supervision of trained staff. This serious drawback can only be rectified through the adoption of national policies for the systematic education and training of staff at all levels for the library and information services.

8.2 Manpower Planning for Library and Information Services

Before any constructive programme can be embarked on, however, it will be necessary to undertake comprehensive surveys of existing manpower resources "as a basis for the planning of manpower provision and the forecasting of future needs..." (NATIS Objective 6: Analysis of manpower resources). Manpower analysis and planning should therefore be closely related to national programmes for the training of staff for library and information services if the national requirement should be met. The importance of manpower planning, as Professor Havard-Williams explains in relation to training programmes, is that:

it indicates an attempt to foresee the demands both of the present and of the future and to plan the education and training programmes accordingly. (4)

However, he considers the initial education and training programmes as only the beginning of the problem and advocates a proper programme for manpower development as an essential prerequisite for the best use of available human resources. There would be no guarantee, he warns, that the predicted pattern of development would be completely fulfilled but:

planned prediction is likely to produce a result more acceptable than the haphazard method of leaving planning piecemeal to, for example, local or professional bodies alone. (5)

The "planned prediction" will depend on the knowledge, and analysis, of existing manpower resources. Such an analysis would normally be based

(4) HAVARD-WILLIAMS, P. Manpower planning, professional structures and education and training. In Planning information manpower, by P.Havard-Williams and E.G.Franz. Paris, Unesco, 1974, 8. (COM-74/NATIS/REF.5).

(5) Ibid.

on a categorisation of the staff into recognised groups, as for example, professional and sub-professional, and a further sub-division of these groups into areas of specialisation as would be found necessary. Thus the professional group could be sub-divided into librarians, information scientists, archivists, etc., and the sub-professional group into technical staff, clerical staff, etc.

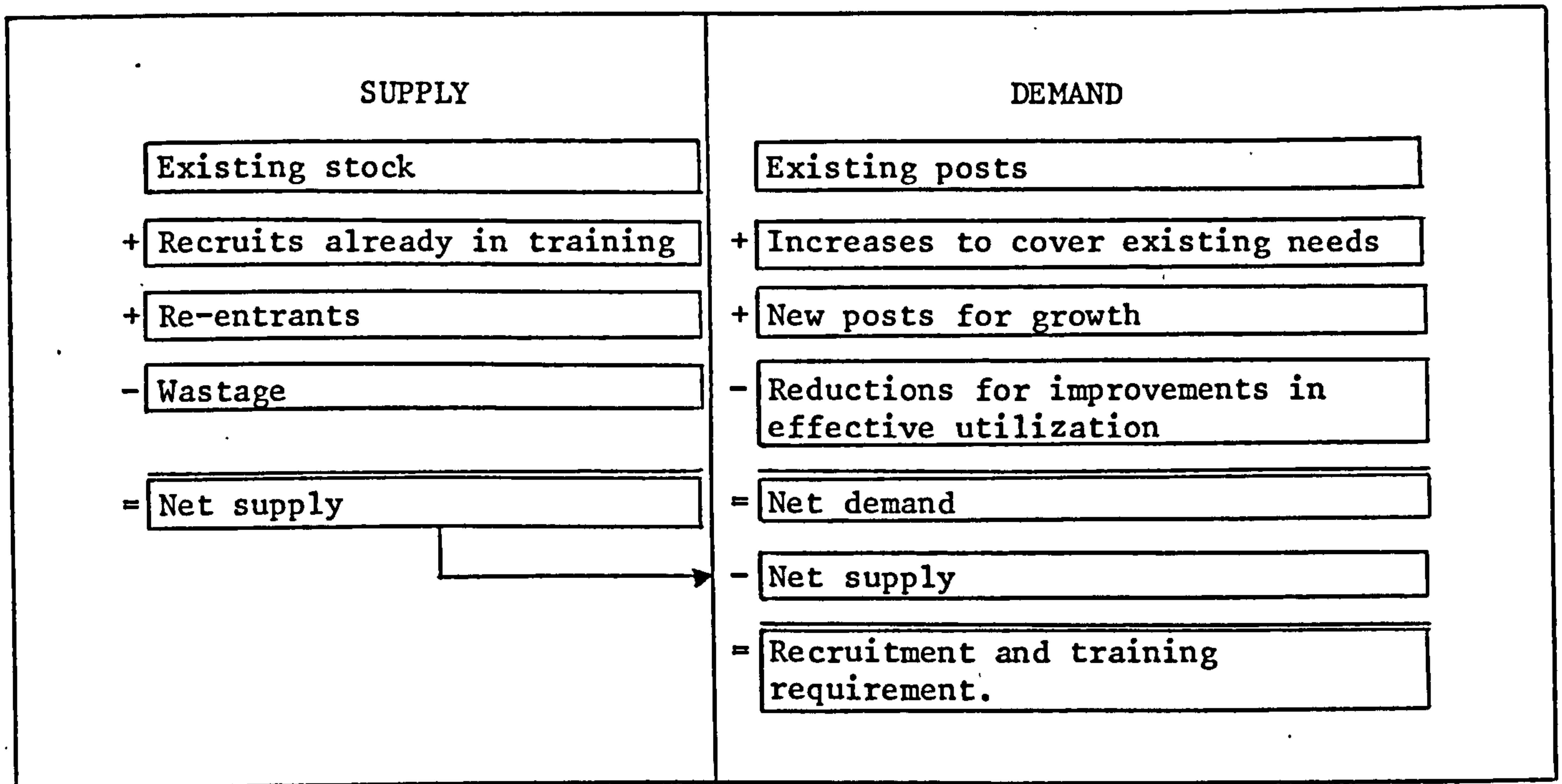
The statistics resulting from the analysis would provide the "base" or primary data for further analysis taking into consideration such variables as recruits to the profession, re-entrants and wastage, both natural (e.g. death, illness, disability or retirement) and voluntary (e.g. resignations, to which a variety of reasons may be ascribed). It is the interplay of these factors that affects the net "supply" figure.

Similar analysis would have to be made to arrive at the "demand" figure. The variables here would be the existing posts, any anticipated increase as a result of an expansion of the existing services or the creation of new ones. Any predicted reductions to improve the effective utilisation of staff would then be deducted to give the net "demand" figure. The difference between the net "demand" and the net "supply" would be the figure on which recruitment and training could be based.

In his article on Library manpower planning, Broome ⁽⁶⁾ provides a model which is reproduced on page 253 (Fig.7) as a schematic representation of the manpower forecasting principle. This principle, which is a simplification of a rather complex issue, may be used to forecast either individual library manpower needs or to estimate national requirements. It must be stressed that the resulting predictions may not always be accurate but it

(6) BROOME, E.M. Library manpower planning. Aslib Proc., 25(11) Nov 1973, 400-414.

Fig.7 A MANPOWER FORECASTING MODEL



Source: BROOME, E.M. Library manpower planning. Aslib Proc., 25(11) Nov 1973, 407.

is possible that with continuous monitoring more reliable forecasts may be arrived at.

In addition to these variables which are directly connected with the profession, there are others of a national nature such as projected patterns of growth in the economy as a whole or in sectors of the economy like education, industry, power, etc. which, if not taken into account when estimating manpower requirements, could seriously invalidate any forecasts. It is therefore very important that manpower planning for library and information services, particularly at the national level, is carried out with the closest collaboration of the national manpower planning bodies, and that it is formulated within the context of the overall national manpower development plan.

8.3 Manpower Requirements of the Sub-region

As was indicated earlier, respondents to the survey questionnaire were asked to give the number of professional and sub-professional staff employed in 1974/75, those currently employed (1979/80), and the estimated staff requirements for 1984/85. The data collected give an idea of the manpower requirements of the individual countries as well as an indication of their staff growth patterns. The results are presented under two main categories of staff: professional staff (sub-divided into librarians, information scientists, computer systems/analysts, and other professional staff) and sub-professional and technical staff (to which clerical and other non-professional staff have been added).

It has been assumed that in arriving at their individual future staff requirements, the responding librarians and information scientists have taken all the possible manpower forecasting variables into account and have made estimates that are as reasonable as possible. The estimates have therefore been used as they have been provided.

8.3.1 Growth Rate and Estimated Requirements - Professional Staff

The earlier discussion on the staffing of libraries and information centres in the sub-region has revealed the paucity of professionally educated librarians in The Gambia. There has been no increase in the number of professional staff since 1974/75, the two professional librarians employed then being the same as those who are currently employed. Both librarians belong to the Gambia National Library which estimates that by 1984/85 it will need a total of six professional librarians.

The three government libraries, two special libraries and one school and college library, which are all currently being run by non-professional staff, will each require a professional librarian by 1984/85, bringing the total estimated professional staff requirements of The Gambia to twelve librarians by 1984/85. The Gambia does not envisage the need for any other category of professional staff. (See Table 31 (a) (Summary) and Table 32 (a) (Full Table)).

In Ghana, there have been increases in the number of librarians in the academic, public and special library sectors. Of the three remaining sectors, the number of librarians has decreased (from seven to six in the government library sector, and from two to one in the information centre sector) while in the third, the school and college library sector, there continues to be no librarian.

There has also been an increase in the total number of information scientists. The special library sector has increased its number of information scientists from one to two, and the information centre sector, which previously had no information scientists, now has three. Previously without any computer/systems analysts, the academic library sector now has one, while the special library sector also now has one archivist which it previously did not have.

Currently, there is a total of 128 librarians (an increase of twenty-seven over the 1974/75 total of 101), five information scientists as against one in 1974/75, one computer systems analyst, one translator and one archivist.

All the sectors expect increases in the number of their professional staff, and four of the school and college libraries (the sector without any librarians) reckon they will need a librarian each

within the next five years. One special library and one information centre will also each require one computer/systems analyst. The total estimated national requirements for Ghana within the next five years are: 266 librarians (an increase of 138); seventeen information scientists (an increase of twelve); four computer/systems analysts (an increase of three); two translators (an increase of one); one archivist and one abstractor/indexer. (See Tables 31 (b) and 32 (b)).

There has been virtually no staff growth in Liberia. Only one sector, the special library sector, has added one librarian to the one it had in 1974/75. The government library sector has lost the sole librarian it had in 1974/75, while the number has remained at twelve for the academic library sector, and three for the public library sector.

The number of information scientists and computer/systems analysts has remained at two and one respectively. There has been no change in the 1974/75 total number of seventeen librarians, two information scientists, and one computer/systems analyst.

The special library sector does not expect any addition to its present number of two librarians and neither does the information centre intend to add to the one computer/systems analyst it currently has. Increases are otherwise expected in the remaining sectors. The total requirements within the next five years are: thirty-four librarians (a doubling of the present number) and five information scientists (an increase of three). (See Tables 31 (c) and 32 (c)).

With the exception of two sectors, all the sectors in Nigeria have had increases in the number of librarians employed. The two exceptions are the government library sector which, like its counterparts

in Ghana and Liberia, has suffered a decrease, the number having reduced from the seventeen of 1974/75 to the current thirteen, and the public library sector which has experienced no staff increase and still has its eleven librarians. The school and college library sector no longer has the information scientist it had in 1974/75, while the special library sector now has one translator which it previously did not have.

The current number of 264 librarians is an increase of ninety-one over the 1974/75 total of 173, and the indications are that more librarians will be needed within the next five years. The estimated requirements are for 366 librarians, an increase of 102 (over the current 264). Five information scientists and five computer/systems analysts will be needed, and the present number of one translator is expected to be increased to three by 1984/85. (See Tables 31 (d) and 32 (d)).

In Sierra Leone, the only exception to an otherwise overall sectoral increase in the number of librarians is the academic library sector whose responding library experienced no growth within the last five years, and does not expect any in the next five. There are currently twenty-nine librarians (as against twenty-two in 1974/75) and it is envisaged that fourteen more will be needed within the next five years to bring the total number to forty-three.

Sierra Leone has no other type of professional staff (apart from librarians) and none will be needed. (See Tables 31 (e) and 32 (e)).

8.3.2 Growth Rate and Estimated Requirements - Sub professional and Technical Staff

Generally there have been overall steady increases in the number of sub-professional and technical staff in almost all the countries, and the estimated requirements show, in almost all cases, substantial increases within the next five years.

In The Gambia, the number of sub-professional staff increased by two from its 1974/75 total of four to the current total of six. A much larger increase of eleven is expected within the next five years to bring the total number of sub-professional staff in The Gambia to seventeen by 1984/85. The number of technical staff is expected to increase only by one from its current (as well as the 1974/75) total of two to an estimated three by 1984/85. The number of clerical and other (ancillary) staff is expected to increase only slightly; the number of clerical staff from twelve to thirteen, and other staff from four to six. (See Table 33 (a) (Summary) and Table 34 (a) (Full Table)).

From its 1974/75 total of 202, the number of sub-professional staff in Ghana has increased by 188 to the current 390 which, in turn, is expected to increase by 122 to an estimated 512 by 1984/85. The number of technical staff has also increased over the period. There were forty-three in 1974/75; there are fifty-seven currently (an increase of fourteen within the last five years) and there is an expected increase of forty-seven within the next five years to bring the total number of technical staff to 104 by 1984/85. The number of clerical and other (ancillary) staff also increased, and further increases are expected: from 421 to 468 for the clerical staff and 390 to 397 for the other (ancillary) staff. (See Tables 33 (b) and 34 (b)).

Liberia is the only country to have had a reduction in the number of its sub-professional staff. The 1974/75 total of thirty-five has been reduced by one to its current thirty-four. The number is expected to increase, though, and an additional estimated requirement of twenty-five within the next five years will increase the total to fifty-nine by 1984/85. The number of technical staff increased from two (1974/75)

to six (1979/80) and is expected to increase only slightly by two to a total of eight. Seven additional clerical staff will be needed over the next five years to meet the estimated total of twenty-eight by 1984/85. (See Tables 33 (c) and 34 (c)).

In Nigeria, as in Ghana, substantial increases in the number of sub-professional and technical staff are expected. The current number of 198 sub-professional staff, itself an increase of ninety over the 1974/75 total of 108, is expected to increase by 102 to an estimated total of 300 by 1984/85. The number of technical staff has increased from seventy-eight in 1974/75 to the current 143. It is estimated that forty-nine more technical staff will be needed within the next five years, the estimated total requirements by 1984/85 being 192. Additional fifty-five clerical and forty-one other (ancillary) staff will also be required to meet their respective estimated totals of 437 (clerical) and 346 (ancillary). (See Tables 33 (d) and 34 (d)).

There was no appreciable increase in the number of sub-professional staff in Sierra Leone from 1974/75 to 1979/80, the number having increased by three from fifty-one to fifty-four. As many as seventy-eight sub-professional staff will, however, be required by 1984/85, giving an expected increase of twenty-four. Sierra Leone has no technical staff and there is no provision for any within the next five years. The current number of clerical and other (ancillary) staff is expected to increase minimally from twenty-nine to thirty-two for clerical staff, and thirty-six to forty for the other staff. (See Tables 33 (e) and 34 (e)).

8.4 Education and Training Programmes for the Supply of Library and Information Personnel

Having surveyed the estimated requirements for library and information personnel, the education and training programmes available in the sub-region are now surveyed in relation to their adequacy (or otherwise) in meeting the needs of the sub-region.

It may be recalled that the first attempt at the provision of formal education for librarianship in English-speaking West Africa was made in 1944 with the establishment of a library school at Achimota in Ghana (then the Gold Coast). As was observed, the school was to train library personnel for The Gambia, The Gold Coast, Nigeria and Sierra Leone - the four colonies which made up British West Africa. (The plan excluded Liberia which was not a British colony). After one year, the school was closed down because its establishment at that time was considered premature. (See Chapter 3, Section 3.2.3 - Public Libraries).

The question of a library school for the sub-region was to come up again some eight years later, triggered, this time, by the Unesco Seminar on the Development of Public Libraries in Africa which was held at Ibadan, Nigeria, in 1953 ⁽⁷⁾. One of the outcomes of the Seminar was the sponsorship of a survey into the library needs of British West Africa by the Carnegie Corporation of New York. The survey was conducted by Dr. Harold Lancour, then Associate Dean of the University of Illinois Graduate School of Librarianship whose report ⁽⁸⁾ recommended the establishment of a post-graduate library school. Dr. Lancour was of the opinion

(7) UNESCO. Development of public libraries in Africa: the Ibadan Seminar. Paris, Unesco, 1954. (Public libraries manuals, no.6).

(8) LANCOUR, H. Libraries in British West Africa; a report of a survey for the Carnegie Corporation of New York, October - November 1957. Urbana, University of Illinois Library School, 1958. (Occasional Papers, no.53).

that one library school would be adequate for the sub-region, and recommended the University College, Ibadan, Nigeria, as the institution best suited for the school. The recommendation eventually materialised, in October 1960, in the establishment of the Institute of Librarianship, Ibadan University.

In the same year, an earlier proposal for the establishment of a library school in Ghana was revived when Mr. J.C. Harrison, formerly head of the Manchester School of Librarianship, was commissioned by the Ghana Library Board to conduct a survey of the manpower needs of the country and make recommendations for the establishment of a library school. This was the result of a rekindled interest in the idea by the Government which had turned the proposal down in 1954 because "the priorities of other needs are such that we must abandon the idea for the present".⁽⁹⁾ As Miss Evans, the former Director of the Ghana Library Board, relates in her book A tropical library service, it was the President of Ghana who eventually decided that Ghana should have its own library school, and asked the Library Board to make recommendations to that effect.⁽¹⁰⁾

Mr. Harrison recommended that the library school be established as a non-university institution under the auspices of the Ghana Library Board to prepare students for the professional examinations of the (British) Library Association.⁽¹¹⁾ The Government accepted the recommendations and the Ghana Library School was established in 1961. The school operated under the Ghana Library Board for four years after which it was transferred to the University of Ghana, Legon.

(9) EVANS, E.J.A. A tropical library service; the story of Ghana's libraries. London, Andre Deutsch, 1964, 144.

(10) Ibid.

(11) HARRISON, J.C. The Ghana School of Librarianship; report to the Minister of Education and Information. In EVANS E.J.A. A tropical library service. op cit., 145-159.

It was soon to become apparent that the Ibadan Institute of Librarianship could not adequately meet the needs of Nigeria, let alone the whole of English-speaking West Africa as it had originally been thought. A second library school for Nigeria was established at Ahmadu Bello University in 1968, and two more library schools have since been established, one at Bayero University and the other at the University of Maiduguri. There are proposals for the establishment of two additional library schools in Nigeria. These will be sited at the University of Nigeria, Nsukka, and the University of Benin.

No comparable developments have taken place in the other countries. Neither The Gambia nor Sierra Leone has a library school, although there are local schemes for the training of sub-professional staff, and Liberia has an Institute of Librarianship which also trains sub-professional staff.

Existing arrangements for the education and training of library and information personnel in the individual countries are discussed below, starting with the professional staff and followed by the sub-professional staff.

8.4.1 Education and Supply of Professional Staff

As The Gambia has no library school, its two qualified librarians have had to pursue their professional education outside The Gambia (both in the United Kingdom). The Gambia cannot support a library school of its own - its economy and resources will not allow that, and neither will the low national demand for library and information personnel justify it. The present system of sending librarians outside the country for their professional education will therefore have to remain The Gambia's source for the supply of professional librarians.

According to the estimates (Table 31 (a)), The Gambia will need a total of twelve professional librarians by 1984/85. Discounting the two who are currently employed, an additional ten professional librarians will be needed within the next five years, making the national requirement an average of two librarians a year. As far as can be ascertained, only one Gambian librarian is currently receiving a three-year professional education in a British institution (i.e. at Loughborough University). There is no immediate provision for the education of additional professional staff. This immediately disrupts the training programme and draws The Gambia further away from attaining its national complement of professional librarians.

Of all the library and information systems in the sub-region, The Gambia's is the least developed. A more vigorous national programme for the education of professional staff will have to be pursued if The Gambia is to have an effective national library and information service.

Library education in Ghana is provided by the Department of Library and Archival Studies of the University of Ghana which started as the Ghana Library School in 1961. It was moved to the University of Ghana in 1965 to become the Department of Library Studies within the Faculty of Social Studies. In 1974 archival studies were added to its programme.

Currently, the Department offers the following professional courses:

- i) Post-graduate Diploma in Library Studies;
- ii) Post-graduate Diploma in Archival Studies;
- and iii) Master's Degree in Library Studies.

The Post-graduate Diploma in Library Studies is of one year's duration and is designed to prepare future librarians to:

- i) occupy beginning professional positions in any type of library, especially in Africa;
 - ii) effectively acquire, organise and disseminate information;
 - iii) guide library users in making better use of available knowledge and experience;
- and iv) analyse a wide range of information materials. (12)

The Post-graduate Diploma in Archival Studies is similarly planned.

The Master's Degree in Library Studies extends over "not less than one academic year" and is meant to provide mid-career educational opportunities and to prepare professional librarians to:

- i) become library administrators;
 - ii) plan and conduct research in library studies ;
- and iii) formulate, demonstrate and assess new methods and approaches to library service in Africa. (13)

The basic professional education programmes offered by the Department are the two Post-graduate Diploma courses in Library and Archival Studies. (14) Since Ghana depends almost entirely on the Department for these two categories of professional staff, the number produced may be rightly interpreted as constituting the entire supply element of the manpower forecasting formula. From Fig.8 (page 265), it may be seen that over a five-year period (1975/76 - 1979/80), the Department produced a total of thirty-six librarians (thirty-three at the Post-graduate Diploma level and three at the Master's level), and

(12) GHANA. University. Department of Library and Archival Studies. Prospectus, 1979-1980. Legon, Department of Library and Archival Studies, 1979, 18.

(13) Ibid., 27.

(14) Originally, the Department offered a three-year undergraduate course leading to a Bachelor's Degree in Library Studies. This was changed to a two-year Diploma course in 1967. The two-year Diploma course was reduced to the present one-year course in 1969.

Fig.8 DEPARTMENT OF LIBRARY AND ARCHIVAL STUDIES, UNIVERSITY OF GHANA, LEGON - NUMBER OF LIBRARIANS AND ARCHIVISTS PRODUCED, 1975/76 - 1979/80

Year	Post-grad.Dip. Libr.Stds.	Post-grad.Dip. Archiv.Stds.	Master's Degree Libr.Stds.
1975/76	4	11	-
1976/77	7	8	-
1977/78	7	2	1
1978/79	10	5	1
1979/80	5	4	1
Total	33	30	3

thirty archivists. The average annual number of librarians produced over the period is seven, and six in the case of archivists.

The estimated requirements (Table 31 (b)), indicate that within the next five years (i.e. by 1984/85) Ghana will need a total of 266 librarians - 138 more than it currently has. Working on averages again, this means that the Department will have to produce an average of twenty-eight librarians a year for the next five years. With a production rate of seven librarians a year, the conclusion which may be drawn from this assessment is that the Department is currently under-producing librarians at a ratio of one to four.

The Department does not, at the moment, offer a course in information science, although it is offered as a subject in both the Post-graduate Diploma programmes in Library and Archival Studies. All the five information scientists now employed in Ghana were therefore educated overseas. The Department is currently considering introducing a course in information science. If the plan does materialise soon, then

the Department may be in the position to meet the estimated national requirement of some three information scientists a year for the next five years. Failing that, Ghana will have to continue with its present system of educating its information scientists abroad, including the one abstractor/indexer that will also be needed.

Since 1974, the Department has been serving as a Regional Training Centre for Archivists from English-speaking African countries. The thirty (or the annual average of six) archivists that the Department has produced over the past five years have been educated in respect of this regional obligation. Out of the thirty, only nine were Ghanaians. ⁽¹⁵⁾ This gives an average of two archivists a year for Ghana. Although only an additional archivist will be needed (according to the estimates) the adequacy of the annual average of two archivists cannot be assessed since no returns were obtained from The National Archives of Ghana, the country's largest single employer of archivists.

The estimates also indicate the need for three additional computer/systems analysts and one additional translator by 1984/85. The education of these categories of professional staff is, of course, outside the purview of the Department. They are requirements whose satisfaction will depend on what provision the appropriate sectors of the national educational system have for their education. It was partly in this connection that, earlier in this chapter, the point was made regarding the importance of all manpower planning activities being viewed in relation with overall national plans; it is the cumulation of the various sectoral plans (or requirements) that makes up the national total. However,

(15) Interview with the Acting Head of the Department of Library and Archival Studies, University of Ghana, Legon, March 14, 1980.

considering the available local facilities, it should be possible for the estimated requirements of three additional computer/systems analysts and one translator to be met.

In Liberia, education for professional librarianship has always been sought outside the country, there being no local library school offering that facility at the professional level. Because of its historical links with the United States of America, seeking educational facilities outside Liberia almost invariably means attending institutions in America - just as there exist similar relationships between Britain and its former colonies. Almost all the current seventeen professional librarians in Liberia were educated in America.

Liberia, like The Gambia, has an economy and a national demand for professional librarians which cannot support a library school. As has hitherto been the practice, Liberia will have to depend on external sources for the education of its professional staff which, in this case, are an additional seventeen librarians and three information scientists within the next five years (Table 31 (c)). Again like The Gambia, Liberia has no articulate national programme for the education of its professional staff. A national training programme, as well as a more positive official approach to the development of library and information services, will have to be adopted for these requirements to be attained.

The Department of Library Studies, University of Ibadan, the oldest of Nigeria's four library schools, started in 1960 as the Institute of Librarianship in the University's Faculty of Education. At first, the school offered courses leading to the professional examinations of the (British) Library Association and admitted both graduates and non-graduates to the course. The admission of non-graduates ceased in 1965 when the Institute decided to concentrate on post-graduate education. In 1970,

however, a one-year course (now converted into a two-year Diploma course) was introduced for the training of non-graduates as supporting sub-professional personnel in libraries. In the same year, the status of the Institute was raised to that of a Department, with responsibility for teaching and research into all aspects of librarianship. Consequently, the objectives of the Department are:

- i) to educate the leadership of the library profession;
 - ii) to train supporting para-professional staff for libraries;
 - iii) to conduct research into the problems of libraries and library operations in Africa;
 - iv) to provide further education opportunities for experienced members of the profession;
- and v) to provide a forum for discussion on problems of African librarianship.⁽¹⁶⁾

The following professional courses are currently being offered by the Department:

- i) Master's Degree in Library Studies;
 - ii) Master of Philosophy Degree in Library Studies;
- and iii) Doctor of Philosophy Degree in Library Studies.

The Master's Degree in Library Studies is now the basic professional education in librarianship offered by the Department. It has, since 1978, replaced the Post-graduate Diploma in Librarianship which had been offered as the basic professional course since 1960. Over the past five years (1975/76 - 1979/80) the Department has produced a total of 103 librarians

(16) OGUNSHEYE, F.A. Formal programme development in library education in Nigeria. Paper presented at [the] UNESCO-FID-CONACYT-UNAM Pre-Session Seminar on Education and Training, Mexico City, 20-24 September 1976. COMLA Newsletter, 17, Aug 1977, 20.

in the basic Post-graduate Diploma and Master's Degree courses (Fig.9), putting the annual average number of librarians produced during the period at twenty-one.

Fig.9 DEPARTMENT OF LIBRARY STUDIES, UNIVERSITY OF IBADAN -
NUMBER OF LIBRARIANS PRODUCED, 1975/76 - 1979/80

Year	Post-grad.Dip. Librarianship.	Master's Degree Library Studies
1975/76	19	-
1976/77	16	-
1977/78	1	26
1978/79	-	18
1979/80	-	23
Total	36	67

Nigeria's second library school, the Department of Library Science, Ahmadu Bello University, Zaria, started as the Department of Librarianship in 1968. Two years later, it was fully integrated into the Faculty of Education as the Department of Library Science. The aim of the Department is:

to train librarians on several levels with a well rounded education in librarianship ... emphasis is placed on problems facing libraries in Africa. (17)

Currently, the Department offers the following professional courses:

- i) Bachelor of Library Science;
- and ii) Master of Library Science.

The Bachelor of Library Science programme is the basic professional course offered, while the Master's programme is for:

(17) NIGERIA. Ahmadu Bello University. Department of Library Science. Syllabus, 1971-1972. Zaria, Ahmadu Bello University, 1971, 2.

- 1) those holding the Bachelor of Library Science degree who wish to become specialists in some aspect of librarianship,
- or ii) those with a degree in a subject field who wish to pursue librarianship as a career.⁽¹⁸⁾

To the second category of students, the Master's course provides the basic course in librarianship. It is estimated that the Department produces about thirty librarians annually - twenty in the Bachelor's programme and ten in the Master's programme.⁽¹⁹⁾

The two new library schools, the Department of Library Studies, Bayero University, Kano, and the Department of Library Studies, University of Maiduguri, both offer Bachelor's degree programmes. Both are yet to present their first group of librarians. Therefore, estimating with the number of librarians produced by Ibadan and Ahmadu Bello, Nigeria currently produces an average of fifty-one librarians a year.

It may be seen from Table 31 (d) that Nigeria will need an estimated 366 librarians by 1984/85 - that is, 102 more than its current number of 264, or an average of twenty librarians a year for the next five years. From this assessment, it may seem as if Nigeria is currently producing more librarians than it needs. Actually, Nigeria needs more than twenty librarians a year. For reasons given in Chapter 4 (Section 4.1.4 - Limitations) the survey of existing library and information resources had to be restricted, in the case of Nigeria, to a selected number of libraries. The responding fifty libraries (out of ninety-four survey questionnaires which were sent) therefore represent only about one third of the 142 listed by the National Library of Nigeria as the "major libraries in Nigeria".

(18) Ibid., 3.

(19) Interview with Mr. S. A. Ajia, Lecturer, Department of Library Science, Ahmadu Bello University, Kano, Nigeria, presently at Loughborough. (Loughborough, May 1980).

So the average of twenty librarians arrived at as being Nigeria's annual requirement of professional librarians is about one third of the actual requirement. If the figure is trebled, the resulting sixty will seem a more realistic annual requirement than the twenty. Considering that the National Library of Nigeria's list covers only the "major" libraries, it is conceivable to assume that the total national requirements, including the "minor" libraries, will be considerably higher than sixty librarians a year. With their joint annual production of fifty-one librarians, the two library schools (i.e. Ibadan and Ahmadu Bello) are therefore producing less librarians than the nation needs. This assessment reinforces the observation made by Ifidon ⁽²⁰⁾ in 1977 that "the two library schools have never been able to produce [enough librarians] for the libraries". It is to be expected that the newly established schools, and eventually the proposed ones, will substantially bridge the gap between the demand and the supply of librarians in Nigeria.

Neither Ibadan nor Ahmadu Bello currently offers a course in information science, although Ibadan offers it as a subject in its MLS and MPhil programmes. The introduction of a full course in information science would be worth the consideration of the Departments of Library Studies. Until that time, Nigeria will have to continue with its dependence on external sources for the education of its information scientists, five (possibly more) of whom will be needed by 1984/85.

The estimates indicate the need for five computer/systems analysts and two additional translators by 1984/85 (again, the actual requirements may be more). The education of these categories of professional staff, as

(20) As quoted in AJIA, S.A. Library education in Nigeria: a study of factors that have influenced its development. A Master's thesis submitted ... for the award of Master of Arts of the Loughborough University of Technology, October 1977, 132. (Unpublished).

was discussed, is the responsibility of other organisations on whom the libraries have to depend for their requirements. The available facilities in Nigeria for the production of computer/systems analysts and translators should not make it difficult for the libraries to have their needs satisfied.

Library education for professional librarians in Sierra Leone, like The Gambia and Liberia, has to be obtained entirely outside the country, mainly in the United Kingdom. Unlike The Gambia and Liberia, however, Sierra Leone has a comparatively well-developed library service with some twenty-nine currently serving professional librarians, and a national requirement of an additional fourteen librarians within the next five years. The satisfaction of this requirement will make Sierra Leone attain its national complement of forty-three librarians by 1984/85. (See Table 31 (e)).

Although Ogundipe ⁽²¹⁾ advocates the establishment of a library school in Sierra Leone for the education of professional librarians, with a national average requirement of three librarians a year, the establishment of a school now would seem premature. Sierra Leone currently educates an average of three librarians a year outside the country, and a more appropriate policy would be the continuation of this arrangement until the establishment of a library school can be justified.

8.4.2 Training and Supply of Sub-professional Staff

In all the countries, there is some facility or the other for the training of sub-professional staff. In The Gambia, the Gambia National Library organises occasional workshops and courses in "basic librarianship".

(21) OGUNDIPE, O.O. Education for librarianship in Sierra Leone: the need. Unesco Bull Libr., 29(3) May-Jun 1975, 151-155.

Two types of courses are run, one for primary school teachers, and the other for library assistants and clerks in charge of libraries in government, public and other institutions.

Two ten-day workshops have so far been organised for primary school teachers, both of which have been aimed at preparing the teachers to run their school libraries. The objective of the workshops seems to have been largely achieved as "ninety per cent of the primary schools now have locally trained [teacher]/librarians". (22)

The only course in "basic librarianship" to have been held for library assistants and clerks lasted six weeks (from 6th November to 15th December, 1978) and was "intended for people employed in libraries as non-professionals." (23) The course covered such topics as types of libraries, library users, organisation of libraries, types of materials, sources of supply, cataloguing, indexing and classification, etc. at the end of which the nineteen participating library assistants, typists, schedule and record clerks, etc. were awarded certificates.

At the present rather undeveloped state of library and information services in The Gambia, these workshops and courses are useful attempts to meet some of the pressing current needs. But they should be seen as serving a limited purpose only and not as a substitute for a national programme for the training of sub-professional staff. From the estimates (Table 33 (a)), The Gambia will need to have two sub-professional staff trained annually for the next five years if it is to have the total of seventeen sub-professional staff it will require by 1984/85. Currently,

(22) GAMBIA. National Library. Report on the [Second] National Library Workshop in Basic Librarianship for Primary School Teachers, 2-12 January, 1979. [Banjul, The National Library, 1979], i. (The First Workshop was held from 3-13 January 1978).

(23) GAMBIA. National Library. Report on Course in Basic Librarianship for Library Assistants/Clerks in Departments and Institutions.... from 6th to 15th December 1978. Banjul, The National Library, [1978], 2.

only one sub-professional librarian is being trained (at the Department of Library and Archival Studies, University of Ghana, Legon). This, once again, puts The Gambia's training programme out of schedule.

In Ghana, the training of sub-professional librarians is undertaken by the Department of Library and Archival Studies, University of Ghana, which offers the following programmes:

- i) Certificate in Librarianship;
- ii) (Non-graduate) Diploma in Library Studies;
- iii) Certificate in Archive Administration;
- and iv) (Non-graduate) Diploma in Archival Studies.

The Certificate in Librarianship course covers one year and is meant to train library assistants to support professional librarians in various library operations. The training is also to enable them to perform technical tasks without direct supervision and to supervise the execution of various technical and clerical operations.⁽²⁴⁾ The Certificate course does not prepare assistants to become administrators or "to perform research oriented tasks in libraries, e.g. research centred reference work, compilation, explanation or manipulation of classification tables..." They are, however, expected, after graduation, "to be able to classify and catalogue simple titles, compile reading and accession lists, answer simple (directional) reference questions..."⁽²⁵⁾ The Certificate course in Archive Administration is similarly organised.

The non-graduate Diploma courses are designed to up-grade the qualifications of persons possessing either the Certificate in Librarianship or Archival Studies awarded by the University. Candidates are required to prepare a written project (not exceeding 15,000 words) on an approved topic over a period of one calendar year. Both courses are non-residential

(24) GHANA. University. Department of Library and Archival Studies. Prospectus, 1979-1980. op cit., 11.

(25) NITECKI, A. Library education in Ghana. Ghana Libr.J., 4(2) Dec 1972, 36.

and are open to those with at least three years' post-certificate working experience.⁽²⁶⁾ As Fig.10 shows, within the past five years (1975/76 - 1979/80), the Department has trained 101 sub-professional staff in the Certificate in Librarianship course and sixty-five in the Certificate in Archive Administration course. Since the inception of the non-graduate Diploma programmes in 1978/79, twenty seven candidates have been awarded the non-graduate Diploma in Library Studies, and two the non-graduate Diploma in Archival Studies. In the basic sub-professional training courses (i.e. the Certificate courses), the Department has produced an annual average of twenty sub-professional staff in librarianship, and thirteen in archive administration during the past five years. (Of the thirteen produced annually in archive administration, seven have been Ghanaians).

Fig.10 DEPARTMENT OF LIBRARY AND ARCHIVAL STUDIES, UNIVERSITY OF GHANA, LEGON - NUMBER OF SUB-PROFESSIONAL STAFF PRODUCED, 1975/76 - 1979/80

Year	Cert. Librarianship	Cert. Arch.Admin.	Dip. Libr.Stds.	Dip. Arch.Stds.
1975/76	17	8	-	-
1976/77	19	20	-	-
1977/78	19	10	-	-
1978/79	21	14	26	-
1979/80	25	13	1	2
Total	101	65	27	2

(26) GHANA. University. Department of Library and Archival Studies. op cit., 15.

National requirements indicate that Ghana will need 512 sub-professional staff by 1984/85, an increase of 122 over the present 390, or twenty-four sub-professional staff a year for the next five years. (See Table 33 (b)). While in the case of the professional staff respondents distinguished between their requirements for librarians, information scientists, archivists, etc. such distinction was not made for the sub-professional staff. It is therefore difficult to determine whether the additional 122 sub-professional staff required are in the area of librarianship only, or whether they are for both librarianship and archive administration. Assuming that the total requirement is for sub-professional library staff, the current output of twenty falls slightly below the national requirement of twenty-four sub-professional library staff a year, in which case supply will have to be stepped up to match demand. On the other hand, if the figure (122) is taken as representing the national requirement for sub-professional staff in both librarianship and archive administration, then the combined average annual production of twenty-seven sub-professionals in librarianship and archive administration exceeds the national requirement by seven. However, the excess may be apparent only. As has been noted, no returns were obtained from the National Archives of Ghana. So the actual need for sub-professional archivists may be greater than the estimates have indicated. The inclination is therefore towards an advocacy against a reduction in the number currently being produced.

In Liberia, the Institute of Librarianship has been training "semi-professional or middle level librarians" since its establishment in 1972. The Institute was established when the Director of Libraries, University of Liberia "was approached by a group of practising local

librarians to organise a training programme in librarianship." (27)

It is a privately-owned institution with no official connections with the University. The University itself offers an elective course in librarianship under its teacher training programme. The aim of the course is:

to help strengthen public school libraries by providing teachers who, while not professional librarians, are prepared to supervise the organisation and use of typical school library facilities. (28)

One course is offered each semester, and instructions are given by the staff of the University of Liberia Libraries.

The Institute of Librarianship, however, remains the main training source, and trains sub-professional staff:

who will have the ability and responsibility to organise and operate small school libraries, libraries in government ministries, and other institutions and agencies. (29)

The course lasts for two years, six months of which is for practical work, and successful candidates are awarded a Certificate of Proficiency in Librarianship. It is expected that the Institute will be absorbed by the University of Liberia in about 1983 or 1984.

The Institute has trained forty-four sub-professional staff over the past five years (1975/76 - 1979/80), with an average of nine a year. Matched against Liberia's estimated national requirements of fifty-nine sub-professional staff by 1984/85 (i.e. an additional twenty-five, or five annually for the next five years, as Table 33 (c) shows), the Institute's output exceeds the national requirements by four sub-professional staff a year. This assessment confirms the remark by the Director of the

(27) ARMSTRONG, C.Wesley. A short history of libraries in Liberia. Monrovia, University of Liberia, 1973, 93.

(28) Ibid., 94

(29) Ibid.

Institute that "...presently production outstrips demand and some graduates are not placed." (30) This situation has arisen because training is not related to national needs; the programme is advertised and successful applicants are enrolled. Since the Director himself is aware of the situation, probably an attempt will be made to match supply with demand - vested interest notwithstanding!

Three of Nigeria's four library schools offer training courses for sub-professional staff. The three are: the Department of Library Science, Ahmadu Bello University, the Department of Library Studies, University of Ibadan, and the Department of Library Studies, Bayero University.

The Department of Library Studies, University of Ibadan, offers a two-year non-graduate Diploma in Librarianship which provides basic training in library techniques for personnel in all types of libraries. It is also intended to train library personnel for appointment to the middle grades, and emphasis is placed on practical work throughout the course. (31) The total number of sub-professional staff produced by the Department between 1975/76 and 1979/80 is 235, or an annual average of forty-seven.

The Department of Library Science, Ahmadu Bello University, also offers a two-year non-graduate Diploma in Library Science for para-professional or intermediate staff. This programme is distinguished from the Bachelor's programme offered by the Department, "first by the entrance qualifications, second by the absence of academic courses, and third by a greater practical emphasis." (32) It is estimated that an

(30) Interview with the Director, Institute of Librarianship, Monrovia, Liberia, January 28, 1980.

(31) NIGERIA. University of Ibadan. Department of Library Studies. Prospectus, 1976-1977. Ibadan, Department of Library Studies, [1976], 5.

(32) As quoted in OBI, D. Education for librarianship in Nigeria. Nigerian Libr., 11(3) Dec 1975, 241.

average of thirty sub-professional staff are trained annually.

The third library school, the Department of Library Studies, Bayero University, is one of two new library schools in Nigeria. It offers a two-year non-graduate Diploma in Library Studies which is designed to prepare para-professional staff to work in any kind of library routines and practical work, and:

[The programme's] subsidiary aim of providing a general and high standard of pre-university education is catered for by an equivalent emphasis on at least one academic subject. (33)

Since it was established in 1977, the Department has produced, on the average, twenty sub-professional staff a year.

The average number of sub-professional staff produced by these three library schools is therefore ninety-seven. From Table 33 (d), it may be seen that Nigeria will require an estimated total of 102 sub-professional staff (an average annual requirement of twenty) in addition to the current 198 so as to attain the national requirement of 300 by 1984/85. For the same reasons as were advanced for a trebling of the professional staff requirements, a trebling also of the average annual requirement of twenty sub-professional staff to sixty will be nearer the true national requirement. Again, considering the needs of the "minor" libraries not covered by the survey, the three library schools may not be overproducing sub-professional staff as the estimates make it seem.

In Sierra Leone, training at the sub-professional level is provided jointly by the Fourah Bay College Library and the Department of Extra-mural Studies, both of the University of Sierra Leone, by preparing candidates for the Library Assistants Certificate of the City and Guilds of London.

(33) NIGERIA. Bayero University. Department of Library Studies. Prospectus, 1978-1979. Kano, Department of Library Studies, [1978], 99.

It is a junior library certificate programme, intended for assistants "who do not aim at professional status". The purpose is to help the assistants "to acquire a proper understanding of their work" and to provide them with "a basic qualification in library practice ... with emphasis on practical skills". (34) It is normally a one-year course although the University offers it for two years. About ten assistants are trained every year but about five are successful at the City and Guilds examination. (35)

At the current rate of five assistants a year, the supply of assistants is the exact match of the projected demand since the estimated requirement of an additional twenty-four sub-professional staff to meet the national total of seventy-eight by 1984/85 (Table 33 (e)), means an annual output of five assistants. The problem, however, is with the level and suitability of the course which has been assessed as being:

essentially a junior assistants qualification with a European bias and [which leaves] an unfilled training gap between City and Guilds and the ALA. (36)

In effect, Sierra Leone has no facilities for the training of sub-professional (or para-professional) staff. The present training system was started in 1968 when it obviously suited the needs of the country at that time. Library and information services in Sierra Leone have developed since then and what was suitable as a staff training scheme some twelve years ago may not be suitable now. The introduction of a more relevant scheme for the training of sub-professional staff is

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- (34) SIERRA LEONE. University. Fourah Bay College Library. Library Assistant Certificate Course - City and Guilds Examination. [Freetown, Fourah Bay College Library], 2.
- (35) Interview with Mr. I. Ndanema, Assistant Librarian, Fourah Bay College, University of Sierra Leone, Freetown, January 22, 1980.
- (36) As quoted in HUNTER, L. The recruitment and training of middle-level manpower in the public library service. Sierra Leone Libr.J., 3(1) Jan 1977, 5.

needed to sustain the progress that has been achieved, and also to ensure continued development.

In all the countries, estimated requirements have been made for technical staff (i.e. staff trained purposely for such services as audio/visual, binding and similar technical services), clerical staff and other ancilliary staff. The training of these categories of staff has not been discussed as it is outside the competence of library and information studies. Generally, facilities in the sub-region for their training is adequate and their supply should therefore not pose any major problems.

8.4.3 Staffing of Library Schools.

A very important consideration in any educational programme is the availability and the adequacy of well trained staff to carry out the teaching programmes, and recommendations are often made regarding what should constitute the minimum in staff provision. In the field of library education, what constitutes the minimum as regards the qualification of the teaching staff is:

a degree with a library or information science qualification (or very good experience in lieu) with at least three years' practical or research experience. (37)

Adequacy of staff is reckoned in terms of a minimum of four full-time staff - however small the student body - so as to enable the staff to cope with the increasing range of specialised subjects taught in a library school. Different staff/student ratios have been recommended. The British standard is one to ten, while IFLA recommends one to twelve.

(37) HAVARD-WILLIAMS, P. op cit., 26.

What may be considered as the appropriate staff/student ratio in one situation may not necessarily be appropriate in another, given that there are differences in prevailing circumstances. But whatever the circumstances may be:

there should certainly not be less than a ratio of 1:20 or more than 1:6, always provided there is a minimum of four. (38)

Although a library school should not rely entirely on part-time staff, the full-time staff should, ideally, be aided by a group of part-time staff to enrich the value of the teaching programmes with their practical experience. As practitioners:

[they bring] to the classroom the fresh quality of current experience and the present solutions of problems which the full-time teacher cannot match.. (39)

With only two exceptions, the rest of the library schools in the sub-region do satisfy these conditions. The exceptions are the privately-owned Institute of Librarianship in Liberia which is run by a staff of three qualified librarians on an entirely part-time basis, (40) and the newly established Department of Library Studies, University of Maiduguri, Nigeria, which has a full-time staff of only two. (41) (The training scheme offered jointly by the Fourah Bay College Library and the Department of Extra-mural Studies, University of Sierra Leone, cannot strictly be termed a library school. In any case, the scheme relies entirely on the staff of the Fourah Bay College Library who teach in addition to their work in the Library).

(38) Ibid.

(39) Ibid.

(40) Interview with the Director of the Institute, Monrovia, Liberia, January 28, 1980.

(41) Commonwealth Universities Yearbook, 1980. London, Association of Commonwealth Universities, 1979, 4 vols.

The Department of Library and Archival Studies, University of Ghana, has a staff of nine full-time lecturers. They are aided by four part-time lecturers who are practising librarians, and one consultant on administrative history. (42) At Ibadan, the Department of Library Studies has a teaching staff of sixteen (43) who are assisted by "visiting lecturers", that is, part-time lecturers drawn from the ranks of local practitioners. The Department of Library Science, Ahmadu Bello University, Zaria, also has similar arrangements for "visiting lecturers", and a full-time staff of thirteen. (44) The Department of Library Studies, Bayero University, Kano, the second of the two new library schools in Nigeria, satisfies the condition minimally with a full-time staff of four. (45)

8.4.4 Curriculum Content

In a paper presented at the Forty-sixth IFLA General Conference on the Development of Libraries and Information Systems, held in Manila, The Philippines, in August 1980, Professor Saunders (46) remarked that:

Up to the present most developing country library school curricula look all too similar to those of their developed counterparts...

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- (42) GHANA. University. Department of Library and Archival Studies. Prospectus, 1979-1980. op.cit., 4-5.
 - (43) NIGERIA. University of Ibadan. Department of Library Studies. Academic staff and internal students, 1979-1980. Ibadan, Department of Library Studies, 1979.
 - (44) Commonwealth Universities Yearbook, 1980. op.cit.
 - (45) Ibid.
 - (46) SAUNDERS, W.L. The environment of library education. Paper presented at the 46th IFLA General Conference on the Development of Libraries and Information Systems, held in Manila, The Philippines, 18-23 August, 1980, 17. (mimeo.).

Thus, attention was drawn again to an issue which, for quite some time now, has been of major concern to all those connected with library education in the developing countries. This situation has arisen often because (to complete the quotation):

[the library schools] have been created and implemented by expatriates in the first place.

In fact in 1974, the heads of library schools in Sub-Sahara Africa met at Dakar, Senegal, to discuss ways in which their teaching programmes could be made to reflect the needs of the region. Professor Ogunshye⁽⁴⁷⁾ made the following observation at the Conference:

The courses in most library schools in Africa are based on framework of courses in Great Britain, Paris or U.S.A. This is because the personnel establishing the courses have to operate from the basis of what is known and accepted. The content of library history, printing and book production, literature sources and bibliography, organisation of books and materials, and library administration, have been based on the European or American experience. Because African libraries obtain books from European and American sources, they have had to include studies of librarianship on both continents as well as to study what has accumulated as African librarianship or courses for African Studies... The courses are therefore crowded with experience of world librarianship and the African component is treated as special subject instead of being integrated into every course. It is therefore imperative after fourteen years of library education to analyse the needs of African librarianship and work out a course that will meet the special needs of Africa and yet meet international standards for library education...

At the end, the Conference decided on the following steps:

- i) the formation of a Standing Conference of African Library Schools as a forum for the discussion of all matters concerning teaching, research and administration in library schools in Africa;
- ii) the publication of a newsletter of the Standing Conference;

(47) As quoted in OBI, D. Content and structure of library education in Nigeria. Paper presented at the Colloquium on Education and Training for Librarianship in Nigeria, [held at] the Department of Library Studies, University of Ibadan, 15-19 March, 1974, 14. (mimeo.).

- iii) the compilation of textbooks adapted to the needs of the African library schools, (an approach to be made to Unesco for financial assistance);
- iv) the regular exchange of publications such as annual reports, development programmes, research papers, syllabuses (including revisions), statistics, staff lists, etc.;
- v) the establishment of a machinery for the exchange of staff and students among African library schools. (48)

Useful as they would have been in contributing towards the desired change, no concrete action has so far been taken on them and they still remain recommendations. The desire for change persists, though, and as may have been noticed in the review of the available educational facilities in the sub-region, all the library schools have aims that are geared towards the production of library and information personnel capable of coping with the problems peculiar to Africa. The course contents of the teaching programmes show topics of distinct local interest. The Department of Library Studies, University of Ibadan, for instance, has on its MLS and MPhil programmes, topics like: patterns of government of West African libraries; development of libraries in Africa; compilation of bibliographies in the areas of social sciences or the humanities with special reference to Nigeria, etc., and in Ghana, the Department of Library and Archival Studies has on its Post-graduate Diploma programmes: African names as catalogue entries; Africana and the general classifications; special Africana classifications, etc.

The Departments also have Occasional Publications series which serve as useful media for the dissemination of research results, the proceedings of seminars, workshops and conferences, etc. on topics of special interest to African Librarianship. From the Department of Library Studies, University of Ibadan, have come: Standards of practice

(48) Ibid., 15.

for West African libraries; and Nigeria's library resources in science and technology, among others, while the Department of Library and Archival Studies, University of Ghana, has, also among others, published the following: Authority files for African libraries; Persistent issues in African bibliography; and The Dewey Decimal Classification and African studies.

These are all very important contributions towards finding an answer to the issue under review. All the same, a revival of interest in the recommendations of the Dakar Conference and the adoption of positive plans for their implementation will hasten the search for a solution.

8.4.4.1 Core Curriculum

An aspect of curriculum development which has gained currency is the notion of a core curriculum for library studies, information science and archive administration. For Africa, the idea goes back to 1970, at the Expert Meeting on National Planning of Documentation and Library Services in Africa held in Kampala, Uganda, when participants recommended that:

every effort be made by Unesco to ensure that no rigid distinction between libraries and documentation centres are introduced into Africa since documentation services are an integral part of all library and information services...

and, to ensure that no artificial distinctions would be made between the training of librarians and documentalists, the recommendation sought further that:

.....Unesco promote the introduction of specialist courses in documentation work of existing library schools by the provision of the necessary specialised staff. (49)

A more lasting solution to the problem seemed to be the introduction of a core curriculum for the three disciplines of library studies, information science and archive administration - or what has been more appropriately referred to as "the three aspects of a basic discipline". (50) At the Unesco Conference on the Planning of National Documentation, Library and Archives Infrastructures held in Paris in 1974, Professor Havard-Williams came out strongly on the notion of a core curriculum and presented a schema based on a general division of the curriculum into: foundations, materials, methods, management and mechanisation, (51) and thus outlined the integrity of what, intrinsically, is a single profession.

The concept of a core curriculum is even more relevant to the developing countries, most of whom may not have sufficiently developed library, information and archival resources (or the economic capability) to establish separate educational institutions for the teaching of the three disciplines. Providing training in all three disciplines in the same institution obviates the necessity for three schools and, moreover, strengthens the impact of all three.

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- (49) UNESCO. Expert Meeting on National Planning of Documentation and Library Services in Africa, Kampala, Uganda, 7-15 December, 1970. Final Report. Paris, Unesco, 1971, 24-25. (COM/MD/18).
- (50) HAVARD-WILLIAMS, P. Education for library, information and archives studies. IFLA J., 2(4) 1976, 139.
- (51) HAVARD-WILLIAMS, P. Manpower planning, professional structures and education and training. op cit., 18-20. (The schema was completed with the addition of "men", i.e. educating the user. See HAVARD-WILLIAMS, P. Education for library information and archives studies. IFLA J. 2(3) 1976, 139).

While the importance of a core curriculum has been recognised, and the concept generally accepted, what should constitute the "ideal core", or the degree to which the concept is incorporated into a curriculum will (understandably) differ from one institution to the other. In the sub-region, the Department of Library Studies, University of Ibadan, for instance, offers instructions in: archival records management, and information science as part of its MLS and MPhil programmes. The Department of Library and Archival Studies, University of Ghana, also has incorporated the concept into its curriculum. And, as an institution offering courses in both library studies and archive administration, it provides a better illustration of the application of the concept to the curricula of the two courses.

Fig. 11 (page 289) shows outlines of the two curricula and the "combined courses" (management, conservation, and information science) which form the "core" of the curricula.

8.4.5 Continuing Education

In recommending the establishment of national institutions and programmes for the education and training of manpower, NATIS Objective 8 (Supplying Manpower for NATIS) also recommended the institution of continuing education programmes for the trained staff. Continuing education may mean a number of things:

First, it may mean the possibility of transfer from one level to the next through full-time or part-time courses. Secondly, it may mean attendance at short courses, which may have a variety of objectives ... [they] may be updating courses, refresher courses, exchange of experience courses, or post-experience courses. (52)

(52) Ibid., 22.

Fig. 11 DEPARTMENT OF LIBRARY AND ARCHIVAL STUDIES, UNIVERSITY OF GHANA, LEGON, COMBINED COURSES: POST-GRADUATE DIPLOMAS IN LIBRARY AND ARCHIVAL STUDIES

Post-graduate Dip. Library Studies (Syllabus)	Post-graduate Dip. Archival Studies (Syllabus)
<p>1. Management of Libraries</p> <p>(a) Basic principles and concepts of management (COMBINED COURSE)</p> <p>(b) Types and functions of libraries, etc.</p> <p>2. Technical Services</p> <p>(a) Acquisition of library materials, etc.</p> <p>(b) Conservation (COMBINED COURSE)</p> <p>3. Information Science (COMBINED COURSE)</p> <p>4. Reference and Bibliographical Services.</p>	<p>1. Records Management</p> <p>(a) Basic principles and concepts of management (COMBINED COURSE)</p> <p>(b) Definitions and scope of records management, etc.</p> <p>2. Archive Administration</p> <p>(a) Definition, history and processes of archive administration, etc.</p> <p>(b) Conservation (COMBINED COURSE)</p> <p>3. Information Science (COMBINED COURSE)</p> <p>4. Administrative History.</p>

Inherent in the NATIS advocacy for the institution of continuing education programmes for the trained staff, and inherent, also in the dual meaning of continuing education as given here, is an anticipation of change; change either involving the trained staff (for example, change as the result of an individual's motivation for self-improvement) or change involving the institutions in which the trained staff work (as for example, the introduction of new services, or the need to improve

an individual's capability of coping with new trends and developments in the services offered). Although the former may be a personal objective and the latter an institutional one, both must be pursued as part of a "strategy for planned change," (53) since the individual and the institution depend on each other for each other's development. This strategy for change, which is the essence of a continuing education programme, should cater for all classes of the trained staff, not a section only.

If this basic philosophy of continuing education is viewed in relation to the first of the two meanings given above (i.e. the possibility of transfer from one level to the next through full-time or part-time courses) it becomes apparent, from the facilities available for education for librarianship in the sub-region, that the needs of the sub-professional staff are not being catered for. For, whereas the professional group has the opportunity for further advancement through formal courses (up to the PhD level at Ibadan), there is virtually no comparable arrangement for the sub-professional group. The only exception is Ahmadu Bello University which has provision for non-graduate Diploma candidates who excel in the final examinations (or those who are able to obtain two GCE "A" level passes while completing the Diploma course) to proceed to the Bachelor of Library Science programme. (54) The rest of the library schools have no such provision and in most cases the sub-professional staff end where they begin.

Until the beginning of the 1978/79 academic year when the Department of Library and Archival Studies, University of Ghana,

(53) STONE, E.W. Introduction. Libr.Trends, 20(1) Jul 1971, 11.

(54) AJIA, S.A., op cit, 125.

introduced the non-graduate Diploma course, the holder of the Certificate in Library/Archival Studies found himself at the end of the tether immediately after qualifying. The non-graduate Diploma which may now be acquired after at least a three-year post-Certificate working experience and the submission of a written project, gives him a leeway - but just to get him back into a cul de sac. The holder of the non-graduate Diploma of the University of Ibadan similarly has no avenue for further self-improvement in his grade, and neither does the holder of the Certificate of Proficiency issued by the Institute of Librarianship, Liberia, have any further opportunity for self-improvement. And as for the Library Assistant's Certificate course in Sierra Leone, it may be recalled that it is for those "who do not aim at professional status"! It should come as no surprise that there is a high turnover rate of library assistants in Sierra Leone! (55)

It should be possible for the sub-professional staff to progress from one level to the next through the institution of appropriate continuing education programmes. The Ahmadu Bello University system provides proof of the possibility of such an arrangement. The lack of suitable continuing education programmes in the sub-region is further illustrated by the absence of any local provision for the ALA, who is not accorded full professional status in academic libraries, to progress any further than his unrecognised status. As Professor Bengé once asked:

Is there not some significance in the fact that Nigerian ALA's may be able to study for higher qualifications in Loughborough, England, but not in Nigeria? (56)

(55) OGUNDIPE, O.O., op cit, 153.

(56) BENGE, R.C. Return to West Africa: some notes on library education in Africa. Nigerian Libr., 9(1&2) Apr & Aug 1973, 99.

Or in Ghana?, one may add.

In suggesting the institution of continuing education programmes for the sub-professional staff, full cognisance has been taken of the fact that the library and information profession, like all professions, will continue to need the supporting services of middle-level personnel. It is also recognised that not all the Certificate or Diploma holders will be willing to pursue, or indeed, may be capable of pursuing, higher courses. But the advocacy is that provision ought to be made for the willing and the capable.

Continuing education can also take the form of short, advanced courses, seminars, conferences, lectures, etc. for qualified personnel to keep abreast of the latest trends and developments in their fields of interest. Developments in library and information work in recent years have made this form of continuing education even more important for librarians and information scientists. There have, for instance, been the computer and its phenomenal impact on library and information services, the two International Inter-governmental Conferences on the planning of national information systems and their culmination into the General Information Programme of Unesco, concepts like resource sharing, networks and networking, etc. all of which have had wide-ranging implications on the production and utilisation of library and information services. It has therefore become necessary for librarians and information scientists not only to update their existing knowledge but also to acquire new skills and expertise to meet these new challenges.

The organisation of these courses, seminars, etc. should be the joint responsibility of both educators and practitioners of the profession, that is, the library schools, the national libraries and library associations. With all the implications that these new trends and developments have, especially for the developing countries, not much effort is being

made in the sub-region to "educate" the librarians and information scientists. A major reason for this is the inactivity of the national professional associations. The only exception is the Nigerian Library Association which has been fairly consistently active and which has therefore been holding some conferences and seminars on these current issues. The Sierra Leone Library Association was revived only two years ago after a long period of inactivity, while the Ghana Library Association continues to have an uncertain existence. The Gambia and Liberia have no library associations. Another possible reason for this lethargy is the absence of any professional leadership in the countries, the only exception again being Nigeria whose National Library has been the force behind most of the professional activities in that country. (Nigeria is the only English-speaking country in the sub-region with a National Library).

The library schools also have a very important role to play in the continuing education programmes. In the United Kingdom, for instance, most of the library schools (e.g. Aberystwyth, Leeds, Loughborough, Sheffield, Strathclyde, etc.) are involved in the continuing education process and hold conferences, seminars, workshops and short courses regularly. Occasionally some of the library schools in the sub-region (e.g. Legon and Ibadan) have organised lectures and seminars but the degree of involvement has been rather minimal. More active participation in these programmes is needed from the library schools to help promote greater professional awareness of new developments, and also to provide leadership where this may be lacking.

Staff exchange and visiting programmes afford good opportunities for the acquisition of new knowledge, new skills and new experiences and should be considered as forming an important part of a continuing

education programme. In the framework of library and information networks, exchange programmes and visits assume even greater significance: they provide increased interaction among members of the network and help to generate trust, goodwill and understanding needed for undertaking activities which involve a great deal of compromise. (57)

Staff exchange programmes are very underdeveloped in the sub-region, as Table 35 (a-b) shows. The Gambia, Liberia and Sierra Leone have no exchange programmes. Only two libraries (one academic and one special library) out of Ghana's sixty-seven responding libraries have staff exchange arrangements, both of which are with institutions overseas (Table 35 (a)), while in Nigeria, one academic library reported that it was (in October 1979) negotiating a staff exchange programme with another local academic library (Table 35 (b)).

Exchange programmes are said not to have developed in the sub-region "partly because of financial implications", which involve "salary equivalencies, housing and allowances." (58) Although agencies like the Association of African Universities and the Inter-University Council for Higher Education Overseas have been sponsoring staff exchange programmes, obviously there is a limit to the assistance they (or any other organisations) can offer. For the bulk of the exchange programmes, the financial burden would therefore have to be borne by the individual libraries arranging the exchange programmes. It is true that in such situations, adequate local financial support is an

(57) PATRICK, R.J. Guidelines for library co-operation; development of academic consortia. Santa Monica, California, System Development Corporation, 1972, 184.

(58) SHERIF, G.M. Resource sharing in West Africa. Paper submitted (but not presented) to the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, 11.

important consideration. But the lack of such support should not spell the end of the exchange programmes. There are three levels at which staff exchange programmes may be organised; they may be organised at the international, regional and national (i.e. local) levels, with decreasing "financial implications". The least financially implicated level, the national level, is usually the least considered in staff exchange programmes but, paradoxically, that is the most important level, especially where networks are concerned. Just as no library can ever hope to be self-sufficient, so can no network be self-sufficient; the philosophy of interdependence applies to networks too. A national network would need to co-operate with other national, regional or international networks. But this co-operation cannot work efficiently unless the national network is well organised. So the congenial atmosphere of confidence and understanding which staff exchanges and visits help in generating is as important in the operation of a network as the new skills and experiences that may be acquired during the visits and exchanges. These visits, which at the local level may be arranged comparatively inexpensively, could then be supplemented with regional or international visits and exchanges as they become available. The two Nigerian libraries (Bayero University Library and the Nnamdi Azikiwe Library, University of Nsukka) which are arranging a local staff exchange programme are on the right path and must be encouraged and emulated. Charity can be made to begin at home.

Staff exchange programmes may also be arranged for teachers of library and information studies to share their experiences with colleagues in other institutions. Like the library staff exchange programmes, they may be arranged at the three different levels, starting with the least expensive.

This has been a survey of the library and information manpower situation in the sub-region. Additionally, the purpose has been to relate the importance of manpower planning to the development of library and information services. As an activity, manpower planning has four broad aspects: stocktaking analysis, forecasting, planning and policy making, and implementation. (59) The concern here has been with stocktaking analysis and forecasting, or pointers which aid a more reasoned execution of the remaining aspects.

(59) SLATER, M. Manpower planning and research. Aslib Proc., 32 (10) Oct 1980, 381.

CHAPTER 9A SURVEY OF EXISTING LIBRARY AND INFORMATIONRESOURCES IN ENGLISH-SPEAKING WEST AFRICA -VI: FORMAL ORGANISATION9.1 The Need for a Formal Organisation

The last attribute of a library and information network to be considered, but by no means the least important, is a formal organisation under whose direction the network would operate. It was noted in Chapter 2 (Section 2.3.1 - Formal Organisation) that a formal organisation was central to the coherence of a network and the successful implementation of its programmes. The various activities of a library and information network, as have been reviewed in the preceding chapters, substantiate the overriding need for such an organisation to marshall the different libraries and information centres into a recognised entity with agreed aims and objectives. The formal organisation would achieve this by planning the activities of the network, formulating policies and providing for fiscal and legal responsibility. The activities for which the formal organisation would plan and formulate policies would include the acquisition, bibliographical organisation and accessibility of the document resources within the network. It would also ensure that, as far as possible, there would be adequate legal and financial support for the programmes of the network. The form that these arrangements could take will be discussed in the next chapter. In the meantime, the existing legal and financial arrangements for the organisation of the libraries and information centres in the sub-region will be discussed.

9.2 Legislation for Library and Information Services in the Sub-region

One of the issues with which the Ibadan Seminar on the Development of Public Libraries in Africa was concerned was library legislation. The Seminar concluded that:

Only legislation can empower the appropriate authorities to provide the service and ensure adequate financial support and efficient administration according to a national standard. Only legislation can define the functions of the providing authority, create the conditions in which it may fulfil those functions, and ensure development. (1)

The Seminar was to act as a fillip to library development in Africa, and some of the countries were, sooner or later, to enact laws establishing their public library services. As was seen in Chapter 3 (Section 3.2.3 - Public Libraries) some of these laws were patterned on the Act by which the Ghana Library Board had been established in 1950, that is, three years before the Seminar - the first public library in tropical Africa to have been established by legislation. National public library services in the sub-region which have been established by legislation (in addition to Ghana) are Sierra Leone (1959) and The Gambia (1976). In Nigeria, the former Eastern region established its public library service by legislation in 1955. The Western and Northern regions had nothing as articulate as that of the Eastern region. The partitioning of Nigeria into its present nineteen States has meant the abolition of the former regional libraries and the creation of new State (public) libraries, not all of which are backed by legislation. (2) Liberia has no legal

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- (1) UNESCO. Development of public libraries in Africa: the Ibadan Seminar. Paris, Unesco, 1954. (Public libraries manuals, no.6).
 - (2) The National Library of Nigeria's lists of "major libraries in Nigeria" give the following seventeen States as having state public libraries (years in which libraries were established are indicated in brackets where they have been given): Anambra(1955), Bauchi (1976) Bendel (1970), Benue, Borno, Cross River (1968), Imo (1976), Kaduna (1953), Kano (1968), Kwara (1968), Lagos (1946), Ogun (1976), Oyo (1952), Plateau (1968), Rivers (1970), Sokoto. See Nigeria. National Library. Major libraries in Nigeria (a directory). In National Library of Nigeria's official diaries for 1978 and 1980.

backing for its public library service which dates back to 1926.

In their National library and information services: a handbook for planners, Penna, Foskett and Sewell ⁽³⁾ outline what constitute the essential elements of library legislation. The sixteen tabulated elements range from legislation for the provision of nation-wide library services, the co-ordination of the services at the national level and the establishment of central co-ordinating bodies, to legislation for the official recognition of the national associations of professional librarians, and the status (and salaries) of libraries vis-a-vis other appropriate categories of government employees. The elements are here grouped into the following broad categories which will be discussed in turn: the provision of a national service; national co-ordinating bodies; bibliographical control; and professional associations, status and training of library and information personnel.

9.2.1 Provision of a National Service

The intention of library legislation, according to this group of elements, should be the provision of library and information services which would result in every citizen having access to a full range of services. To achieve this, the central government should assume overall responsibility, or at least provide favourable conditions, for the public library service, and any existing services should become part of a national service.

The Acts which established the Library Boards of The Gambia, Ghana and Sierra Leone made the Boards responsible for the establishment,

(3) PENNA, C.V., FOSKETT, D.J. and SEWELL, P.H., eds. National library and information services: a handbook for planners. London, Butterworths, 1977, 81-84.

equipment, management and maintenance of public library services in their respective countries, and empowered them to take steps that would enable them to carry out the duties. All the three Library Boards are responsible to their central governments through their Ministries of Education, and each of them provides a national service and has the mandate to be responsible for any branches of the service in any part of the country.

Nigeria has never had a national public library service. The provision of a library service was the responsibility of the former Regional governments. With the division of Nigeria into its currently nineteen States, that responsibility has fallen on the individual State governments. Whatever co-ordination that there is at the national level is effected through the National Library of Nigeria which was established by legislation in 1964 and has the following objectives:

- i) The provision of necessary support for intellectual efforts in all activities directed at progress and development;
- ii) ensuring the availability of a comprehensive and near complete a collection of resources as possible of materials of knowledge in existence in the world, and ensuring full access to such resources both within and outside the national boundaries; and
- iii) ensuring a free flow of knowledge between [Nigeria and other nations] thereby securing a place for [Nigeria] in the community of nations that depend on recorded knowledge and information for survival in a world of rapid development, and competition of ideas. (4)

(4) As quoted in ODERINDE, N.O. Public library development in Nigeria; past, present and future. A Master's thesis submitted ... for the award of Master of Arts, Loughborough University of Technology, May 1978, 182.(Unpublished).

The National Library is responsible to the Federal Ministry of Education.

As has been noted above, Liberia has no legal support for its public library service which was one time under the Ministry of Education but is now under the Center for National Documents and Records Agency. In 1967 a Unesco consultant who had been invited by the Liberian Government to help formulate a development plan for the country's library services recommended the establishment of a "Library Board of the Republic of Liberia". This was to be done by legislation so as to give the national public library service a legal backing. (5) The recommendation has as yet not been implemented.

9.2.2 A National Co-ordinating Body

The elements in this group call for the recognition of the fact that all publicly provided libraries (not only the so-called "public libraries") contribute to a pattern of library and information service. Each sector (e.g. special libraries, school and college libraries, academic libraries, etc.) will need its own programme of planning and development. But to create a truly national library and information service, rather than a collection of unco-ordinated services, a national co-ordinating body should be created by legislation to plan the development of the services as a whole. The co-ordinating body should be aided by specialist committees for which there would be adequate legal and financial provision.

Only two of the countries in the sub-region, Ghana and Liberia, have national co-ordinating bodies, neither of which was established by

(5) EVANS, E.J.A. Liberia libraries. Paris, Unesco, 1967, 21.
(Serial No.198. MBS.RD/COM).

legislation. The co-ordinating body for Ghana is the National Committee for Information and Documentation which grew out of the Ghana UNISIST National Committee. The UNISIST Committee was formed in January 1975 by the Council for Scientific and Industrial Research (CSIR), the national focal point for UNISIST, to plan and implement the UNISIST recommendations. In January 1980, its composition and functions were broadened to assume a national character and was redesignated the National Committee for Information and Documentation. Its expanded functions include overseeing the general development of library and information services in Ghana and advising the Government of Ghana on the formulation and implementation of a national information policy. An ad hoc Committee on National Policy and Plan for Information has since been appointed.

The body charged with the co-ordination of library, archives and documentation services in Liberia is the Center for National Documents and Records Agency. The Center was established in 1978, and the Director was appointed by the President of Liberia himself (that is, the late President Tolbert) "because of [the President's] direct, personal interest in the re-organisation of the Liberian records and archives". (6) The Center has embarked on a training scheme as part of its manpower development programme and has also been organising short training courses in archive administration.

The Gambia, Nigeria and Sierra Leone have no national co-ordinating bodies. In the case of Nigeria, however, proposals for the establishment of a National Advisory Council on Library and Information Service have been made but the response of the Federal Government has been that the National Library should perform the functions

(6) Interview with Mr. J. H. Deyior Wilson, Director of the Center, in Monrovia, Liberia, on January 25, 1980.

of the proposed Advisory Council "for the time being". (7-8)

9.2.3 Legal Deposit and UBC

Legislation, in respect of this group of elements, should provide for legal deposit and for participation in international library co-operation. The participation should include the observance of international exchange agreements, and the co-ordination of relevant national bibliographic standards with international standards. The links between the different aspects of the book industry (i.e. book publishing, book selling and library and information services) should be recognised in legislation and should be encouraged by the provision of financial aid, operational assistance, etc.

Legislation for legal deposit is closely linked with the concept of Universal Bibliographic Control (UBC). It would therefore seem appropriate to discuss the issues in the light of the requirements of UBC.

As Dorothy Anderson ⁽⁹⁾ has explained:

UBC envisages a system in which each country undertakes the responsibility of recording the publications (with that word used in its widest sense) produced in that country and makes those bibliographic records in accordance with standards which are internationally accepted and acceptable.

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- (7) AJE, S.B. National libraries in developing countries. In Advances in librarianship, vol.7, 1977, edited by Melvin J.Voigt and Michael H.Harris. New York, Academic Press, 1977, 128.
 - (8) During an interview with Mr.M.H.Wali, Deputy Director of the National Library of Nigeria in Lagos, in February 1980, the present writer was informed of a national conference that was due to be organised by the National Library in August 1980, to launch a machinery for Nigeria's participation in the General Information Programme of Unesco. It was expected that during the meeting plans for the formulation of a national information policy for Nigeria, and the establishment of a national co-ordinating body would be discussed again. No further information on this could be obtained at the time of writing.
 - (9) ANDERSON, D. Universal Bibliographic Control and the information scientist. Inf.Scientist, 10(1) Mar 1976, 12.

The principle is that the comprehensive bibliographical record of each publication should be made once in its country of origin by a national bibliographical agency in accordance with internationally accepted standards that are applicable to both manual and mechanical systems. The national bibliographical agency should normally be set up in the national library which should receive copies of the nation's publications under legal deposit. In order to achieve the objectives of UBC, each country should have:

- i) a national bibliographical agency or centre;
- ii) a national bibliography (which is the basic tool); and
- iii) an effective legal deposit arrangement which allows for comprehensive acquisition of the national output of published material from which the national bibliography will be produced.

With the exception of Liberia, which has a national bibliographical centre but no legal deposit laws, the remaining countries have bibliographical centres and legal deposit laws which entitle certain libraries to receive copies of locally published material. The Act which established the Gambia Library Board (Act 31 of 1976) made the Gambia National Library (which is actually a national public library) a depository library for Gambian publications. The Act specifies that:

Where any printed matter other than matter of such description as the Chief Librarian may from time to time specify is published by or on behalf of any person in The Gambia that person shall, for the purposes of the library, deliver to the Chief Librarian two copies of such publication or printed material.

From the publications received under this provision, the Gambia National Library annually publishes the National Bibliography of The Gambia, the first issue of which was published in 1978. All deposited

items about The Gambia as well as those by Gambians are listed.

Ghana's deposit law, the Book and Newspaper Registration Act of 1961 (Act 73) as amended in 1963 (Act 193) makes the following six institutions depositories for Ghana's publications:

- i) The Ghana Library Board;
- ii) The Registrar-General;
- iii) The Library of the University of Ghana, Legon;
- iv) The Library of the University of Science and Technology, Kumasi;
- v) The Library of the University of Cape Coast;
- and vi) The Library of the Ghana Academy of Sciences [now the Council for Scientific and Industrial Research].

The Act, in part, says that:

A printed copy of every book which is published in Ghana... shall or shall continue to be, within one month after the day on which such book is first taken out of the press..., delivered free of charge by the printer to each person or institution specified in the First Schedule to this Act.

Although several efforts have been made in the past to establish a national library in Ghana, the plan has as yet not materialised. The Research Library on African Affairs, which is a wing of the Ghana Library Board, has therefore been performing the functions of a national bibliographical centre. The Research Library is a depository through its parent body, The Ghana Library Board, and since 1965 it has been publishing the Ghana National Bibliography. Formerly a bi-monthly publication with annual cumulations, the National Bibliography is now published annually. The entries consist of monographs in English and the vernacular, articles, theses, official and semi-official publications, new serials and foreign publications covering Ghana.

In Liberia, the National Public Library is the national bibliographical centre. But with neither a legal deposit law nor a national bibliography, the role of the library as a national bibliographical centre is a nominal one only.

Being the only one with a national library, Nigeria is the only country whose national bibliographical centre is set up in a national library. The National Library of Nigeria assumed that role with the promulgation of the National Library Decree of 1970 (Decree No.29) which repealed the National Library Act (Act 6) of 1964. The Decree provides that:

The publisher of every book published in Nigeria shall within one month after the publication deliver at his own expense to the National Library three copies of the book, two of which shall be kept in the National Library for permanent preservation and one of which shall be sent by the Director to the Ibadan University Library.

Before the National Library Decree was passed, the Ibadan University Library had been the country's depository library, entitled to receive a copy of every book published in Nigeria under the Publications Ordinance of 1950. From that year, the Library regularly issued Nigerian Publications as a quarterly list of current publications, with yearly cumulations. The extent of coverage by Nigerian Publications was seriously affected when the Northern Nigerian Publications Law of 1964 ceased to regard the Ibadan University Library as a depository for publications emanating from the Northern region, and invested that right in Ahmadu Bello University. The situation was to be confused further when, by its Legal Notice No.112 of 1964, the Federal Government amended the 1950 Publications Ordinance and substituted the Lagos University Library for Ibadan as the legal depository library. ⁽¹⁰⁾ The National

(10) OSUNKOWA, G. Is our legal deposit law defective? Nigerbiblios, 1(3) Jul 1976, 16.

Library Decree resolved the situation and re-instated Ibadan as a depository library by stating that one of the three copies of publications deposited with the National Library under the deposit law should be sent to the Ibadan University Library. The Decree also made the production of a national bibliography the responsibility of the National Library. Since 1970, the National Library has therefore been producing the National Bibliography of Nigeria. It is a monthly publication with half-yearly and yearly cumulations. The entries consist of monographs, serials, government publications, annual reports, standard works and works published abroad on or about Nigeria.

In Sierra Leone, the Publications (Amendment) Act of 1962 makes it mandatory for every publisher to deposit three copies of each book published in Sierra Leone with the Sierra Leone Library Board within one month of publication. One of the three copies is to be sent to the British Museum, London, and one to the University of Sierra Leone Library. The Sierra Leone Library Board retains the third. Since 1962, the Board has been producing the annual Sierra Leone Publications which lists publications received under the legal deposit law, and contains books, pamphlets, first issues of periodicals, government publications, and documents published outside the country by Sierra Leoneans.

9.2.3.1 Problems With the Implementation of the Legal Deposit Laws

These legal deposit laws notwithstanding, the acquisition of locally produced materials under the laws has not been without problems. There are several reasons for this state of affairs. One reason, which is common to all the countries, is ignorance of the existence, and purpose, of the deposit laws. This is often claimed by most of the small scale

publishers/printers as the reason for not complying with the laws. The massive non-compliance by these publishers/printers, who form the largest block of the book publishing industry in the developing countries, has created the situation where officials of the national bibliographical centres have to go round the publishing houses periodically to check and collect what may have been published. The same ignorance blinds the publishers/printers to the knowledge that compliance with the deposit laws, and the eventual listing of their publications in the national bibliographies, would help advertise their publications nationally and, especially, internationally.

The rest of the problems are with the mechanics of the deposit laws themselves. The Book and Newspaper Registration Act of Ghana, for instance, places the onus of effecting the deposit on the printer. But the Act goes on to state that "the publisher or other person employing the printer" shall supply the printer with "all maps, prints, and engravings", etc. (i.e. the publication) so as to make it possible for him to effect the deposit. The publisher is therefore also made responsible for effecting the deposit without specifically committing him to it. This ambiguity about whose exact responsibility it is to comply with the law creates a legal loop-hole which could be exploited to evade the law. The same ambiguity persists in the Publications Act of Sierra Leone.

Because of the underdeveloped state of the book industry in the developing countries, government publications, in most cases, constitute the largest portion of the developing countries' publication output. Ghana is no exception to this. But Ghana's Act excludes this class of publications from its deposit law. The Act is categorical about it.

"This part", it says, "shall not apply to books printed by the Government Printer for or on behalf of the Government, except as directed by the Minister". The Gambian and Sierra Leonean Acts do not make any special mention of government publications; the assumption therefore is that they are not excluded by the Acts. The Nigerian Decree, on the other hand, states specifically that:

....where any printed matter (other than matter of such descriptions as the Director may specify from time to time) is published by or on behalf of any department of government of the Federation or a State, it shall be the duty of the official in charge of the department to deliver forthwith to the Director for the purposes of the National Library -

- a) twenty-five copies of the publication if it is published by or on behalf of a department of government of the Federation, or
- b) ten copies of the publication if it is published by or on behalf of a department of government of a State, or such smaller numbers of copies as the Director may determine in any particular case.

Such explicit expression removes any doubts or ambiguities and greatly helps in the acquisition of government publications which, because of the lack of proper documentation, are some of the most difficult publications to trace. Lists of government publications are issued, but they are often issued very late and usually contain items that are available at the time of issue. Many items are, thus, very often missed.

It is also necessary that the procedure to be followed in effecting legal deposit should be spelt out in detail and that there should be a machinery for supervision and inspection. The Gambian Act, for example, requires that copies of published material should be deposited with the Chief Librarian of the Gambia Library Board without specifying the time within which the order should be complied with; and neither is there any clause indicating penalty for non-compliance with the law. Ghana and

Sierra Leone have penalty clauses for non-compliance. However, with "a fine not exceeding five pounds" for breach of the law (in both Ghana and Sierra Leone), the penalty is too insignificant to act as a serious deterrent. The cunning publisher/printer would sooner pay the fine than deposit multiple copies of his book(s) the total price of which could far exceed the fine. Once again, it is the Nigerian Decree which sets the example. The Decree provides that:

If a publisher fails to comply with any provision of subsection (1) or (2) above [i.e. the deposit obligations], he shall be guilty of an offence and on conviction shall be liable to a fine not exceeding £50; and the court before which he is convicted may in addition order him to deliver to the Director three copies of the book in question or pay to the Director the value of those copies.

As a penalty for non-compliance with the deposit laws, this presents a better deterrent than the provisions of Ghana and Sierra Leone. It must be said, however, that creating the understanding for the need to comply with the laws through a system of education should be a much preferred alternative to the constant institution of legal action to effect deposit. The education and persuasion method was tried in Nigeria where Professor John Harris is reported to have said that it "has done much to dispel any feeling that the deposit legislation is a coercive bureaucratic measure." (11)

9.2.3.2 Compilation of National Bibliographies

In the compilation of national bibliographies, UBC specifies the following three conditions: comprehensive coverage, prompt compilation and standardisation of entries.

(11) AGUOLU, C.C. Bibliographic problems in Ghana, Nigeria and Sierra Leone. Int.Lib.R., 5(2) Apr 1973, 199-207.

Comprehensiveness of coverage obviously depends on the comprehensiveness of the acquisition of the national literary output which forms the basis of the national bibliographies. The following statistics (Fig.12, page 312) which are based on the national bibliographies of the four countries, give an indication of the coverage of the bibliographies and the currency of the cited items. As may be seen, only the national bibliographies of Ghana and Nigeria contained entries more than 50% of which were current (Ghana 74% , Nigeria 53%). The Gambian national bibliography had 37% currency while that of Sierra Leone was only 22%. The rather low percentages of currency of the entries could well be a reflection of the ineffectiveness of the legal deposit arrangements. Ghana's high 74% currency rate may not be the exception that it seems considering that it took two years for that issue of the national bibliography to be produced.

UBC also requires that the national bibliographies should be published promptly. With the exception of the National Bibliography of Nigeria, which is produced monthly, the rest are all produced annually. The promptness with which publications are listed in a national bibliography enhances the usefulness of the bibliography. However, the frequency of the appearance of a national bibliography may be decided by the size of the national literary output and also on the comprehensiveness of its acquisition. The estimates are that Nigeria produces some 1,300 titles a year, while Ghana produces about 200. ⁽¹²⁾ Figures could not be obtained for either The Gambia or Sierra Leone but it may help to convey an idea as to the size of the output of the two countries if it is

(12) According to the United Nations Statistical Yearbook, 1978, Ghana produced 237 titles in 1976, and Nigeria 1,324 in 1975.

Fig.12
 COVERAGE AND CURRENCY OF NATIONAL BIBLIOGRAPHIES OF
 ENGLISH-SPEAKING WEST AFRICA

Country	Year covered by national bibliography, and date of publication (in brackets)	Percentage of entries with imprint of current year (i.e. year covered by the national bibliography)	Percentage of entries with imprint of the previous year	Percentage of entries with imprint of earlier years
The Gambia	1978(1979)	37	39	24
Ghana*	1972(1974)	74	14	12
Nigeria*	June 1975, issue no.6 (received 30 July, 1976)	53	33	14
Sierra Leone	1977/78(1979)	22	51	27

* Source: CHEFFINS, R.H.A. A survey of the contents of existing national bibliographies. Paris, Unesco, 1977, 25, 35. (PGI-77 / CONF.401/COL.4).

Note: Liberia has no national bibliography.

noted that the National Bibliography of The Gambia for 1978 contained 114 items, while Sierra Leone Publications for 1977/78 contained 90.

So while Nigeria finds it possible to produce its national bibliography monthly, for the others an annual frequency may be more convenient at the current rates of their national literary output.

Another factor which may affect speed of production is shortage of qualified staff to produce the bibliographies. It may be recalled that the Gambia National Library has only two professional librarians, the whole of the Sierra Leone Library Board has eleven, and the Research Library on African Affairs, the de facto national library of Ghana, has five. (See Table 32 (a - e)). The situation is not helped when, in addition to their normal duties, the scanty professional staff have to spend some of their time visiting publishers/printers, libraries and bookshops looking for newly published material for inclusion in their national bibliographies.

The final demand of UBC in the compilation of national bibliographies is the standardisation of the entries through the adoption of the International Standard Bibliographic Description (ISBD). The purpose is to make it easy for bibliographical records to be exchanged among information systems, to permit the interpretation of the records across language barriers, and to facilitate the conversion of the records to machine-readable form. All the four national bibliographies have adopted the ISBD and its variants and the International Standard Book Numbers (ISBN's) are indicated where the publications carry them.

9.2.3.3 UAP - a Necessary Complement to UBC

Another concept which lends itself appropriately to discussion at this point is that of the Universal Availability of Publications (UAP). Maurice Line ⁽¹³⁾ describes UAP as:

a very wide-ranging concept, affecting legal deposit and other methods of acquisition, the co-ordination of libraries by such means as union catalogues, the organisation of library systems to offer availability, interlibrary lending and photocopying, the exchange of publications, and the role of national libraries or national centres.

The basic philosophy underlining UBC is the comprehensive acquisition and documentation of a nation's bibliographical output. UAP carries the concept further and seeks to make the bibliographical output physically accessible either in the original form or as surrogates whenever they are required. The point was made during the discussion of user needs that alerting or current awareness services should not end with the notification of the relevant items. Little use would be served if the services did not proceed to their logical sequence of providing accessibility to items that may be requested. UAP seeks to provide this "logical sequence" in respect of UBC.

The analogy may be extended further. A country's UAP programme may be viewed as a national network of libraries and information centres. No national network, as has been observed, can be self-sufficient. Likewise, no national UAP programme can claim the ability to provide an unqualified national accessibility to requested documents. Links must therefore be established with other national UAP programmes to extend the range of accessibility of any national programme. UAP therefore operates at two levels: the national and international levels. But the national

(13) LINE, M.B. Universal availability of publications. Unesco Bull.Lib., 31(3) May-Jun 1973, 142.

programme must needs be well-organised to hope for a successful link at the international level.

To maximise availability, UAP recommends effective legal deposit laws which would guarantee a comprehensive collection of each country's publications. Other methods of acquisition such as co-operative acquisition and publication exchange programmes assist comprehensiveness of collection and are therefore encouraged by UAP. Comprehensiveness of collection in itself does not assure availability. The collections must be well-organised bibliographically and made available when needed through efficient interlibrary lending and photocopying arrangements.

These and other related topics which have been discussed in greater depth in Chapters 4 to 6 have revealed the weaknesses in the current acquisition programmes as well as the bibliographical organisation and the accessibility of the document resources in the sub-region. The planned rectification of these weaknesses will put the library and information systems in the sub-region closer to the achievement of UAP. As Maurice Line ⁽¹⁴⁾ has observed:

UAP, like UBC, is not an all or nothing concept. Any improvement in availability is a step towards universal availability.

9.2.4 Professional Associations, Status and Training of Library and Information Personnel

The last group of essential elements of library legislation comprises those which call for the granting of legal recognition to national associations of professional librarians, the provision of adequate facilities for the national (or in some cases multinational

(14) Ibid., 151.

regional) training of library and information personnel, and the linking of the status and salaries of librarians directly with other appropriate categories of government employees.

These issues have, at one time or the other, engaged the attention of the profession since the first professional association, the West African Library Association (WALA) was formed in the sub-region in 1954. WALA, which comprised Ghana, Nigeria and Sierra Leone, was formed as a result of the Ibadan Seminar of 1953 at which a resolution was adopted to the effect that:

Librarians working in various regions of Africa should take practical steps to form dynamic professional library associations as soon as possible. When formed, such associations should draw up carefully planned programmes of action aimed at stimulating and assisting library development in Africa, and achieving adequate recognition for the library profession. (15)

WALA was soon to institute plans for the education of librarians, convinced in its belief that "qualified librarians have a significant part to play in the New Africa..." (16) Its efforts in this direction led to the sponsorship of a study of the library needs of English-speaking West Africa by the Carnegie Corporation of New York. The study resulted in the establishment of the Institute of Librarianship at the University of Ibadan, Nigeria.

WALA was to be the mouth-piece of English-speaking West African librarians for only eight years. Although the attainment of political independence (Ghana 1957, Nigeria 1960 and Sierra Leone 1961) and the surge of nationalism contributed to the break-up of WALA in 1962, that was not the immediate or, indeed, the main cause as it is at times claimed; it only acted as the catalyst. As Professor John Harris, the first President of WALA explains:

(15) UNESCO. Development of public libraries in Africa. op cit. 117.

(16) As quoted in PEELER, E.H. Education for librarianship in West Africa. Nigerian Libr., 1(2) May 1964, 63.

It was becoming more and more difficult to carry out an association which had to switch its executive from one country to another year by year, and which found it difficult to get support from the countries which did not in that particular year control the executive. (17)

There were other difficulties. The constitution of WALA, for instance, was framed so that its activities could be carried out on a divisional basis. There were, thus, within WALA, the "Ghana Division", the "Nigeria Division" and the "Sierra Leone Division". This was later to prompt the remark from the Association's first President that:

The nature of our constitution makes us a divided body, an Association of Divisions. On almost all practical issues my Presidential experience has made this clear... Whatever we are accomplishing in our branches and divisions we have not yet learnt how to act in a united way as an Association. (18)

As it became increasingly difficult for WALA to operate as a "united association" the inevitable decision was reached that it should become a "Federation of West African Library Associations" and that the divisional associations should be turned into national associations. (19) Thus it was that the Nigerian Library Association was formed in December 1962, The Ghana Library Association in July 1964, and the Sierra Leone Library Association (much later) in January 1970. All the three associations have the identical aims of uniting all persons and institutions interested in libraries and librarianship; safeguarding and protecting the professional interests of librarians, assisting in the promotion, establishment and development of libraries; promoting and encouraging

(17) HARRIS, J. Why a professional association? An introductory address. Nigerian Libr., 1 (1) Feb 1964, 6.

(18) HARRIS, J. Presidential Address. WALA News, 3(3) Jun 1959, 105-106.

(19) The "Federation of West African Library Associations" has as yet not been formed. At the instance of the Ghana Library Association, an "exploratory meeting" of the various Library Associations was held in Accra from October 29 to November 2, 1972 (as part of the activities of the Ghana Library Association's annual conference) to discuss the formation of the Association. The general consensus was that it should be formed. Nothing has happened since.

bibliographical study and research; and library co-operation. In addition, the Nigerian Library Association has the specifically stated aims of establishing and maintaining standards in the education and certification of librarians; watching any legislation affecting libraries, and assisting in the promotion of such legislation as may be necessary. (20)

In furtherance of their aims, the associations have sought (mostly through alternating periods of activity and inactivity) to unite their members, and all those interested in libraries and librarianship, by holding conferences, seminars, lectures, etc. They also have publication programmes which include the proceedings of conferences, seminars, symposia, etc. and the following official journals: Ghana Library Journal (Ghana Library Association), Nigerian Libraries (Nigerian Library Association) and Sierra Leone Library Journal (Sierra Leone Library Association).

True to their pledges, the associations have protected the interests of their members when the occasion has demanded it. When the profession was threatened with relegation to the "Sub-professional Class" by the Nigerian National Manpower Board, and the Nigerian Federal Government classified librarianship as "Technical and Non-professional" in its scholarship awards programme for 1966-67, the Nigerian Library Association was quick to take the issue up with the appropriate authorities. Earlier in 1956, the Grading Teams and Reviewing Body for the Federal Public Service of Nigeria had accorded librarianship a non-professional status in its report and had recommended non-professional salary scales for librarians. WALA had drawn the attention of the Federal Government to the anomaly and it had been corrected. (21)

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- (20) AGUOLU, C.C. Library associations in West Africa. Int.Lib. Rev., 8(1) Jan 1976, 25-26.
- (21) ODERINDE, N.O. Our professional association, 1948-1968. Nigerian Libr., 6 (1 & 2) Apr & Aug 1970, 85-87.

Similarly, the Ghana and Sierra Leone Library Associations have had to protect the interests of the profession at various salary review commissions. Mainly because of these efforts, professionally qualified librarians are, generally, now offered salary scales commensurate with their professional training. In keeping with developments elsewhere, librarianship in the sub-region is changing from its purely professional nature to a post-graduate profession. This move will help tremendously in raising the status of the profession.

The devaluation of the professional status of librarians during the salary reviews referred to, goaded the associations into seeking legal recognition. The fact that their representations on matters professional had been accepted by the governments might have lulled the members into taking that to signify a de jure recognition of the associations. The Nigerian Library Association was soon to pass a motion at its 1966 Annual General Meeting asking its Council to seek solutions to the following issues as a matter of urgency:

- i) the need for an affirmation of librarianship as a profession and its acceptance as such by government, employing authorities and other professions;
- ii) the acceptance by employing authorities of standards and professional qualifications recognised by the Association;
- iii) the need for an approved Register of Librarians considered professionally qualified by this Association, and an enforcement that any librarian wishing to practise in Nigeria be registered;
- iv) the desirability of certain stated procedures for filling posts by open recruitments;
- v) the desirability of the Association raising question with employing authorities when posts are advertised at salaries less than those considered appropriate for the minimum qualifications required;

- and vi) the propriety of the Association being authorised to discourage its registered professional librarians from applying for posts whose conditions of appointment fall below those considered acceptable. (22)

Almost contemporaneously, the Council of the Ghana Library Association was reporting, at the end of its two-year term of office in 1967, that although nothing much had been achieved on the question of the legal recognition of the Association, "all preliminary preparations [had been] made". The succeeding Council was enjoined to pursue the matter since it was important and needed accomplishment. (23)

Both Councils engaged their attentions on the issue, and in its Annual Report for 1972-73, the Council of the Nigerian Library Association was able to report that it had continued both formal and informal contacts with the Government concerning the promulgation of the decree proposed by the Association. The Report added that although the matter seemed to have been dragging for too long, "all information received so far point to the fact that the matter is receiving careful attention of Government." (24) Obviously the matter must still be receiving the Government's "careful attention" since the Nigerian Library Association still remains legally unrecognised.

In Ghana, the Ghana Library Association applied for registration as a professional body when the Professional Bodies Registration Regulations, 1971(CI 20) were issued by the Government. Before the application could be considered the Regulations were repealed and were replaced by the Professional Bodies Registration Decree, 1973 (NRCD 143).

(22) Ibid., 88.

(23) GHANA LIBRARY ASSOCIATION. Two-year Report of the Council for the period 25th July - 28th August 1966, and 28th August 1966 - 30th July 1967. Ghana Libr.J., 2(2), 1968, 70.

(24) NIGERIAN LIBRARY ASSOCIATION. Annual Report of the Council for 1972-1973. Nigerian Libr., 9(3) Dec 1973, 196.

The Decree regards a professional body as one whose members are:

- i) trained and qualified in a profession recognised as such, and
- ii) united in a common interest for the purposes of pursuing research and other activities concerned with the progress of knowledge in any such profession and for maintaining and advancing a code of ethics and conduct among its members and generally for the maintenance of the highest ideals of the profession concerned.

Registration involves the submission of a copy of the constitution of the professional body (which must include the objects of that body, rules regulating discipline among members, and the manner of enforcing such rules); a list of members at the date of application together with their qualifications and addresses; a statement of the activities of that body for a period of one year immediately preceding the date of application (or for the period for which it has been in existence if it is less than one year old); a registration fee of ₵300.00, (25) and a further annual fee of ₵1.00 in respect of each registered member of the body.

Some seven years after the promulgation of the Decree, the Ghana Library Association has still not been registered as a professional body. The reasons are not far to find. In the previous chapter, the lethargic existence of the Association was referred to. Conferences, meetings and lectures are poorly attended, membership subscriptions are paid by only a few (and mostly during annual conferences), and members are almost totally indifferent to the affairs of the Association. In short, the Association has not been registered because it cannot meet the specifications of the Decree; members have not been able to pull

(25) About £102 at the 1973 exchange rate of ₵2.95 = £1 sterling. Currently (1980) the rate is ₵6.44 = £1 sterling.

themselves together as a professional body. There seems to be hardly the need to stress the importance of having the Association registered. The fate of the Association rests in the members' own hands.

The elements of library legislation under discussion in this group also include the provision of adequate facilities for the training of library and information personnel. This topic has already been discussed in some detail in the previous chapter and a repetition may therefore not be necessary here. (See Chapter 8: Section 8.4 - Facilities for the Education and Training of Library and Information Personnel). What is worth a mention, though, is the extent to which the Library Associations are involved in the educational programmes in the sub-region, since the mark of a profession is:

an educational process based on the body of knowledge and art, in ordering which the professional group has a recognised responsibility. (26)

The responsibility of the professional group or association may take one or two main forms: it may be direct (that is, when the association has its own system of examination and certification, e.g. the (British) Library Association), or it may be indirect (that is, when the association has the power of accreditation only, e.g. the American Library Association). WALA did not involve itself in examination and certification. Its pre-occupation was with the general development of librarianship in the sub-region and so even though in his survey of library needs in British West Africa Dr. Lancour referred to the possible institution of a local system of examination and certification, (27) the

(26) PATON, W.B. Presidential Address: the profession of librarianship. Libr.Ass.Rec., 64, Oct 1962, 369.

(27) LANCOUR, H. Libraries in West Africa; a report of a survey for the Carnegie Corporation of New York, October - November, 1957. Urbana, University of Illinois Library School, 1958, 29-30. (Occasional Paper, no.53)

issue was not taken up by WALA - probably because it became topical only after the dissolution of WALA. Before then, librarians were educated mostly in Britain for the professional qualifications of the (British) Library Association, and the Institute of Librarianship which had been established in the University College of Ibadan, Nigeria, in 1960 to offer local training, had started by preparing students for the same examinations. But change became imminent as the (British) Library Association prepared to launch its new (1964) syllabus, which was considered to be more inclined towards British needs than those of the sub-region. Ibadan therefore thought it appropriate to introduce its own programme. It was when the Institute started offering its own post-graduate Diploma course in place of the (British) Library Association examinations that the Nigerian Library Association became directly involved in the education of librarians in Nigeria. Oderinde ⁽²⁸⁾ gives four reasons for this involvement:

- i) it was felt that those members of the [Nigerian Library] Association who had passed parts of the British Library Association examinations and who would have been awarded scholarships to complete their course abroad were being denied their right to get qualified by their own indigenous institution;
- ii) some qualified members felt that the Diploma gained from Ibadan was inferior to the British ALA;
- iii) others felt that a graduate librarian strata was being created to the detriment of the professionally qualified non-graduates;
- iv) some others believed that the Nigerian Library Association was shirking its responsibility by entrusting such an important question of library education to a library school managed by a few members of the Association.

(28) ODERINDE, N.O. op cit, 82.

Similar sentiments were to be expressed in Ghana a few years later when the Ghana Library School, which had also been preparing students for the (British) Library Association examinations, was moved to the University of Ghana in 1965 as the Department of Library Studies to offer its own graduate education and certification programme. (Negotiations regarding the transfer of the School to the University were completed without the Ghana Library Association. An ad hoc committee which was appointed to negotiate the transfer consisted of the Vice-Chancellor of the University (who was the Chairman), University representatives, the Ministry of Education, and the "principal negotiators", i.e. the Ghana Library School and the Ghana Library Board, under whose auspices the School had been operating).⁽²⁹⁾

In both Ghana and Nigeria, the Associations appointed special committees to study the issues in closer detail. The committees' recommendations suggested steps which would have given the Associations more influential roles in the education and certification of librarians. The recommendations included the award of associateships as evidence of the possession of approved professional qualifications, and for admission to the professional grade; the award of fellowships as evidence of professional maturity (to be awarded on the basis of original work - thesis or bibliography - or in appreciation of notable contribution to librarianship); the preparation of approved registers of librarians qualified, and authorised, to practise, etc. Nothing much has, however, been achieved. The Nigerian Library Association is reported to have held discussions at one stage with the Institute of Librarianship, Ibadan, "on the merits and demerits of [the Institute's] scheme,"⁽³⁰⁾ and in Ghana,

(29) KOTEL, S.I.A. The social determinants of library development in Ghana with reference to the influence of British traditions. Thesis submitted for the MPhil (Arts), University of London, April 1972, 528. (Unpublished).

(30) ODERINDE, N.O. op cit, 83.

the President of the Ghana Library Association is an ex officio member of the University of Ghana's Advisory Board of Library Studies.

It is proper that, as professional bodies, the Associations should seek, and indeed have, some "recognised responsibility" in the educational processes of the profession. It would seem, though, that the Associations are tackling the issue from the wrong end of the stick. They have not made much headway because they themselves lack the legal recognition that should make them the accredited representatives of their profession. That needs to be resolved first. The rest may not be too difficult to follow.

9.3 Financing of Library and Information Services in the Sub-Region

It was stated at the beginning of this chapter that a library and information network would need a formal organisation whose duties would include the provision for legal and fiscal responsibility. The preceding discussions have shown the importance of legislation to library and information work. However, without adequate and continuing financial support, it would be difficult, if not impossible, for the network to implement its programmes. The survey sought to ascertain the funding pattern of library and information services in the sub-region and the respondents were therefore asked to indicate their incomes and expenditures over the three-year survey period of 1976/77 to 1978/79. The results are given in Tables 36 to 38. It may be noticed from the gaps in the Tables that a complete picture of the funding pattern could not be obtained. This is because either the information was not supplied or, as it happened in three cases, it was given in confidence and the confidence had to be kept. It is hoped, all the same, that from

the analysis of the results, it may be possible to have some idea regarding the financing of library and information services in the sub-region.

9.3.1 Sources of Income

Respondents to the survey questionnaire were asked the source from which they obtain their income. The results show that, with the exception of the few libraries and information centres which belong to public boards and corporations or international organisations and foreign institutions, the rest either entirely depend on government subventions, or supplement such subventions with incomes from private sources, subscriptions, fees for services, or foreign aid.

Out of The Gambia's seven responding libraries, six (three government, one school and college, and two special libraries) are entirely government funded. The seventh, the national public library, which is also funded by the government, has some supplementary income from private sources, foreign aid, fees for services and the sale of publications. (Table 36 (a)).

The majority of Ghana's sixty-seven responding libraries and information centres have the government as their main source of funding. Fifty-four of them (or 81%) are wholly government sponsored. Six (9%) supplement their government subventions with incomes from other sources. Of the six, four (one government library, one school and college library, and two academic libraries) receive some foreign aid, while the remaining two (one public library and one special library) receive supplementary incomes from subscriptions. Three libraries (4%), all of which are

special libraries, are sponsored entirely by their parent corporate organisations. The remaining four libraries (6%), made up of one special library, one information centre and two public libraries, belong to foreign organisations who are responsible for their funding. In all, therefore, 90% of the responding libraries and information centres in Ghana receive government subventions. (Table 36 (b)).

In Liberia, three (43%) of the responding seven libraries depend on the government for their entire financial needs. Another three (43%) have supplementary sources of income. One of the three is an academic library. Although the University to which the library belongs is a private institution, it is heavily subsidised by the government. The second, a special library, receives some foreign aid in addition to the government grant, while the third, an information centre, has some foreign aid as well as some income from private sources to supplement the government subvention. (The information centre is a regional organisation to whose funding the Liberian Government contributes). Only one library, a public library, is owned, and funded entirely by a foreign organisation. Out of the seven responding libraries, the government is, thus, involved in the funding of six or 86%. (Table 36 (c)).

Forty-five (90%) of Nigeria's fifty responding libraries are wholly government sponsored. Two (4%) both of which are academic libraries, receive some supplementary income from fees for services, while one (2%), a special library, receives some foreign aid in addition (as in the case of the two academic libraries) to subventions from the government. The two (4%) remaining libraries are both sponsored by their parent organisations. One is a public library belonging to a foreign institution and the other, a special library, belongs to an international

organisation. No less than 96% of the responding libraries are therefore funded by the government. (Table 36 (d)).

In Sierra Leone, as in the other countries, the government remains the main financial source of the libraries. Eight (47%) of the seventeen responding libraries are financed entirely by the government. An almost equal number, seven or 41%, have supplementary sources of income in the form of foreign aid. The seven comprise one government library, all five responding school and college libraries, and one special library. The remaining two (12%) are both public libraries which belong to foreign institutions and are financed by their parent bodies. With the exception of these two, the rest of the libraries, which constitute 88% of the responding seventeen, receive subventions from the government. (Table 36 (e)).

9.3.2 Funding Pattern

The analysis above shows clearly that in all the countries, the national governments are the main sources from which the libraries and information centres derive their incomes. Other points with which the survey was concerned were the adequacy and continuity of the financial support. "Adequacy" of funding can be discussed in terms relative to the individual libraries and information centres only, there being no easily identifiable common bases for comparison either in terms of the economies of the countries, the sizes of the libraries, the "populations" they serve, or the services they provide, etc. But if the comments on the returned questionnaires may be taken as the common denominator, then inadequacy of financial support is one of the major problems facing the libraries and information centres in the sub-region. Further analysis

(below) of Table 36 (a - e) proves the point to some extent and also shows the corrugated nature of the funding pattern of the libraries and information centres. The annual incomes of the libraries and information centres for the three-year survey period (1976/77 - 1978/79) are analysed to show where allocations had been increased, reduced or where they had remained "fixed" (i.e. where there had been no change in the amount of money allocated).

In The Gambia, only three of the seven responding libraries provided information on their annual incomes. One of them, a government library, had a fixed allocation for the three survey years. The other two (one government and one public library) on the other hand had progressive annual increases during the period. (Table 36 (a)).

Forty-one out of Ghana's sixty-seven responding libraries indicated their annual incomes. Out of the forty-one, twenty-one (51%) had their allocations for the first survey year (1976/77) increased during the second year (1977/78). Five (12%) had theirs reduced, while eight (20%) had fixed allocations. Seven (17%) gave insufficient information for the purpose of the analysis. During the third survey year (1978/79), twenty-three (56%) had increases over the previous year's allocations, five (12%) had theirs reduced, and seven (17%) had fixed allocations. Six (15%) provided insufficient information.

The overall funding pattern is as follows: out of the forty-one libraries and information centres, fifteen (37%) had progressive annual increases over the three-year period. These were: six academic libraries, six special libraries, one public library, one school and college library, and one information centre. Six (15%), comprising three special libraries, two school and college libraries, and one government

library had fixed allocations throughout the survey period, and one (2%), a government library, had consistent annual reductions during the three-year period. The remaining nineteen (46%) had their allocations increased or reduced one time or the other during the period. (Table 36 (b)).

Four of Liberia's seven responding libraries indicated their annual incomes. Out of these, one, an academic library, had an increased subvention during the second year. Another one, a government library, had its reduced, while the third, a public library had a fixed allocation. One provided insufficient information. For the third year, three (75%), comprising an academic library, a government library and a public library, had their subventions increased. One (25%) gave insufficient information.

Only one academic library had regular annual increases. The rest (75%) had their incomes increased or reduced. (Table 36 (c)).

In Nigeria, thirty-two out of the fifty responding libraries provided information on their incomes. Of that number, seventeen (54%) had their incomes increased during the second year. Ten (31%) had theirs reduced, and two (6%) had fixed incomes. Three (9%) provided insufficient information. During the third year, fourteen (44%) had their incomes increased, sixteen (50%) had theirs reduced, and one (3%) had a fixed income. One (3%) gave insufficient information.

Only six (19%) of the thirty-two Nigerian libraries had regular increases during the period. They were: three special libraries, one academic library, one government library, and one school and college library. Another six (19%) had regular annual reductions. These consisted of three academic libraries, one government library, one public

library, and one school and college library. The remaining twenty libraries (62%) had reduced or increased allocations during the period. (Table 36 (d)).

Of Sierra Leone's seventeen responding libraries, eleven indicated their annual incomes. Out of the eleven, only one (9%), a public library, had its income increased during the second year. Another one (9%), a government library, had its reduced, and six (55%) had fixed allocations. Three (27%) did not provide sufficient information. In the third year, five (45%) had increased subventions, one (9%) had its reduced and four (37%) had fixed allocations. One (9%) provided insufficient information.

None of the libraries had regular annual increases, and none had consistent reductions either but three (27%) had fixed allocations throughout. They were one academic and two government libraries. The remaining eight (73%) had their incomes reduced or increased during the period. (Table 36 (e)).

The analysis shows a pattern of predominant inconsistencies in the funding of the libraries and information centres in the sub-region. These, as may be expected, reflect on the expenditure on books, periodicals and other purchases, as Table 37 (a - e) shows. (The only items which showed consistent annual increases were wages and salaries! See Table 38 (a - e)).

It is frustrating enough for a librarian or an information scientist to operate a library or an information centre on a fixed budget, but it is even worse to have the budget reduced. In a developing country with an unstable currency (a situation common to most developing countries), such fixed or reduced budgets can have far-reaching consequences. Consider,

for instance, the Ministry of Agriculture Reference Library in Ghana. For each of the three survey years, it had a fixed budgetary allocation of c2,000 for books and periodicals. It has been observed elsewhere that about 90% of books purchased by the developing countries are imported from Europe and America. Working on that basis, about c1,800 of the vote would have been spent on imported books. In 1976/77 (i.e. the first survey year) c1.850 converted to f1 sterling, ⁽³¹⁾ and the average price of a British academic book was f2.80. ⁽³²⁾ So, the c1,800 which would have converted to f973 could have bought some 348 British academic books. During the second year (1977/78) the exchange rate had increased to c2.74 to f1 sterling, ⁽³³⁾ but the price of a British academic book had reduced to f2.62. ⁽³⁴⁾ However, because of the increase in the exchange rate of the Ghanaian currency, the fixed vote of c1,800 which would have converted to f657 could have bought only 251 books. In the third year (1978/79), the exchange rate had increased to c6.25 to f1 sterling, ⁽³⁵⁾ and the average book price had also gone up to f2.85. ⁽³⁶⁾ So, the c1,800 would have converted to

(31) Financial Times, 2 Aug 1977.

(32) COOPER, A. Average prices of British academic books, 1977. Loughborough, Loughborough University of Technology, Library Management Research Unit, 1978, 4. (LMRU Report, no.11).

(33) Financial Times, 1 Aug 1978.

(34) COOPER, A. Average prices of British academic books, 1978. Loughborough, Loughborough University of Technology, Library Management Research Unit, 1979, 4. (LMRU Report, no.14).

(35) Financial Times, 7 Aug 1979.

(36) COOPER A. Average prices of British academic books, 1979. Loughborough, Loughborough University of Technology, Department of Library and Information Studies, Centre for Library and Information Management, 1980, 4. (CLAIM Report, no.2).

£288 and could have bought a mere 101 books. Within the three years, therefore, the average book price had increased by 18%, the exchange rate had gone up by a staggering 237% and the purchasing power of the fixed vote had whittled down to almost one third its original value. And, for a reminder, the ₵1,800 was not for books alone; it was for books and periodicals - which further cripples the library's acquisition capability. The Ghana Ministry of Agriculture Library is not an isolated case. The examples could be multiplied in all the countries. Librarians and information scientists in the sub-region may, thus, find themselves employed to preside over stagnating services with little salvaging power.

However much some administrators may wish to imagine, library and information services cannot be run successfully on token and inadequate financial sponsorship. They need regular and adequate funding to make them thrive. In this respect, libraries and information centres do not behave any differently from business and industrial concerns: an apathetic investment policy will produce results that match the apathy of the policy.

CHAPTER 10

LIBRARY AND INFORMATION NETWORKS FOR RESOURCE SHARING IN ENGLISH-SPEAKING WEST AFRICA: SUMMARY AND CONCLUSIONS

10.1 The Role of Governments in Information Transfer

The Working Document of the Intergovernmental Conference on the Planning of National Documentation and Archives Infrastructures, Paris, 1974, declared that:

In the present age, only governments have the opportunity and the resources necessary to create conditions for the functioning of a national system for information transfer that meets the needs of the whole community. ⁽¹⁾

This is because the total information process (i.e. its generation, collection, storage, processing, dissemination and utilisation) has become so complex that only governments have the overall capability to encompass its complexity. The Conference also declared information a national resource and concluded that its planned development, as well as the assurance of its general accessibility, should be the responsibility of governments.

Governments, in fact, have more than these reasons to show committed interest in information development and transfer. In most countries, but particularly in the developing ones, governments are almost entirely responsible for the funding of what Machlup has termed the "knowledge

(1) UNESCO. Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris, 23-27 September 1974. Working Document 1.3.2.(COM-74/NATIS/4).

industry". Resource allocations to both formal and informal education, research and development, communications, etc. are virtually all governmental. The net result of these usually heavy investments is the production of information (socio-economic, scientific and technological information) which is one of the necessary foundations for the growth and development of a nation. Governments therefore have a strong stake in the information process and should show more than passive interest in systems that seek to enhance the proper organisation and utilisation of the end product of their investments. Often, however, the interest is more passive than active. The national development plans of governments (again, particularly those of the developing countries) are, for instance, usually resplendent with high priority rated development programmes in the various sectors of the economy. But the importance of the role that information would need to play in these development programmes (if they are to be effectively carried out) is often not so glamorously portrayed. The following extract from the Agricultural Sector of the Ghana Five-Year Development Plan, 1975/76-1979/80, illustrates:

The role that agriculture plays in the economy of Ghana is significant. In our situation, agriculture has the highest potential of all other sectors for simultaneous achievement of several goals mentioned in the Guidelines of the Five-Year Plan. The pre-eminence that agriculture enjoys in the economy makes it mandatory that its development should receive the highest attention in the planning strategy.... (2)

The plan goes on to outline programmes for the development of crops, live-stock, fisheries, etc., and allocates some ₵999 million (or 25.5%, and the highest of the whole investment programme) (3) to the agricultural sector over the five-year period to help attain the projected development targets.

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- (2) GHANA. Five-Year Development Plan, 1975/76-1979/80. Part II. Accra, Ministry of Economic Planning, 1977, 1.
- (3) GHANA. Five-Year Development Plan, 1975/76-1979/80. Part III. Public investment programme. Accra, Ministry of Economic Planning, 1977, iii.

(The allocation to the agricultural sector was, thus, some ₵199.8 million a year). There is no direct mention of library and information services but from the response to the survey questionnaire, it may be seen that for each of the survey years of 1976/77 to 1978/79, the total budgetary allocation for the Reference Library of the Ministry of Agriculture, one of the obvious organisations to implement the development programmes in the agricultural sector, was a mere ₵3,000! (See Table 36 (b)). And yet the section of the Plan on "Research and the dissemination of its results" seems to wonder why:

....Where some spectacular and relevant results have been obtained from research institutions, these have hardly been properly disseminated or translated into the type of project which would make significant impact on national economic growth.... (4)

It is for the efficient organisation and utilisation of such available information and also, in its wider context, for the evolution of an "informed society" that NATIS Objective 1 (National Information Policy) advocates the formulation and implementation of national information policies, reflecting the needs of all sectors of the community. The Objective stresses, in particular, that the elements of such policies should be integrated with national development plans as the only way of ensuring that "all who engage in administrative, educational, scientific and cultural activities have access to the information they need". (5) This recommendation, which is being echoed here, is directed to governments as the sole authorities capable of implementing it, and also of encouraging and supporting national (and international) systems designed for the effective management of the resource on which all the other resources depend for their development.

(4) GHANA. Five-Year Development Plan. Part II. op cit. 15.

(5) UNESCO. Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris, 23-27 September 1974. Final Report. Paris, Unesco, 1975, 25.

10.1.1 Objectives of a National Information Policy

In its publication Information for a changing society; some policy considerations, the Organisation for Economic Co-operation and Development (OECD) recommends what, in national information policies, should constitute the major policy objectives for governments. The OECD recommends to governments:

- i) to ensure the availability of scientific, technological, economic and social information adequate for national needs;
- ii) to ensure that access to other national and international sources can be obtained;
- iii) to determine, if possible, the relationships between scientific and technological information and information about social phenomena;
- iv) to ensure that scientific, technological, economic, and social information is properly selected, digested and analysed for educational, industrial, policy, and other public purposes;
- v) to ensure that resources are available to study habits and needs of users, and to study new practices in information processing;
- vi) to ensure that resources are available for the establishment and operation of appropriate information systems;
- vii) to ensure that the management responsible for central co-ordination has the breadth of view to encompass the systems management skills, appreciation of user requirements, understanding the potential of library systems and the power of modern information technology, without being preoccupied with only one of these to the exclusion of the others;

- viii) to ensure that an adequate mix of properly trained subject specialists and information processing specialists is available. (6)

None of the countries in the sub-region as yet has a national information policy, although in Ghana and Nigeria efforts are being made towards their formulation. The recently-created Ghana National Committee for Information and Documentation has appointed an ad hoc Committee on National Policy and Plan for Information, and the Nigerian Library Association is currently contemplating the formulation of a national plan for Nigeria. These are steps in the right direction, and it would be recommended to The Gambia, Liberia and Sierra Leone to initiate steps towards the formulation of national information policies.

The exact details of one national information policy will differ from the other since national needs, targets and priorities cannot be the same. All the same, the ultimate objective of a national information policy should be the evolution of a system that embraces all the institutions concerned with the provision of information, whether they are in the government, public or private sector. The OECD recommendations provide useful guidelines and could constitute the point of departure for the information policy planners in the sub-region.

The formulation of the national information policies, however, is one thing, their acceptance and incorporation into the national development plans quite another. Plans may be proposed, systems and networks for the effective harnessing and utilisation of the national information resources may be planned but such plans, systems and networks have little chance of being implemented unless their importance as essential elements in the socio-economic growth and development of a nation is recognised. The decision to accord them that recognition rests with the national governments. And it is

(6) OECD. Information for a changing society; some policy considerations. Paris, OECD, 1971, 33-34.

a decision that will be determined by the governments' acceptance of the concept of information as an important national resource and the need for its systematic development and utilisation. The right decision and the provision of the necessary support would ensure the proper dissemination of the "spectacular and relevant research results" and enhance the translation of such results into projects that "would make significant impact on national economic growth".

10.2 Formal Organisation

10.2.1 National Co-ordinating Bodies

It was stated in the previous chapter that a system or network that seeks to embrace all the organisations concerned with the provision of library and information services would need a formal organisation within which to operate. The nature of such an organisation, and some of the major functions it would undertake, formed part of the recommendations of the Expert Meeting on National Planning of Documentation and Library Services in Africa which was held in Kampala, Uganda, in 1970. The recommendation was that:

- a) while it is recognised that the patterns of organisation of library and information services will of necessity differ from one country to another, early steps be taken in each country to create a single national body, backed by the necessary legislation, with responsibility for the planning and development of a fully integrated national library and information system.
- b) That such bodies should be responsible to one minister who would act as its spokesman in the body politic and have a membership fully representative of all agencies requiring the provision of library and information services and all government ministries concerned, including planning and finance.

- c) That such bodies should be provided with the necessary finance and expert staff to enable them to carry out the following functions:
- i) The preparation, co-ordination and implementation of development plans for all types of library and information services;
 - ii) the costing of such plans and their inclusion in the national development plans;
 - iii) the harmonisation of the allocation of all resources for library and information services whether from internal or external sources;
 - iv) the establishment of national standards for the efficient operation of library and information services;
 - v) the development of a unified scheme of service and a common salary structure for the profession and the preparation in consultation with established schools of librarianship of the necessary manpower plans. (7)

The recommendation was to be underlined four years later at the International Conference on the Planning of National Documentation, Library and Archives Infrastructures (NATIS), Paris, in 1974, when its Objective 7 (Planning the Organisational structure of NATIS) recommended the co-ordination of the functions of all documentation, library and archives services through a central body (or bodies). This would ensure the optimum use of available resources and the maximum contribution to the cultural, social and economic development of each nation. (8)

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- (7) UNESCO. Expert Meeting on National Planning of Documentation and Library Services in Africa, Kampala, Uganda, 7-15 December 1970. In UNESCO. Regional Meetings of Experts on the National Planning of Documentation and Library Services. Summary of main recommendations. Paris, Unesco, 1974, 7.
- (8) UNESCO. National information systems. Objectives for national and international action. Paris, Unesco, 1975, 15. (COM-74/NATIS/3 Rev.).

Several countries, particularly those in the developed world, have established centrally co-ordinated library and information systems and networks. The creation of the British Library as "a national library of the United Kingdom" out of six previously separate and intrinsically national library services is an example. ⁽⁹⁾ Administratively, the British Library comes under the Department of Education and Science, and the British Library Act of 1972 under which it was created provides for a Board of Management whose members are appointed by the Secretary of State for Education. Unlike the National Commission on Libraries and Information Science (NCLIS) of the United States of America, however, the British Library is not a national co-ordinating body (although it already performs a range of functions which might more properly be undertaken by a national co-ordinating body). The creation of such a body for the United Kingdom has been the subject of a number of recommendations and memoranda. ⁽¹⁰⁾ The NCLIS, on the other hand, was established in 1970 by Public Law 91-345 as a national planning and co-ordinating body. It is an independent, permanent federal agency within the executive branch of the United States Government and advises the president and Congress on national information policy, the development and implementation of overall plans for meeting the library and information needs of the United States, and the co-ordination of activities at the federal, state and local levels to ensure the satisfaction of those needs. (In 1975 the NCLIS published its "Program Document" ⁽¹¹⁾ outlining its objectives and how they would be achieved.)

(9) They were: the British Museum Library; the National Reference Library of Science and Invention (administratively part of the British Museum); the National Lending Library for Science and Technology; the National Central Library; the British National Bibliography; and the Office for Scientific and Technical Information.

(10) See for example the (British) Library Association's memorandum: A national review of library and information services, published in 1979.

(11) UNITED STATES. National Commission on Libraries and Information Science. Toward a national program for library and information services: goals for action. Washington, D.C., NCLIS, 1975.

In the developing world, Jamaica offers a notable example of one of the few countries which have taken definite steps towards the establishment of centrally co-ordinated library and information services. In 1973, the Prime Minister of Jamaica appointed the National Council on Libraries, Archives and Documentation Services and charged it with the responsibility of formulating a national plan for the development of libraries, archives and documentation centres. The Council's recommendations, published in its Plan, ⁽¹²⁾ included, inter alia, the adoption of a national information policy and its integration with the country's overall national plans for social, economic and cultural development, the provision of sound financial and legal bases for the national information system, and the constitution of the Council into a permanent national body with clear responsibility and authority to advise the Prime Minister on the planning and co-ordination of library, information and documentation services in the country.

10.2.2 National Co-ordinating Bodies in the Sub-region

Encouraging as it is that Ghana and Liberia have appointed national co-ordinating bodies, it is difficult to see how, as currently structured, they can be effective in their co-ordinating roles. It was noted in the previous chapter that the national co-ordinating body for Ghana, the National Committee for Information and Documentation, grew out of the Ghana UNISIST National Committee. The UNISIST Committee had been appointed by the Council for Scientific and Industrial Research (CSIR) to guide the development and utilisation of scientific and technological information in Ghana in conformity with the UNISIST recommendations.

(12) JAMAICA. National Council on Libraries, Archives and Documentation Services. Plan for a national documentation, information and library system for Jamaica. Kingston, NACOLADS, 1978.

Its changed and expanded role notwithstanding, like its predecessor, the National Committee for Information and Documentation comes administratively under the Secretariat of the CSIR. Indeed, one of the terms of reference of the National Committee, "as approved by the Executive Committee [of the CSIR]", is to advise the Government of Ghana through the CSIR on the formulation and implementation of a national information policy. This administrative arrangement immediately subjugates the National Committee to the CSIR and puts a hurdle between it and the Government. The considered recommendation of Unesco, through its regional conferences on the planning of national documentation, library and archives infrastructures (now crystalised in its General Information Programme), is that for maximum impact and effectiveness, such national bodies should be established by legislation and should be responsible to one minister. In other words, the national bodies should be directly responsible to the government. The National Committee satisfies none of these conditions. Moreover, as the body charged with the responsibility for planning and co-ordinating all existing (as well as future) library and information services, including those of the CSIR, it must be above sectoral interest so as to command the respect and the co-operation of all organisations concerned with the provision of library and information services in the country. Its attachment to the CSIR could prove to be a liability rather than an asset in the sense that it could easily, albeit erroneously, be interpreted as an attempt in empire-building and thereby deny it the co-operation it would desperately need to make it succeed.

As constituted at present, then, the National Committee for Information and Documentation ⁽¹³⁾ may find itself inadequate to meet

(13) The composition of the National Committee could not be ascertained. But it is hoped that its membership is representative of the different interests in library and information services as well as the major or identifiable user groups.

its set objectives. A re-structuring of the National Committee from a "Committee" of the CSIR into a permanent, independent body would be recommended. It should be established by legislation, made directly responsible to the government, preferably to the President's Office, and supported by adequate legislative, financial and secretarial provision. This would enhance the National Committee's effectiveness as the national co-ordinating body and the ultimate authority on the planning and implementation of library and information services in Ghana.

The personal interest that President William Tolbert (the late President of Liberia) showed in the re-organisation of the Liberian records and archives and in the Center for National Documents and Records Agency was most commendable. However, such interests may be short-lived (particularly in politically unstable areas where change may be sudden and drastic) if they are not expressed in legislation to ensure permanence. As the national co-ordinating body, the Center would need the appropriate legislative backing as well as adequate financial and secretarial support. To give the Center a truly national character, and also to afford it the benefit of a diversity of views and methods of approach, the Director should be assisted by a Management Board whose membership should be made to reflect the interests of the identifiable groups concerned with the provision and use of library and information services.

In Nigeria, proposals for the establishment of a national co-ordinating body (the National Advisory Council on Library and Information Service) have so far not had the approval of the Federal Government. The Government's response that the National Library should perform the functions of the Advisory Council "for the time being" is an indication of the Government's acceptance, in principle, of the idea of a national co-ordinating body. What remains is the translation of the idea into reality. Although

the National Library has been given the pro tem mandate as the co-ordinating body, there still is the urgent need for the establishment of an independent, high-powered body, much for the same reasons as for those which have been advanced for Ghana - except that the need may even be more pressing for Nigeria with its fast growing library and information services. The request for the establishment of the Advisory Council deserves the closest attention of the Government, and its early implementation too.

In Sierra Leone, an education review report (published in 1976) recommended the establishment of "a national co-ordinated system which would be responsible for the development of libraries, archives, documentation and museums." (14) The recommendation, which was addressed to the Ministry of Education, has not been acted on. The library profession, particularly the Sierra Leone Library Association, should draw the attention of the Government to the report and use it as the basis for the establishment of a national co-ordinating body.

In the absence of a developed professional body in The Gambia, the advocacy for the establishment of a co-ordinating body becomes the responsibility of the Gambia National Library which, in any case, has been providing professional leadership in the country. The fact that the library and information services in The Gambia are hardly developed should not diminish the need for a co-ordinating body. The establishment of such a body in these early stages would ensure the co-ordinated growth and development of the services.

10.2.3 Committees of the National Co-ordinating Bodies

The national co-ordinating bodies (which may be Councils or Commissions) would in each country constitute the highest, and deciding,

(14) SIERRA LEONE. Education review: all our future. Final report; the results of the Working Groups and the combined proceedings of the two conferences... in Freetown, University of Sierra Leone, 1976, 68.

authority on all matters affecting the planning, development and co-ordination of the library and information services. To emphasise again, the Councils should have adequate legal, financial and secretarial support. They should be high-powered in their composition and broad-based in their representation of the different groups of providers and users of library and information services.

In view of the complex nature of library and information services, the National Councils would have to appoint a number of special committees, composed ideally of librarians and information scientists with the appropriate specialist background, to study specific aspects of the Councils' programmes and recommend their implementation. Committees may be appointed for Acquisitions, Finance, Technical Services, User Services, Manpower Development, etc. The Committees would differ from one country to the other. But what all the Councils would need to appoint, early in their operations, would have to be a "Planning Committee" which would be responsible for the formulation of a working plan for the establishment of the co-ordinated service. The functions of the Committee would include such pre-implementation activities and decisions as the determination of aims and objectives, the extent of the existing library and information resources, the organisational structure or the appropriate network configuration, the responsibilities of participants, etc.

The activities of the various "Planning Committees" would again reflect national needs and priorities. A decision which would be common to all, however, would be on the type of network configuration that would prove most suitable for the library and information services in the sub-region. Of the basic network configurations (i.e. the cyclic, non-directed, directed, composite and hierarchical) the hierarchical would seem the most suitable. Its ability to accommodate a large number of libraries and

information centres at different levels of development, its flexibility and relative reliability give it qualities which particularly suit the varying stages of library and information service development in the sub-region.

10.2.4 Proposed Network Configuration for the Sub-region

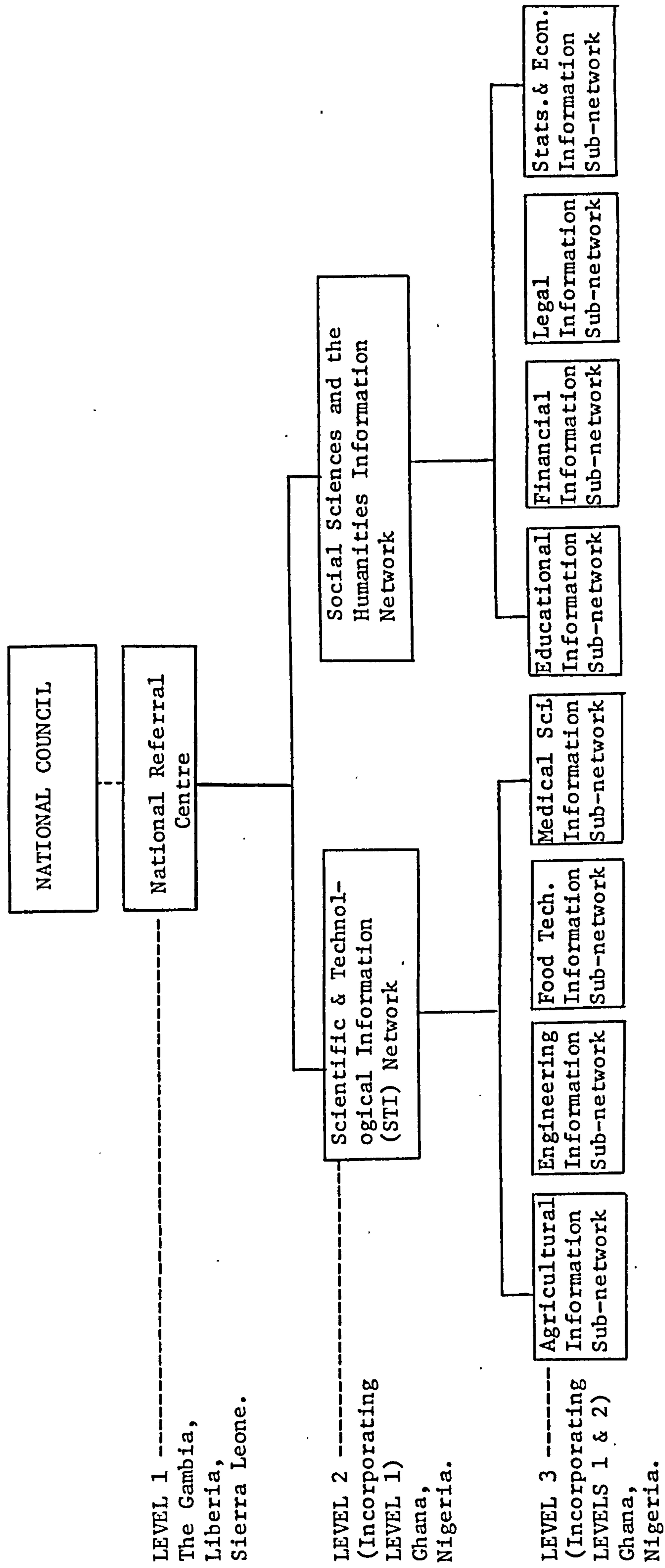
In Fig.13 (page 348), a hierarchical network model is presented. It would operate on a subject basis, and a graduated system of development would make it operational irrespective of the size and level of development of the library and information service in any particular country.

As illustrated in the diagram, with their relatively less developed library and information services, The Gambia, Liberia and Sierra Leone would operate at Level 1 only. In each of the countries, one library (the most suited for that purpose) would be designated the national referral centre and would be made responsible for the co-ordination of the library and information activities within that country. For The Gambia, this would be the Gambia National Library; for Liberia, the University of Liberia Libraries; ⁽¹⁵⁾ and for Sierra Leone, the Sierra Leone Library Board. The networks could be expanded (i.e. to Level 2) to cope with the expansion of the services.

Ghana and Nigeria, on the other hand, have sufficiently well-developed library and information services to enable them to operate at Levels 1 and 2. This would consist of two main subject networks: the

(15) This would be an interim measure only. The most suitable library to take on this role would be the National Public Library. But in its present state of neglect, it would not be able to act immediately as the national referral centre. Its re-organisation on the lines recommended by the Unesco consultant, and the implementation of the recommendations in the present work, would enable it to perform that role effectively.

Fig.13 PROPOSED NETWORK CONFIGURATION SHOWING LEVELS OF OPERATION



scientific and technological information network (the STI network), and the social sciences and the humanities network, which would constitute Level 2 in the national network configuration. Each network would comprise all libraries and information centres specialising, or with a predominant interest, in that broad subject group. Thus, all libraries (of whatever type) which specialise in any aspect of scientific and technological information would belong to the STI network. Similarly, the social sciences and the humanities network would comprise all libraries and information centres in those subject areas. In other words, the emphasis would be on the subject content of the libraries and information centres and not on the type. ⁽¹⁶⁾ Each network would have a main node (or switching/referral centre) to co-ordinate activities within the network and to provide the link between the network and the national referral centre at Level 1. The national referral centre would co-ordinate the activities of both networks and provide common services.

Depending on the rate of development, there could be further divisions within the networks. These "sub-networks" would be more specialised in their subject content than their "parent" networks. For the STI network, for example, there could be sub-networks for agricultural information, engineering information, food technology information, etc. There could be similar sub-networks for the social sciences and the humanities network. These would constitute Level 3 in the national network hierarchy. Each sub-network would have a switching centre which would also liaise activities within the sub-network, link it with the "parent" network and thereby with the national referral centre.

(16) This arrangement should not preclude the formation of other interest groups within the main networks. A wide range of network permutations is possible. There could be groupings by type of library with or without respect to subject interest, e.g. all government libraries (irrespective of subject interest), or all government libraries specialising in scientific and technological information, etc.

The co-ordinating activities at the national referral centre should ideally be undertaken by the national library. In Ghana, the activities would be performed by the Research Library on African Affairs which, in the absence of a national library, has been carrying out some of the activities normally associated with national libraries. In its present set-up, however, the Research Library is ill-equipped in staff, finance, equipment and legislative power to assume the full role of a national referral centre effectively. It would therefore be necessary for the earlier plans for the establishment of a national library to be revived, and for the Research Library to be constituted (by legislation) into a national library, independent of the Ghana Library Board of which it is now a wing. This recommendation would need the early and urgent consideration of the Ghana National Council.

For the STI network, the co-ordinating or switching centre would be the Council for Scientific and Industrial Research (CSIR) whose Central Reference and Research Library (CRRL) has been promoting co-operation among the scientific and technical libraries in Ghana since its establishment in 1964. Some of the problems which have prevented the CRRL from playing a more effective co-ordinating role have been the lack of adequate staff and financial support. The CRRL would have to be strengthened in these respects to enable it to cope with its responsibilities as the switching centre for the STI network.

In the social sciences and the humanities, it is the Balme Library, University of Ghana, that would prove the most suitable co-ordinating centre for the network. Although some forty-six libraries reported substantial holdings in the social sciences and the humanities, they are generally not well-developed, and none of them has the matching resources and expertise as the Balme Library to operate as a switching centre. It is

a national role which the Balme Library would not find completely new. It may be recalled that it was entrusted with the responsibility for the compilation of a national union catalogue of "non-science" books but has not been able to pursue the project actively because of the perennial problems with staff and finance. With adequate staff and financial provision, the Balme Library should provide an effective co-ordinating service for the social-sciences and the humanities network.

In Nigeria, the national referral centre would obviously be the National Library which is already engaged in a number of co-ordinating activities as part of its functions. The switching centre for the STI network would be the Ministry of Science and Technology (until recently the National Science and Technology Development Agency - NSTDA) whose library, like the CRRL in Ghana, has been encouraging co-operation among the scientific and technical libraries in Nigeria. It is early yet to know what effect the recent organisational change would have on the library and its activities. But it is to be hoped that the change, if any, would be for the better.

Again as in Ghana, it is a university library that would provide the ideal setting for a switching centre for the social sciences and the humanities network. This would be the Ibadan University Library which has played a significant role in library development in Nigeria. It has the resources and the expertise to offer an effective switching service but sufficient provision would have to be made in terms of staff and financial support for the resulting additional responsibilities.

The proposed network has been planned for Nigeria at the national (i.e. Federal) level. Similar schemes would have to be planned at the State level to co-ordinate activities within each State, the level of operation (i.e. either Level 1 or Levels 1 and 2) being determined by the level of development of the library and information services within the

State. Whatever the levels of operation may be, the State networks must be planned so that they dovetail into the national network. Services (e.g. interlibrary lending) would normally be provided at the State level in the first instance. Requests which cannot be satisfied at that level would then be sent to the national referral centre. This would ensure effective use of available resources within the States and also avoid an over-burdening of the national service.

As was stated earlier, the national networks in Ghana and Nigeria would both initially operate at Levels 1 and 2. The early possibility of a Level 3 operation in the STI networks of both countries must be mentioned. This would be in the area of agriculture where, as would be expected in countries with economies that are traditionally agro-based, there are, particularly in Nigeria, a fairly substantial number of libraries specialising in agriculture. There is also the emerging awareness among the agricultural librarians in the sub-region for the need to co-operate in the provision and use of agricultural information. This is evidenced by the meeting of West African agricultural librarians and documentalists in Ibadan, Nigeria, in 1975, to launch the West African Centre for AGLINET (World-wide Network of Agricultural Libraries). Apart from the creation of country liaison centres and the decision that each country should compile a national union list of agricultural periodicals, which would cumulate into a regional union list, nothing much has come out of the meeting. This is so mainly because of the absence of national organisational frameworks within which the envisaged co-operative activities would be carried out. The proposed STI networks would be the appropriate organisations which would provide the nurturing base for what currently are the dormant nuclei of the agricultural information sub-networks.

10.2.5 Legislative Support for Library and Information Services

Adequate legislative provision has been emphasised as one of the important factors which contribute to the establishment and effective operation of library and information services. The necessary legislative requirements have been treated under the following headings: the provision of a national service; national co-ordinating bodies; bibliographical control; and professional associations, status and training of library and information personnel.

10.2.5.1 National Service and National Co-ordinating Bodies

The legislative requirements under these two categories constitute what may be called the "enabling legislation", or legislation which establishes the services and gives them authority to operate as such. In the context of modern library and information service planning, such legislation should provide for the creation of nationally co-ordinated services embracing all publicly provided libraries and information centres, and the creation also of co-ordinating bodies to plan the co-ordination. None of the countries has such legislation, the existing provision being for the creation of national public library services only. Legislation as has been recommended in support of the proposed National Councils and the national networks would help create nationally co-ordinated library and information services.

In addition to legislation establishing the services, rules and regulations would be needed to systematise the provision of the services. In networks, such rules and regulations would normally be formulated by the governing bodies and would define the objectives of the network, the responsibilities of the participants, and penalties for non-conformity.

Many of the traditional co-operative arrangements are known to have failed because of the absence of formally written agreements and, consequently, the lack of formal commitment on the part of the participants to their obligations. As the governing bodies of the proposed networks, the National Councils would have to draft suitable rules and regulations for the management of their respective networks.

Important as the rules and regulations would be to the running of the networks, another aspect of networking whose importance must not be under-estimated is what has been referred to as "social engineering", or the generation of an appreciation of the need for the networks and, in consequence, a willingness to participate in the programmes. Such an atmosphere may be created through a system of education which would help to promote an understanding of the complexity of the information transfer process and a conviction that answers to some of the problems involved may, at least, be found through co-operation. In the final analysis, however, it is proof of beneficial participation that will sustain interest in the networks.

10.2.5.2 Bibliographical Control and UBC

Legislative support for bibliographical control has been discussed in the broader context of Universal Bibliographic Control (UBC) whose requirements are:

- i) the existence of a national bibliographical centre;
- ii) a national bibliography; and
- iii) an effective legal deposit arrangement.

With the exception of Liberia, all the countries satisfy these basic requirements to a greater or lesser extent. Liberia only has a national bibliographical centre but without legal deposit laws and with no national bibliography, the usefulness of the centre is extremely limited.

The National Council for Liberia would have to ensure the institution of legal deposit laws for the country, and also the provision of facilities (staff, finance, equipment) to enable the centre to produce a national bibliography regularly.

A major problem which confronts all the national bibliographical centres is non-compliance with the deposit laws mainly by the small scale publishers/printers who often claim ignorance of the existence of the deposit laws. Although such claims may not be legally excusable, they often stem out of genuine ignorance. Osunkowa,⁽¹⁷⁾ for example, tells of some publishers/printers who visit the National Library of Nigeria to peddle their publications! A systematic programme of education in the form of lectures, conferences, meetings, etc. by the national bibliographical centres and the national library associations would help eradicate such ignorance. The educational programmes would be organised jointly with other institutions connected with the book industry. Book Development Councils, where they exist (as they do in Ghana and Nigeria), would be useful institutions with whom the programmes could be jointly organised.

The institution of the educational programmes should not obviate the need for deposit laws that are explicit in their intentions, and have effective systems for supervision and inspection. The ambiguities in the Ghana and Sierra Leone deposit laws regarding whose exact responsibility it is (i.e. between the "printer" and the "publisher") to effect the legal deposit provide legally exploitable loopholes and would need to be corrected. A serious drawback which would also need to be corrected is the exclusion of government publications from the provisions of the Ghana deposit laws. Like most developing countries, government publications form

(17) OSUNKOWA, G. Is our legal deposit defective? Nigerbiblios, 1(3) Jul 1976, 17.

the majority of Ghana's national literary output. Their exclusion therefore constitutes a serious check on the comprehensive collection of local publications.

Without specifying the time within which a publication has to be deposited after its issue, the deposit law of The Gambia also provides an avenue for evasion of the law. This inherent weakness would have to be corrected, and so would there be the need for a penalty clause to be included in the deposit law. The penalty would have to be sufficiently significant to act as a deterrent to wilful non-compliance and not as a preferred alternative to compliance. With fines of some £5 for non-compliance, the Ghana and Sierra Leone penalty clauses belong to the second option and would therefore need to be revised, with the Nigerian deposit law serving as an example. Its imposition of a fine of £50 and the additional order for the deposit to be made (or the payment of fees in lieu of the publications) should provide sufficient deterrence against wilful evasion.

The procedure for effecting legal deposit in Ghana would be simplified if it was centralised. In place of the present system whereby publishers/printers have to send six copies of their publications to six different places, all six copies could be sent to the Research Library on African Affairs which is the national bibliographical centre. The Research Library would then send copies to institutions which should receive them. This would make it administratively simpler for the publishers/printers to comply with the law, and would also facilitate the institution of claims from defaulting publishers/printers.

10.2.5.3 Professional Associations, Status and Training of Personnel

The professional associations in the sub-region (i.e. the Ghana, Nigeria and Sierra Leone Library Associations) have, in varying degrees of commitment and success, continued to pursue the interests of the profession and its members since the dissolution of the West African Library Association (WALA) in 1962. The associations have been particularly active, and largely successful, in fighting for the recognition of librarianship as a profession, and in gaining professional status and appropriate service conditions for their members.

In other areas, however, the associations have not had much success. An issue of primary concern in this respect is the fact that none of the associations has been able to obtain the legal recognition of their national governments. Although they cannot be accused of want of trying (the Ghana and Nigeria Library Associations, at any rate), they cannot totally escape blame for their unrecognised status. They have, generally, failed to project the image consistent with professional associations. A citable example is the inability of the Ghana Library Association to apply for registration as a professional body because of its failure to meet the requirements of the Professional Bodies Registration Decree, the Decree under which professional bodies may be registered in Ghana. The nature of an association - its dynamism or its inertness - depends substantially on its members, their attitude towards the association and the degree of their involvement in its activities. The ineffectiveness of the associations in the sub-region is therefore the direct result of the indifference of the members to the associations and what they stand for.

Representing the profession as they do, the library associations have important roles to play in the general development of the profession

and in programmes for the development of library and information services. These are roles that will become increasingly important particularly with the implementation of the proposed plans for the nationally co-ordinated development and sharing of the library and information resources. Their expertise would be needed in the drafting of national information policies, their representation on the National Councils and their various committees would be very important, and their involvement in the planning and implementation of educational programmes, both for the members of the profession and the users of the services alike, would also be necessary.

There are also several public relations activities in which the associations could engage to promote the cause of the profession and to create an understanding for its programmes among policy makers and the public at large. In the United Kingdom, for example, the Library Association has been able to arrange quarterly meetings with the minister responsible for library and information services, it has established useful contacts with interested members of parliament, it holds regular meetings with the appropriate civil servants, local government officials, etc. As it was recently remarked, "librarians in general talk too much to each other and not enough to influential policy makers. The way needs to be found to do it, when it does not yet exist." (18)

The library associations in the sub-region can play these important roles only when they are well-organised, are alive to their responsibilities and have the full recognition as the accredited representatives of the profession. The members have a significant part in bringing this about.

The cause of the profession and its members in The Gambia and Liberia would be better advanced if national library associations were

(18) HAVARD-WILLIAMS, P. The role of the library association in national library development. Keynote Address delivered at the Annual General Conference of the Nigerian Library Association, held at Kano, Nigeria, 2-6 December, 1980. (To appear in Nigerian Libraries).

established in these countries. This should be done at the earliest opportunity.

10.2.6 Financing of Library and Information Services

One of the important initial steps that the National Councils would have to take would be the adoption of fiscal policies that would ensure adequate financial support for the programmes of the networks. The false notion that networks could operate on little or no additional financial support has already been referred to elsewhere. The ultimate purpose of networking is the provision of services that are more efficient and more extensive than would be possible for any single library or information centre to provide. But financial provision should be made to create the conditions under which the improved services could be provided. The lack of such financial support has been the cause of the poor performance or the total failure of many networks and other co-operative ventures. The compilation of the union catalogues in Ghana has been held in abeyance because of problems with staff and finance.

As the review of the funding pattern of library and information services in the sub-region showed, one of the biggest problems facing the libraries and information centres is inadequate and irregular financial support. The debilitating effect that inadequate funding has on the services was also shown. Like almost all the libraries and information centres in the sub-region, the National Councils and the programmes of their networks will also be entirely government-sponsored. The importance of adequate funding to library and information services has been given repeated emphasis. All the same, it would need to be emphasised again that assured financial support for the networks (and indeed for the individual libraries and information centres of which the networks would be composed) would be crucial to the success of these proposals.

10.3 Document Resources

Document resources constitute an important attribute of a library and information network. Plans for their collaborative development and use should therefore be given prominence in the operations of a network. There should be plans for the collaborative acquisition, bibliographical organisation and accessibility of the document resources.

10.3.1 Co-operative Acquisition Programmes

The survey of existing document resources in the sub-region showed subject areas (including special collections) that were common to most of the libraries and information centres, particularly those in Ghana and Nigeria. Without any well-defined systems for the co-operative acquisition of the document resources, the incidence of unnecessary duplication could be very high. Although a few libraries in Ghana and Nigeria are engaged in some co-operative acquisition programmes, in the absence of formal organisational media under whose control and monitoring they would operate, the programmes have attained little success beyond their nominal existence. The proposed national networks would provide the co-ordination and monitoring through their Acquisition Committees, and co-ordination would be for document resources acquired through purchase as well as those obtained through exchange arrangements.

10.3.1.1 Acquisition by Purchase

Of the two most practised co-operative acquisition schemes (i.e. subject specialisation and joint purchase) subject specialisation would provide the more practical and realistic starting point for the co-ordinated

acquisition programme. This is because allocation of special subject areas would be based on the existing collections and fields of interest of the libraries and information centres. (In fact the greater number of the co-operative acquisition programmes reported on in the sub-region are on subject specialisation basis). The subject specialisation schemes would be supplemented with pre-purchase checking arrangements to avoid unnecessary duplication, especially of expensive items.

While allocation of the special subject areas would be carried out by the Acquisitions Committee (after extensive analyses of the existing document resources), the administration of the programme (i.e. the record-keeping, catalogues, etc.) would be carried out at the switching centres in the network. Thus, for The Gambia, Liberia and Sierra Leone, where the networks would operate at Level 1, the national referral centres would be the administrative or focal points for the programmes. In Ghana and Nigeria, where the networks would operate at Levels 1 and 2, the switching centres of the two networks (i.e. the STI and social sciences) would provide the immediate focal points for the networks, while co-ordination would be provided nationally at the national referral centres.

Other forms of co-operative acquisition, e.g. joint purchase of expensive collections or back-runs of periodicals could be undertaken as would be found necessary and convenient.

10.3.1.2 Acquisition by Exchange Arrangements

Publication exchange arrangements, particularly those with foreign institutions, would also have to be co-ordinated. As the review of the existing document resources showed, there is a large number of libraries and information centres, mostly in Ghana and Nigeria, which are engaged in

exchange arrangements with foreign institutions. In countries where dependence on imported publications is almost absolute, acquisition through exchanges offers a beneficial way of supplementing acquisition by purchase. Co-ordination should therefore be encouraged to avoid wasteful duplication.

The exchange arrangements would not have to be centralised. Each individual library or information centre would enter into its own arrangements. But the national referral centres would co-ordinate the exchange programmes by keeping records of all exchange arrangements, publishing data on exchanges and providing information and advice so as to eliminate waste, and maximise the usefulness of the exchange arrangements. The national referral centres would also be the national bibliographical centres for exchanges and would compile and circulate lists of available exchange material.

10.3.2 Bibliographical Organisation of Document Resources

The bibliographical organisation of document resources enhances the physical and intellectual accessibility of the resources and therefore constitutes an important activity of a library and information service. In a network, co-ordination of the bibliographical activities is essential to ensure uniformity and economy of effort. As has been shown by the review of existing resources, the bibliographical practices in the sub-region do not only lack co-ordination but they are also based on a multiplicity of classification schemes and cataloguing codes. The opportunities that centralised cataloguing (or cataloguing done by a central agency) offer for the adoption of uniform bibliographical processes, have been reviewed with regard to the prevailing conditions in the sub-region.

10.3.2.1 Centralised Cataloguing

Two main practised forms of centralised cataloguing have been reviewed: the establishment of processing centres, and the use of external services for printed cards. The establishment of processing centres in the sub-region now would be premature. Processing centres need to cater for a large number of participants and, in particular, handle a large number of publications to be viable. They also need to operate in reliable postal and communication environments. The statistics on book acquisitions collected over the survey period suggest that the rate of acquisition may not justify the establishment of processing centres, and neither could the postal and communication facilities be relied on to provide the level of efficiency of service which is necessary for the successful operation of processing centres.

The alternative to the establishment of processing centres would be the adoption of policies for the use of external services for printed cards. This could be undertaken as part of the co-ordinated acquisition schemes. The services of established agencies in Europe and America would be used, and since some 90% of the document resources of the networks would be obtained from Europe and America, in any case, subscription to the services for the small additional fee would be more cost-effective than the establishment of under-utilised processing centres.

The generalised use of the services would combine the advantages of centralised cataloguing with the opportunity for the so-called "small libraries" (i.e. the usually ill-staffed government, special, school and college libraries) to have better bibliographically organised document resources. For the professionally well-staffed libraries, the added advantage would be the reduced need for original cataloguing and therefore the opportunity for the staff to be deployed on other services.

The problems with the use of centrally produced cards have also been highlighted. These are mainly the resistance to change which may result from the reluctance to abandon entrenched cataloguing practices, particularly local nuances, for which the centrally produced cards may not cater; often the lack of co-ordination between the arrival of books and cards; and the integration of the new cataloguing system with the old one. But these are problems which are not insurmountable.

10.3.2.2 The Use of MARC

Developments in cataloguing practices are helping to overcome some of the problems associated with co-operative cataloguing, and the adoption of these practices in the sub-region would enhance the efficiency of the suggested co-operative cataloguing schemes. The use of MARC (Machine Readable Cataloguing) tapes would be recommended in this respect.

The interest that was shown in the use of the tapes in Nigeria seems to have petered out - probably because of the absence of a national body to promote a programme for their use. With the creation of the proposed National Councils, Nigeria, as well as the remaining countries, would have the right bodies to promote the use of the tapes. As has been shown, the adaptability of the tapes would permit their use in all the countries in spite of the limited accessibility to computers in some cases. In all the countries, the tapes would be used as part of the co-operative acquisition schemes, and would be co-ordinated nationally to provide the maximum benefit and also to reduce costs.

10.3.3 Accessibility of Document Resources

Programmes for the bibliographical organisation of the document resources should be developed concurrently with programmes that would ensure the physical accessibility of the document resources without which the networks would lose much of their relevance. Accessibility would be ensured through the existence of union lists and catalogues (or directory look-up systems); switching or referral centres; efficient communication systems; and equally efficient interlibrary lending arrangements.

10.3.3.1 Switching Centres

In the proposed national networks, the national referral centres would undertake the switching or referral services. In The Gambia, Liberia and Sierra Leone, all the referral activities would be confined to Level 1 since the networks would operate at that level only. In Ghana and Nigeria, however, the referral activities within each of the two networks (i.e. the STI and the social sciences and the humanities networks) would be undertaken by their respective referral centres (Level 2), while the activities of both centres would be co-ordinated by the national referral centres (Level 1).

10.3.3.2 Union Lists and Union Catalogues

The efficiency with which the switching centres perform their co-ordinating and referral functions would depend on the extent to which the necessary supporting conditions would be satisfied. Important for the efficiency of the referral services would be the existence of union lists

and union catalogues. Described as "navigational guides" to the document resources, they locate needed items within the networks and therefore constitute key elements in resource sharing.

Union lists and catalogues have had rather limited accessibility and use in the sub-region, the reasons being a possible lack of sufficient appreciation of their importance on the one hand, and the lack of the necessary support for their compilation on the other. The first supposition (which refers to local union lists and catalogues) may be justified on account of the fact that although a total of fifty-three libraries reported that they belonged to library systems that had more than one service point, only eleven either possessed, or had access to, local union catalogues of books (i.e. union catalogues for their own library systems). An even smaller number, seven, reported access to, or possession of, union lists of periodicals.

On the second count, it may be recalled that attempts to compile national union catalogues in Ghana have floundered because of difficulties with staff and finance. Generally when national union lists and catalogues have been compiled in the sub-region, they have been undertaken entirely out of the resources of the libraries which have accepted the responsibility for their compilation. In Ghana, for instance, the Central Reference and Research Library of the CSIR has been entirely responsible for the compilation of the Union List of Scientific Periodicals in Ghana, as well as the maintenance of the National Union Catalogue of Scientific and Technical Books, while the Balme Library, University of Ghana, has also been entirely responsible for the maintenance of a union catalogue for the social sciences and the humanities. Similarly in Nigeria, the Library of the International Institute of Tropical Agriculture was solely responsible for the compilation of the Union List of Scientific and Technical

Periodicals in Nigerian Libraries, until that responsibility was taken over by the National Library of Nigeria. Where the resources of these libraries are already limited (a situation common to most of the libraries), the compilation of the lists and catalogues runs into difficulties.

Union lists and catalogues are of such importance to the viability of networks that support for their compilation must be assured at all times. In the proposed networks, that support (staff, finance and equipment, as would be needed) would be provided by the National Councils who would ensure the uninterrupted compilation and maintenance of the union lists and catalogues within the networks.

10.3.3.3 Communication and Delivery Systems

The efficiency of the networks would also depend on their ability to transmit messages and documents quickly and reliably within the networks. Like most developing countries, the postal and communication services in the sub-region are generally slow and unreliable. Although some of the national governments have plans for the improvement of the services, they are essentially long-term considerations for situations which need short-term solutions.

Some of these solutions, like courier or delivery services, are being successfully used by some of the library and information networks in the developed countries, and would be equally useful to the developing countries as, indeed, the Benin/Ile-Ife/Ibadan courier service of Nigeria showed. Although it was more expensive to run than the use of the national postal service, it proved to be faster, more dependable and more efficient than the national service. With the participation of a larger number of libraries, running costs would be reduced and the scheme would

become cost-effective. The institution of courier services for the networks would be worth the serious consideration of the various National Councils.

What would also be worth the consideration of the National Councils would be the installation of such telecommunication equipment as telex and radiotelephones to supplement the national telecommunication facilities. Although their value as supplementary communication media has increased substantially over the past few years, very few libraries and information centres in the sub-region possess, or have access to, them. Their increased accessibility and use within the networks would facilitate interlibrary communication and increase the efficiency of the networks. The libraries and information centres in the networks need not all be linked by telex or radiotelephones but the switching centres and the principal nodes ideally should.

10.3.3.4 Interlibrary Lending

Also necessary for the success of a network is an efficient arrangement for interlibrary lending. Although the survey showed a fair amount of interlibrary lending in the sub-region, especially in Ghana and Nigeria, there is no proper co-ordination and direction. This is mainly because of the absence of recognised switching centres or central agencies, limited accessibility to union lists and catalogues and the unreliability of the communication services.

The referral centres of the proposed networks would now become the recognised central agencies and would co-ordinate both national and international interlibrary lending arrangements. Co-ordination, particularly in regard to national loan requests, would be decentralised.

In other words, it should be possible for a library to request an item directly if its location is known, and for the lending library to send it to the requesting library without the intervention of the central agencies. However, the borrowing and lending systems should be such that the central agencies would be notified of loans not transacted through them. For international loans, some amount of centralisation would be required to ensure that locally available items were not requested from abroad, and also to direct in-coming requests to the appropriate local sources. The central agencies would therefore have to be equipped with reliable national union lists and catalogues to enable them to perform their location and direction functions efficiently.

As it would not always be possible or advisable to send the original copies of requested items, facilities for the reproduction and reading of surrogates (i.e. photo-copies, microfilms, etc.) would be needed. For most of the libraries a photocopying equipment (which most of the libraries possess) and a simple mechanism for microreading would be adequate for their immediate reprographic needs. The switching centres or central agencies, on the other hand, would have to be equipped with a much wider range of reprographic equipment (e.g. microreader/printers, microreproduction equipment etc.) to meet the wider range of requests which they would have to deal with.

10.3.3.5 Co-operative Storage

The interlibrary lending arrangements must be backed by efficient document storage facilities. The available accommodation facilities for the library and information services in the sub-region were therefore surveyed to determine their adequacy, and the need for the establishment

of co-operative storage schemes.

Although only ninety-eight (or 66%) of the 148 responding libraries and information centres gave information on their accommodation needs, the returns gave a good indication of the accommodation facilities available in the sub-region. Of the responding number, thirty-one (or 32%) indicated serious accommodation problems. Most of them are government, special, and school and college libraries which have been established only recently. But because of a general failure to relate the importance of suitable physical environment to the efficient functioning of library and information services, sufficient provision had not been made for them and they had therefore started with the accommodation problem. An appreciation of this basic relationship would solve most of the so-called "serious" accommodation problems. The establishment of co-operative storage schemes in the sub-region would therefore not seem necessary at this stage.

10.4 Users

10.4.1 User Surveys

As the ultimate beneficiaries of the services of library and information networks, users constitute key elements in the networks. The satisfaction of their needs should therefore be the primary objective of the networks.

User surveys, which help in determining what those needs are, have had very little part to play in the provision of library and information services in the sub-region. Only eighteen (12%) of the responding 148 libraries and information centres reported having carried out user surveys. Of these, the majority have been concerned more with the managerial aspects of the provision of the services and trends in the use of the library stock than with trying to ascertain the needs of the users.

Although such user-orientated services as current awareness, abstracting and indexing, and selective dissemination of information are provided by some of the libraries and information centres, there is no guarantee that they are meeting the needs of the users. User needs do not remain static; they change with changing circumstances. It is only through regular user surveys that current needs or interests would be determined. User surveys would have to feature more prominently in the provision of library and information services in the sub-region if the services are to be of maximum benefit.

10.4.2 Provision of Services

10.4.2.1 Formal Sources of Information

A user's information needs may be satisfied through two main sources: formal sources (i.e. through document resources - the primary, secondary and tertiary sources), and informal sources (i.e. through private correspondence, attendance at meetings, conferences, etc). As disseminators of information, library and information services should be concerned with facilitating users' accessibility to both sources of information.

In addition to the normal services provided, most of the libraries and information centres in the sub-region also provide alerting or current awareness services which are designed to draw the attention of their users to formal document resources which may be relevant to their needs. These services range from the routing of periodicals and the circulation of books to the compilation of bibliographies and the provision of SDI, current awareness and abstracting and indexing services. Some of the libraries and information centres belong to international information systems, thereby increasing the range of the current awareness services they provide.

These are absolutely necessary services, the provision of which must be encouraged and pursued as important functions of the networks. It must be stressed again that these services must be related to the needs of the users if they are to be useful.

An important sequel to the provision of the current awareness services is the provision of physical accessibility to the document resources when required. It would serve little useful purpose if users' attention were to be drawn to the existence of documents to which they could not have physical access. Translations of foreign articles should be provided when needed, and originals or photocopies of requested items should be made available either from the library or information centre's own resources, or through interlibrary lending arrangements.

The increase in the number of languages used in the transfer of information has meant an increase in the number of translations that would be required. In addition to the translations services available in Europe and America, some local translations facilities are provided by some of the libraries and information centres in Ghana, Liberia and Nigeria. These are useful supplements to the international facilities and steps should be taken to co-ordinate the national efforts. The creation of national translations services would eliminate duplication of local efforts and would also ensure the accessibility of the services to a greater number of users.

10.4.2.2 Informal Sources of Information

Like most services elsewhere, the libraries and information centres in the sub-region have concentrated their efforts more on the formal information transfer process than on the informal process. The concepts of "invisible colleges" and "technological gatekeepers" have demonstrated the

value of informal information transfer. Librarians and information scientists in the sub-region should be concerned with this aspect of information transfer too, and should engage in activities that would encourage the informal transfer process. The dissemination of information on forthcoming conferences, seminars and meetings, directories of research institutions, lists of research workers, and directories of on-going research, etc. would encourage the informal information transfer process, and would also help in avoiding unnecessary duplication of research programmes. Again, knowledge of users' needs and interests would be useful in directing the right information to the right users or user groups.

10.4.2.3 Automation of Services

With the exception of The Gambia, a number of libraries and information centres in the sub-region have access to computers. In spite of this, there has not been much use of the computer in the provision of library and information services. Out of a sub-regional total of twenty-nine libraries and information centres which have access to a total of forty-one computers, only four (one in Liberia and three in Nigeria) have automated some of their services. A more extensive sub-regional use of the computer is planned, though, and by 1985, sixteen more libraries expect to have automated some of their services, while two expect to have increased the range of their services currently automated.

A study of the projected use of the computer shows a pronounced inclination towards the automation of such house-keeping activities as acquisition, cataloguing, periodical processing and circulation systems. Despite its advantages, automation can be an expensive process, and a decision to automate any library and information activity should be based

on a careful analysis of its usefulness and cost-effectiveness - and not on the desire to automate. The planned automation of the house-keeping activities of some of the libraries and information centres could prove to be unjustifiably expensive (in terms of their cost-effectiveness) if they were undertaken on an individual library or information centre basis. If, on the other hand, they were pursued co-operatively, the automated programmes would offer the libraries and information centres in the sub-region a cost effective way of taking advantage of modern processes and in improving the quality and extent of their services. The co-operative use of MARC tapes in acquisition and cataloguing programmes has already been suggested. The further use of the computer in the provision of national abstracting and indexing services has also been suggested for Ghana and Nigeria where the existing conditions would favour such use.

Other ways in which the computer would be found of immediate, general use would be in the production of union lists, union catalogues, directories, and "listing" services of similar nature. These are relatively simple computer operations which the sub-region has the facilities and the expertise to undertake. As sources of information, these "listing" services get dated quickly and therefore need constant revision and updating to retain their currency and therefore their usefulness - a task for which the computer is aptly suited. The second editions of the Ghana and Nigerian union lists of scientific periodicals would not have taken ten and three years respectively to appear if they had been automated. Although the second edition of the Ghana union list was published in 1976, and that of Nigeria in 1973, none of them has been revised since, and neither have any supplements been issued. Their usefulness as sources of current information remains very questionable. The early automation of the "listing" services, particularly the national union lists and catalogues, would be recommended as a matter of urgency.

10.4.3 User Education

The user has been identified as the focal element in library and information systems and networks. He should therefore be able to explore fully the library and information resources provided for him often at considerable expense and effort. His inability to do so effectively has necessitated the institution of user education programmes and the consideration of these programmes as an essential part of a library and information service. User education programmes in the sub-region have been discussed under the following three levels of provision: university, pre-university and post-university levels.

10.4.3.1 User Education at the University Level

User education programmes have generally been neglected in the sub-region. Out of the responding 148 libraries and information centres, only fifty (34%) provide user education programmes. Of these, the majority (twenty-one: (42%)) are academic libraries (including Faculty and Institute libraries). The programmes offered by the academic libraries are mainly the "customary" introductory talks and tours organised in groups for new students at the beginning of the academic year. Only four of the twenty-one libraries offer anything that goes beyond the rudimentary level of talks and tours, to include organised courses.

Because of the under-developed pre-university library systems in the developing countries, university libraries offer the best opportunity for the introduction of systematically organised user education programmes, and for the training of what are cadres of potential users of information products. User education at the university level should therefore be given

greater consideration and attention than it is being given now. The form of any two user education programmes may not be exactly the same but the essential elements should feature in all programmes if they are to be beneficial. The (British) Library Association's three-point plan (of an: initial introduction, followed by two graduated courses at the appropriate stages) presents an ideal framework around which individual programmes could be fashioned. The universities should consider appointing Information Officers who would be responsible for the planning and execution of the user education programme. This is being followed by most universities in Europe where it has been found to be a useful policy.

The university authorities should also consider making user education courses compulsory. Experience has shown that the programmes are taken more seriously when they are compulsory, examinable and are made to count towards final examinations. The co-operation of the university authorities would be needed in the adoption of this policy as indeed their co-operation, as well as those of the Faculties and Institutes, would be needed in the planning and implementation of the user education programmes.

10.4.3.2 User Education at the Pre-university Level

With their under-developed library systems, most of the institutions in this sector lack the resources and the personnel to organise user education programmes. Of the fifty libraries and information centres which offer user education programmes, eight (16%) are school and college libraries, and represent the small number of such libraries which are staffed by trained librarians. The user education programmes offered consist of talks and conducted tours.

The main thrust of pre-university user education programmes would best be provided at the national level as part of co-ordinated national plans for the development of library and information services. The conditions which favour the institution of user education programmes must be created to make the implementation of the programmes possible - without libraries and without personnel, user education programmes cannot be implemented.

The present efforts of the public library systems in The Gambia, Ghana and Sierra Leone in assisting in the development of school and college libraries are most useful and must be given the fullest support and encouragement. The public library system of Liberia, which at present has no service of similar nature, should be given the necessary support to establish one. In The Gambia and Sierra Leone, the programmes could continue to be administered as "services" of the public library systems. However, in Ghana, where there is a much greater number of schools and colleges, there would seem to be the need for the "service" to be expanded into a unit within the Ministry of Education, and to make it solely responsible for the development of library services in the pre-university sector. As in the existing arrangements in Nigeria, the unit would be directly responsible to the Ministry of Education (and no longer to the Ghana Library Board), and would operate under the direction of professionally qualified staff - with the necessary financial and manpower support.

10.4.3.3 User Education at the Post-university Level

User education at the post-university or "professional" level is conducted mainly on an individual library basis, and takes the form of short talks and tours of the particular government, technical or research libraries. These are usually conducted for new members of staff.

Occasionally, seminars are used by some of the libraries to supplement the talks and tours.

The varied nature of the user population, the diversity of interests and the absence of the student/teacher atmosphere of educational institutions make the organisation of user education programmes at this level more difficult than at the others. The system of talks, lectures, and seminars would continue to constitute the pattern of user education at this level. As a new dimension, the appropriate national institutions would have to be involved in the planning and implementation of the programmes at the national level. Planned under the auspices of the National Councils, the various higher institution libraries, the departments of library studies and, particularly, the library associations, would all participate in programmes that would help create among the user population an awareness of the extent of the available library and information resources and how they could be effectively used.

10.5 Manpower

The successful operation of the proposed networks will depend on the availability of trained staff to plan and implement the programmes. Staff education and training programmes, based on analyses of the manpower resources, should be pursued systematically in order to ensure the availability of the required staff.

10.5.1 Availability of Trained Staff

One of the features common to most library and information services in the developing countries is the dearth of professionally trained librarians and information scientists. The sub-region bears this trait too as the survey

results have shown. This is particularly so in The Gambia where only one (14%) of its seven responding libraries has professionally trained staff. In Ghana, thirty-seven (55%) of the sixty-seven libraries and information centres are professionally staffed, while eleven (65%) out of Sierra Leone's seventeen libraries, six (86%) out of Liberia's seven libraries, and forty-eight (96%) out of Nigeria's fifty responding libraries are professionally staffed.

In all the countries, the least professionally staffed are the so-called "small libraries" - the government, special, technical, and school and college libraries - most of which are left to be run by untrained staff who are content to operate the libraries without recourse to classification schemes, cataloguing rules, catalogues or indexes of any kind. The smallness of these libraries should, of course, not be made to belittle their importance to national development. The staff training and development programmes of the national networks should pay particular attention to the training of the staff in these sectors in order to make the libraries useful and effective links in the networks.

10.5.2 Staff Requirements and Staff Education and Training Programmes

The projected staff requirements of the libraries and information centres indicate substantial increases in the number of both professional and sub-professional staff in all the countries by 1984/85. But not all the countries are pursuing staff education and training programmes that would ensure the attainment of the estimated requirements.

According to the estimated requirements, The Gambia, for example, would need an average of two professional librarians a year for the next five years. Only one is currently being trained, with no immediate provision for the training of additional staff. Ghana would need some

twenty-eight trained librarians a year. The Department of Library & Archival Studies, University of Ghana, produces, on the average, seven professional librarians a year. There would also be an annual requirement of three information scientists for the next five years, as well as an estimated additional abstractor/indexer. The Department has no facilities for the training of these categories of staff. They would therefore have to be trained elsewhere. However, there is no national programme to meet these requirements. In Liberia, the national requirements are for an average of three professional librarians and one information scientist a year for the next five years. Liberia has no local facilities for the training of professional librarians and information scientists and would therefore have to depend on external training facilities. There is no articulate national training programme towards that goal.

According to the estimates, Nigeria would need well over sixty trained librarians a year. The two library schools which currently train professional librarians (Ahmadu Bello and Ibadan) produce, between them, an average of fifty-one librarians a year. For Nigeria, the situation is likely to improve when the two new library schools (at Bayero and Maiduguri Universities) start producing professional librarians. (There are also two schools planned for Nsukka and Benin). Although Nigeria has no local facilities for the training of information scientists, it has a more open policy for the training of librarians and information workers and with good co-ordination of training programmes it should be able to meet the national requirement for information scientists. Sierra Leone's estimated national requirements are for an average of three trained librarians a year. There are no local facilities for the training of professional staff but Sierra Leone has a policy of training the staff abroad which, if pursued at the current rate of about three a year, would match the national requirements.

The training programmes for the sub-professional staff also follow a similar pattern of current output being hardly sufficient to meet projected national requirements. The exception is Liberia which is producing an excess of sub-professional librarians.

The discrepancies between the supply and demand of librarians underline the suggested need for the adoption of national staff training and development programmes based on systematic analyses and monitoring of the available manpower resources. Co-ordination of the training programmes at the national level would give a better overview of national requirements and ensure the channelling of the training and development programmes in the right direction. National co-ordination would be provided by the National Councils who would also have to adopt immediate steps to ensure that the projected national staff requirements would be met as far as possible.

10.5.3 Teaching Programmes in the Sub-region

The available local facilities for the training of librarians have been reviewed with regard to the staffing, and the teaching programmes, of the library schools. The schools are: the Department of Library and Archival Studies, University of Ghana, Legon; the four library schools in Nigeria: University of Ibadan, Ahmadu Bello University, Bayero University and University of Maiduguri; and in Liberia, the Institute of Librarianship.

With the exception of the Department of Library Studies, University of Maiduguri and the Institute of Librarianship, the rest satisfy the minimum recommended conditions in respect of the staffing of library schools, viz, qualifications (academic and professional) of the teaching staff, adequacy of staff (in terms of staff/student ratio), and the use of

part-time lectureships in enriching the value of the teaching programmes. The Department of Library Studies, University of Maiduguri currently has a full-time staff of two (the recommended minimum is four), while the entire teaching programmes of the Institute of Librarianship are offered on part-time basis by three practising librarians. Maiduguri is one of the two library schools recently established in Nigeria and may still be experiencing the "teething problems" usually encountered by new establishments. It is to be hoped that the problems will soon be solved. As regards the Institute of Librarianship, the decision of the University of Liberia to absorb it in 1983/84 would be endorsed as the right one in the interest of the development of library and information services in Liberia.

Two specific aspects of curriculum content have been discussed: the reflection of the needs of "African librarianship" in the teaching programmes of the library schools, and the concept of a core curriculum for the schools. On the former, the concern of the library schools to reflect the peculiar problems relating to the practice of librarianship in Africa has been shown in the inclusion of specific topics of particular local interest in their curricula, and the publication of research reports, conference proceedings, etc. on topics of related interest. Of special interest are the recommendations resulting from the 1974 Dakar Conference organised by the heads of schools in Sub-Sahara Africa to discuss ways in which the needs of the region would be reflected in the teaching programmes. Unfortunately, the recommendations have as yet not been implemented. A revival of interest in the recommendations and their implementation would be a significant step forward.

The concept of a core curriculum has been discussed with particular reference to its relevance to the developing countries. Because most of the

developing countries lack sufficiently developed resources (or the economic capability) to establish three separate institutions for the teaching of library studies, information science, and archival studies, a curriculum embracing all three would not only obviate the need for three schools but it would also emphasise the integrity of what is basically a single profession. The concept has been incorporated into the curricula of Ibadan and Legon, particularly Legon which offers courses in both library and archival studies. The incorporation of the concept into the curricula of all library schools in the sub-region should be strongly recommended.

The teaching of courses in information science in the library schools should also be strongly recommended. It is now being offered by both Legon and Ibadan as one of the subjects in their postgraduate programmes in library studies. The rapid developments in this area of information handling would justify a more detailed study of the subject. The establishment of courses in information science in the library schools should therefore be encouraged and given the necessary support.

10.5.4 Continuing Education

Continuing education may take several forms and serve several purposes. In the sense that it provides the opportunity for transfer from one level to the next through full-time or part-time courses, there is an imbalance in the opportunities which the sub-region offers. While the professional librarians and information scientists have virtually unlimited opportunities for advancement, the sub-professional staff can hardly advance beyond their initial qualification stage. This is a situation which calls for an urgent review and correction. Ahmadu Bello University in Nigeria and Loughborough University in England are proofs that appropriate formal continuing education programmes can be provided

for the sub-professional librarians. The implementation of similar programmes by the library schools in Ghana and Nigeria would seal the gap in the existing facilities for education for librarianship in the sub-region.

Continuing education in the form of short courses, seminars, conferences, etc. meant to keep qualified personnel abreast of developments has not been given as much attention as necessary, in spite of recent developments in the provision of library and information services. The organisation of these programmes should be more actively pursued as the joint responsibility of the educators and practitioners of the profession alike. Committees comprising representatives of the library associations, the national libraries and library schools should be appointed to plan and implement the courses. Such committees would operate under the auspices of the National Councils.

Staff exchanges and visits are also an important form of continuing education. They aid the acquisition of new skills and experiences, and have the added advantage of promoting an atmosphere of confidence and understanding among participating institutions - an atmosphere which is particularly useful in network organisation. Of the three levels at which staff exchange programmes may be organised (i.e. the international, regional and national), often the least regarded are exchanges at the national (i.e. local) level. However, they would be the most useful in generating the congenial atmosphere which would also be necessary for the success of the proposed national networks. (Incidentally, they are also the least complicated to organise). National staff exchanges and visits would have to be encouraged as part of the development programmes of the national networks. They would be supplemented with regional and international exchanges and visits as they become available.

10.6 Co-operation at the Sub-regional Level

The discussions have so far been concerned more with activities at the national, rather than at the sub-regional, level. This is because the successful implementation of sub-regional co-operative activities would depend on the effective co-ordination of national services. As Gelfand ⁽¹⁹⁾ has rightly observed, "when library co-operation is firmly and widely established on a national level, international co-operation will follow".

The review of the library and information services in the sub-region has shown the absence of properly organised national schemes for the acquisition, bibliographical organisation and accessibility of document resources. Under these conditions, sub-regional co-operation in any of these activities would have very little chance of success. Attention should be directed towards the creation of effective national schemes as a necessary condition for successful co-operation at the sub-regional level.

Assured of these favourable national conditions, co-operation at the sub-regional level would also (like co-operation at the national level) depend on the appreciation of the need, and with it the willingness to co-operate; a delineation of responsibilities (i.e. the form in which the co-operation would take); and a formal organisation within which to co-operate.

The need for sub-regional co-operation should not be any different from that for national co-operation, and that is, the inability of any one nation, even with its combined document resources and services, to satisfy the sum total of the national information requirements. Co-ordination of sub-regional services would prove as beneficial as co-ordination of national services. The method of co-ordination would,

(19) GELFAND, M.A. Co-operative acquisition schemes and the developing countries. Unesco Bull.Lib., 19(6) Nov-Dec 1965, 296.

however, differ in some cases. This would be especially so in the case of co-operation in the acquisition of document resources. The recommended methods for national schemes (i.e. pre-purchase notification, subject specialisation and joint purchase) would be unsuitable, and indeed unrealistic, at the sub-regional level. Co-operative acquisition at this level would be more realistic if acquisition was limited to the national literary output. In other words, each country would take on the responsibility of ensuring a comprehensive collection of its national literary output, interpreted in its widest sense to include all forms of publications on or about the country, and making them available through the national interlibrary loan channels when requested by another country. The locally unavailable non-sub-regional publications would continue to be obtained through established sources such as the British Library Lending Division.

An activity which could lend itself to sub-regional co-operation is the use of MARC tapes. The tapes have already been recommended for use at the national level in two out of the three possible ways in which they could be used in the sub-region now. The third and ultimate way in which the tapes could be used entails a sophistication and level of infrastructural development which the sub-region lacks at the moment. But with the rate of development in the sub-region, particularly in Nigeria, it should not be too long before that level of development was reached. The tapes could then be bought and processed in the sub-region with Nigeria as the sub-regional centre. In addition to speeding up bibliographical processes and enhancing uniformity in bibliographical description, the tapes would be much cheaper to use this way than they would at the national level because of a much wider sharing of costs. This use of the tapes would also be a better and more feasible alternative to the establishment of processing centres in the sub-region.

Other areas in which sub-regional co-operation could be achieved are in education and staff exchange programmes. Some amount of co-operation already exists in the area of education. The Department of Library and Archival Studies, University of Ghana, has, for instance, been serving as a regional training centre for archivists from English-speaking African countries since 1974. The training of librarians from countries in the sub-region without local training facilities could also be pursued as a sub-regional staff training policy. In the review of the available manpower resources in the sub-region, it was noted that in The Gambia, Liberia and Sierra Leone professional librarians were trained mainly outside the sub-region. Where the courses are offered by library schools in the sub-region, training, especially the basic professional training, should be undertaken in the sub-region as far as possible. Local training has the advantage of exposing trainee librarians to local conditions and problems - situations that they would face in real professional life. Appropriate advanced or specialised courses could later be obtained outside the sub-region as necessary. As part of a continuing education programme, sub-regional staff exchange programmes could also be arranged.

A formal organisation would be needed to co-ordinate these activities and also to provide a forum for the planning and implementation of other sub-regional co-operative programmes. The organisation which could provide this co-ordination is ECOWAS (the Economic Community of West African States), a sub-regional body which was established in 1975 to promote the economic and social development of its members. ECOWAS consists of sixteen West African States and has its Headquarters and Executive Secretariat ⁽²⁰⁾ in Lagos, Nigeria. Under the auspices of ECOWAS, a

(20) The Executive Secretariat is the principal body for the execution of the programmes of the community. It implements the decisions of the Council of Ministers and the Conference of the Heads of State and also initiates the formulation of policies for the functioning and the development of the Community.

committee comprising representatives of the proposed National Councils could be formed as a permanent body to plan and co-ordinate the sub-regional co-operative activities.

As an organisation which is concerned with the promotion of co-operation within the sub-region, ECOWAS would seem the most appropriate body to co-ordinate the sub-regional library and information activities. In suggesting this role for ECOWAS, the attention of the national governments is being drawn again to the importance of information to social and economic development, and also to their role in its development and use. Their individual national acceptance of the primacy of information would, in ECOWAS, be given a collective acknowledgement.

10.7 General Conclusion

The purpose of this study has been to investigate the possibilities for the sharing of library and information resources in English-speaking West Africa. In doing so, the existing resources have been reviewed to determine their extent, strengths and weaknesses. The results have formed the bases for the recommendations whose wide-ranging nature is an index to the complexity of the information transfer process, and an affirmation of the need for the adoption of common strategies for the development and use of the resources.

Resource sharing has its promise. But it has its problems too, and the sub-region will not be exempt from them. However, the problems are not insuperable and with the right amount of effort, dedication and understanding from all concerned, resource sharing in the sub-region should be a feasible and beneficial undertaking.

BIBLIOGRAPHY

1. ADEGOKE, A. The evolution of libraries in Nigeria. Int.Libr.Rev., 5(4) Oct 1973, 407-452.
2. African Book World and Press; a directory.
Compiled by the African Book Publishing Record.
Editor: Hans M.Zell. Oxford, Hans Zell Publishers Ltd., 1977.
3. AGUOLU, C.C. Bibliographic problems in Ghana, Nigeria and Sierra Leone. Int.Libr.Rev., 5(2) Apr 1973, 199-207.
4. AGUOLU, C.C. The foundations of modern libraries in Nigeria. Int.Libr.Rev., 9(4) Oct 1977, 461-483.
5. AGUOLU, C.C. Library associations in West Africa. Int.Libr.Rev., 8(1) Jan 1976, 23-31.
6. AGYEI-GYANE, L. Directory of special libraries in Ghana. Accra, Central Reference and Research Library, CSIR, 1974.
7. AJE, S.B. Co-operative acquisition programme in Nigeria. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G. Saur, 1979, 24-32. (IFLA Publications, 14).
8. AJE, S.B. National libraries in developing countries. In Advances in librarianship, vol.7, 1977, edited by Melvin J. Voigt and Michael H.Harris. New York, Academic Press, 1977, 105-143.
9. AJE, S.B. Workshop on ISBD(M) and ISBD(S) in Nigeria. Unesco Bull.Libr., 30(1) Jan-Feb 1976, 62.
10. AJIA, S.A. Library education in Nigeria: a study of factors that have influenced its development. A Master's thesis submitted.... for the award of Master of Arts of the Loughborough University of Technology, October 1977. (Unpublished).
11. ALLEN, T.J., PIEPMEIER, J.M. and COONEY, S. The international technological gatekeeper. Tech.Rev., 73(5) 1971, 37-43.
12. AMBARTSUMIAN, V. Address (delivered by the President of ICSU to the Intergovernmental Conference for the Establishment of a World Science Information). In Final Report (of the) Intergovernmental Conference for the Establishment of a World Science Information System, Paris, 4-8 October, 1971. Paris, Unesco, 1971.

13. ANDERLA, G. EURONET and the changing European information environment. In Commission of the European Communities. Second European Congress on Information Systems and Networks, Luxembourg, 27-30 May, 1975. München, Verlag Dokumentation, 1976, 65-76.
14. ANDERLA, G. Information in 1985; a forecasting study of information needs and resources. Paris, OECD, 1973.
15. ANDERSON, D. International standardisation of cataloguing and bibliographical records. Unesco Bull.Lib., 27(2) Mar-Apr 1973, 66-71, 107.
16. ANDERSON, D. Universal Bibliographic Control and the information scientist. Inf.Scientist, 10(1) Mar 1976, 11-22.
17. ARMSTRONG, C. Wesley. A short history of libraries in Liberia. Monrovia, University of Liberia, 1973.
18. ARMSTRONG, J.C. Current American acquisition policies for African materials. In Proceedings of the SCOLMA Conference on Progress in African Bibliography [held at the] Commonwealth Institute, London, 17-18 March 1977. London, SCOLMA, 1977, [1-8].
19. ARNTZ, H. Planning of national overall documentation, library and archives infrastructures. Paris, Unesco, 1974. (COM/74/NATIS/Ref.2).
20. ASHEIM, L. Librarianship in developing countries. Urbana, Ill, University of Chicago Press, 1966.
21. ASHWORTH, W. The information explosion. Libr.Ass.Rec., 76(4) Apr 1974, 63-68, 71.
22. AVRAM, H.D. Bibliographic and technical problems in implementing a national library network. Libr.Trends, 18(4) Apr 1970, 487-502.
23. BARKER, R. and ESCARPIT, R. The book hunger. Paris, Unesco, 1973.
24. BECKER, J. Library networks. Law Libr.J., 63(4) Nov 1970, 526-531.
25. BECKER, J., ed. Proceedings of the Conference on Interlibrary Communications and Information Networks...Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970. Chicago, American Library Association, 1971.
26. BECKER, J., ed. Working Group summary on network needs and development. In Proceedings of the Conference on Interlibrary Communications and Information Networks...Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970. Chicago, American Library Association, 1971, 13-17.

27. BECKER, J. and OLSEN, W.C. Information networks. In Annual Review of Information Science and Technology, vol.3, edited by Carlos A. Cuadra. Chicago, Encyclopaedia Britannica, 1968, 289-327.
28. BEDIAKO, A.O. Reading habits of students at the University of Cape Coast. Thesis submitted for the Fellowship of the Library Association, July 1968. (Unpublished).
29. BELL, S. Library development in Africa; a study of its foundations and administrative policy in Ghana, Nigeria, Sierra Leone, Uganda, Kenya, Tanzania and Zambia. A thesis presented for Part II of the Diploma of Librarianship, University College, London, September 1967. (Unpublished).
30. BENGE, R.C. Return to West Africa: some notes on library education in Africa. Nigerian Libr., 9 (1 & 2) Apr & Aug 1973, 97-100.
31. BERNAL, J.D. The social function of science. London, Routledge, 1938.
32. BOADI, B.Y. The provision of scientific and technical information in Ghana with particualr reference to the requirements of UNISIST. A Master's dissertation submitted... for the award of Master of Library Studies of the Loughborough University of Technology, May 1977. (Unpublished).
33. BRIQUET DE LEMOS, A.A. On the feasibility of processing centres in Brazil. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 99-104. (IFLA Publications, 14).
34. BROOME, E.M. Do developing countries need processing centres? In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L. Vervliet. München, K.G.Saur, 1979, 105-114. (IFLA Publications, 14).
35. BROOME, E.M. Library manpower planning. Aslib Proc., 25(11) Nov 1973, 400-414.
36. CANADA. National Library. Canadian Union Catalogue Task Group. Final Report to the National Librarian of Canada. Ottawa, National Library of Canada, 1976.
37. CLARKE, D.A. Library co-operation in the acquisition of materials from Africa, with special reference to the implications for the SCOLMA scheme of the UGC Report on "Capital Provision for University Libraries." In Proceedings of the SCOLMA Conference on Progress in African Bibliography [held at the] Commonwealth Institute, London, 17-18 March 1977. London, SCOLMA, 1977, [1-8].

38. COBLANS, H. An inflation of paper; a note on the growth of literature. Her.Libr.Sci., 10(4) Oct 1971, 349-356.
39. COBLANS, H. Librarianship and documentation: an international perspective. London, Andre Deutsch, 1974.
40. COOPER, A. Average prices of British academic books, 1977. Loughborough, Loughborough University of Technology, Library Management Research Unit, 1978. (LMRU Report, no.11).
41. COOPER, A. Average prices of British academic books, 1978. Loughborough, Loughborough University of Technology, Library Management Research Unit, 1979. (LMRU Report, no.14).
42. COOPER, A. Average prices of British academic books, 1979. Loughborough, Loughborough University of Technology, Department of Library and Information Studies, Centre for Library and Information Management, 1980. (CLAIM Report, no.2).
43. COTTON, I.W. Network management survey. Washington, D.C., National Bureau of Standards, 1974. (NBS Technical Note 805).
44. DEAN, A.J.E. Organisation and services of university libraries in West Africa. In Comparative and international librarianship; essays on themes and problems, edited by Miles M. Jackson. London, Bingley, 1970, 113-137.
45. DE GENNARO, R. Austerity, technology, and resource sharing. Libr.J., 100 (10) May 1975, 917-923.
46. DE SOLLA PRICE, D.J. The ends of scientific communication. In Communication in science, edited by Anthony De Reuck and Julie Knight. London, Churchill, 1967, 199-209.
47. DE SOLLA PRICE, D.J. Little science, big science. New York, Columbia University Press, 1963.
48. DIPEOLU, J.O. Problems of acquiring African published materials; the experience of African university libraries. In Publishing in Africa in the seventies; proceedings of an International Conference on Publishing and Book Development, held at the University of Ife, Ile-Ife, Nigeria, 16-20 December 1973, edited by E.Oluwasanmi, et al. Ile-Ife, University of Ife Press, 1975.
49. DRUCKER, P.F. Technology, management and society. New York, Harper and Row, 1970.
50. DUGGAN, M. Legal and contractual aspects of interlibrary and information service operations. In Proceedings of the Conference on Interlibrary Communications and Information Networks..... Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 219-222.
51. DUGGAN, M. Library network analysis and planning (LIB-NAT). J.Libr.Automation, 2/3, Sep 1969, 157-175.

52. ESEZOBOR, J.E. A critical examination of a functional network of courier service for a national lending service. In Nigeria.National Library. Meeting of the Working Group on Interlibrary Lending, Ile-Ife, April 24 and 25th, 1974, 15-22. (National Library Publication no.30).
53. EVANS, E.J.A. Liberia libraries. Paris, Unesco, 1967. (Serial No.198. MBS. RD/COM).
54. EVANS, E.J.A. A tropical library service; the story of Ghana's libraries. London, Andre Deutsch, 1964.
55. FETTERMAN, J. Resource sharing in libraries - why? In Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973 at Pittsburgh, Pennsylvania.... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 1-33.
56. FINZI, J.C. Processing. In Resource sharing in libraries; why,how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973, at Pittsburgh, Pennsylvania.... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 109-117.
57. FJÄLLBRANDT, N. User instruction in the libraries of the technological universities in Scandinavia; some recent developments. IATUL Proc.,7(2) Dec 1974, 54-58.
58. FLOOD, R.A. The British Council in Africa: its role and its libraries. Libr.Mater.Afr.,10(1) Jul 1972, 14-16.
59. FLOOD, R.A. [A report on the] Gambia library service. [London, The British Council], April 1970. (Typescript).
60. FREEDMAN, M.J. Processing for people. Libr.J.,100(1) Jan 1976, 189-197.
61. GAMBIA. National Library. Report on Course in Basic Librarianship for Library Assistants/Clerks in Departments and Institutions... from 6th to 15th December, 1978. Banjul, The National Library, [1978].
62. GAMBIA. National Library. Report on the [Second] National Library Workshop in Basic Librarianship for Primary School Teachers, 2-12 January, 1979. [Banjul, The National Library, 1979].
63. GELFAND, M.A. Co-operative acquisition schemes and the developing countries. Unesco Bull.Lib., 19(6) Nov-Dec 1965, 291-296.
64. GHANA. Five-Year Development Plan, 1975/76-1979/80. Accra, Ministry of Economic Planning, 1977.

65. GHANA. Scientific and Technical Information (STI) Ghana: role of the CSIR in developing a national STI network; an action report by the Joint Consultative Committee of the CSIR/US - National Academy of Sciences/International Development Research Centre (Ottawa). Accra, CSIR, 1976.
66. GHANA. University. Department of Library and Archival Studies. Prospectus, 1979-1980. Legon, Department of Library and Archival Studies, 1979.
67. GHANA LIBRARY ASSOCIATION. Two-year Report of the Council for the period 25th July - 28th August 1966, and 28th August 1966 - 30th July 1967. Ghana Libr.J., 2(2), 1968, 68-73.
68. GHANA LIBRARY BOARD. National Library Technical Advisory Committee. Minutes of the Meeting of the Ghana National Library Technical Advisory Committee held... on Wednesday, 20th January 1965.
69. GHANA LIBRARY BOARD. National Library Technical Advisory Committee. Report of the Sub-Committee on the National Union Catalogue. [Minutes of] Meeting held on Wednesday, 27th January 1965.
70. GRAY, J. Research and the planning of library and information networks. In EURIN II: a European Conference on the Application of Research in Information Services and Libraries, Amsterdam, 23-25 March, 1976. London, Aslib, 1977, 27-30.
71. GRAY, J. Unesco in the information field. Libr.Ass.Rec., 79(10) Oct 1977, 569, 573.
72. GRAY, J. and PERRY, B. Scientific information. London, Oxford University Press, 1975.
73. GREAT BRITAIN. Foreign and Commonwealth Office. Overseas Development Administration. ABC of development assistance; a glossary of some terms and institutions. London, HMSO, 1971.
74. GREAT BRITAIN. Library Association. Council Notes. Libr.Ass.Rec., 51(5) May 1949, 146-151.
75. GREAT BRITAIN. Library Association. A national review of library and information service; a memorandum from the Library Association. London, The Library Association, 1979.
76. GREAT BRITAIN. University Grants Committee. Report of the Committee on Libraries. London, HMSO, 1967. (Chairman, Dr.T.Parry).
77. GREAT BRITAIN. University Grants Committee. Report of the Committee on University Teaching Methods. London, HMSO, 1964. (Chairman, Sir E. Hale).
78. GREAVES, M.A. Nigeria plans for MARC. Int.Cat., 3(3) Jul/Sep 1974, 7.

79. GROGAN, D.J. A science information network for Korea; a report with recommendations, [Aberystwyth, College of Librarianship], 1974.
80. HAKLI, E. The Scandia Plan. In Acquisitions from the Third World. Papers of the Ligue des bibliothèques européennes de recherche seminar 17-19 September 1973, edited by D.A.Clarke. London, Mansell, 1975, 211-222.
81. HARRAR, H.J. Cooperative storage. Libr.Trends, 19(3) Jan 1971, 318-328.
82. HARRAR, H.J. Cooperative storage warehouses. In Reader in library cooperation, edited by M.Reynolds. Washington, D.C., NCR/Microcard Editions, 1972, 211-216.
83. HARRIS, J. Libraries of learning and research in Nigeria. Libr.Wld., 64(747) Sep 1962, 68-69, 72-74, 76, 78-80.
84. HARRIS, J. Presidential Address. WALA News, 3(3) Jun 1959, 102-108.
85. HARRIS, J. Why a professional association? An introductory address. Nigerian Libr., 1(1) Feb 1964, 4-7.
86. HARRISON, J.C. The Ghana School of Librarianship; report to the Minister of Education and Information. In Evans, E.J.A. A tropical library service; the story of Ghana's libraries. London, Andre Deutsch, 1964, 145-159.
87. HARRISON, K.C. Cooperative acquisition: formal and informal. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Sesssion Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 33-40.
88. HARVEY, J.F. Iranian library studies 3: The Tehran Book Processing Centre. Int.Lib. Rev., 5, 1973, 37-52.
89. HAVARD-WILLIAMS, P. Education for library, information and archives studies. IFLA J., 2(3) 1976, 137-145.
90. HAVARD-WILLIAMS, P. The folly of neglecting that national resource, information. Opening Keynote Address to the IFLA Worldwide Seminar, Seoul, June 1976. Libr.Ass Rec., 78(9) Sep 1976, 409-416.
91. HAVARD-WILLIAMS, P. Manpower planning, professional structures and education and training. In Planning information manpower, by P.Havard-Williams and E.G.Franz. Paris, Unesco, 1974, 1-30. (COM-74/NATIS/REF.5).

92. HAVARD-WILLIAMS, P. The role of the library association in national development. Keynote Address delivered at the Annual General Conference of the Nigerian Library Association, held at Kano, Nigeria, 2-6 December, 1980. (To appear in Nigerian Libr.)
93. HAVARD-WILLIAMS, P. and DOVEY, L.A. Reader instruction in Commonwealth university libraries. Libr.Ass.Rec., 62, Jan 1960, 10-13.
94. HUNTER, L. The recruitment and training of middle-level manpower in the public library service. Sierra Leone Libr.J., 3(1) Jan 1977, 3-6.
95. IFLA. IFLA-IATUL telecode and telex address book for libraries in ten languages. London, IFLA, 1966. (International Manuals, no.1).
96. IFLA. Memorandum from the Secretary General to members of the Executive Board on the Report (19 C/42) of the Director General of Unesco on the overall information programme (dated 30th September 1976). Memorandum dated 11th October, 1976.
97. JACKSON, M.M. Libraries and documentation centres and the communication environment. Int.Lib.R., 8(4) Oct 1976, 361-366.
98. JAPAN. Computer Usage Development Institute. The plan for information society - a national goal toward year 2,000. Tokyo, Computer Usage Development Institute, 1972.
99. JENKINS, H.R. Vehicle delivery service - courtesy ACLCP. Penn. Libr.Ass.Bull., 26, 1971, 97-100.
100. JUDD, J. van der. Interlibrary loan delivery experiment. The Bookmark, 31, Sep-Oct 1971, 11-14.
101. KAFE, K. Problems of communication between the library and its users: academic libraries. In Symposia on Problems of Communication between the Library and its Users [held in] Accra, 10-12 February, 1972, edited by A.N.deHeer. Accra, Ghana Library Association, 1977, 2-8. (Communication Series no.2).
102. KAPLAN, A. The age of the symbol - a philosophy of library education. In The intellectual foundations of library education, edited by D.R. Swanson. Chicago. Ill., University of Chicago Press, 1965, 7-16.
103. KEENAN, S. Abstracting and indexing services in science and technology. In Annual Review of Information Science and Technology, vol.9, edited by Carlos A.Cuadra. Chicago, Encyclopaedia Britannica, 1974, 273-303.
104. KENT, A., ed. Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973, at Pittsburgh, Pennsylvania... New York, Marcell Dekker, Inc., 1974.

105. KENT, A. and GALVIN, T.J., eds. Library resource sharing; proceedings of the Conference on Resource Sharing in Libraries, University of Pittsburg, 1976. New York, Marcell Dekker, Inc., 1977.
106. KHURSHID, A. Processing centres in South Asia: problems and prospects. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L. Vervliet. München, K.G.Saur, 1979, 128-135. (IFLA Publications, 14).
107. KORFHAGE, R.R., BHAT, U.N., and NANCE, R.E. Graph models for library information networks. Libr.Quarterly, 42(1) Jan 1972, 31-42.
108. KOTEI, S.I.A. The social determinants of library development in Ghana with reference to the influence of British traditions. Thesis submitted for the MPhil(Arts), University of London, April 1972. (Unpublished).
109. LANCASTER, F.W. User education: the next major thrust in information science? J.Educ.Librarianship, 11(1) Summer 1970, 55-63.
110. LANCOUR, H. Libraries in British West Africa; a report of a survey for the Carnegie Corporation of New York, October - November 1957. Urbana, University of Illinois Library School, 1958. (Occasional Papers, no.53).
111. LAWANI, S.M. and DE CHANTAL, J. Report of the meeting of West African Agricultural Librarians and Documentalists, IITA, Ibadan, Nigeria, January 20-22, 1975. Ibadan, IITA, [1975].
112. LEONARD, L.E., et al. Centralised book processings; a feasibility study based on Colorado academic libraries. Metuchen, N.J.Scarecrow Press, 1969.
113. LIBRARY OF CONGRESS. International scientific organisations; a guide to their library, documentation, and information services. Prepared under the direction of Katherine O.Murra. Washington 25, D.C., Library of Congress, 1962.
114. LICKLIDER, J.G.R. A crux in scientific and technical communication. Amer.Psychol., 21, Nov 1966, 1044-1051.
115. LIEBESNY, F. Foreign language in industry. In ISLIC International Conference on Information Science, Tel Aviv, 29 August - 3 September, 1971 (Proceedings) Vol.1, edited by Lydia Vilentchuk. Tel Aviv, National Centre of Scientific and Technological Information, 1972, 178-183.
116. LIM, H.T. A technical processing centre for Malaysia. In National and academic libraries in Malaysia and Singapore. Proceedings of a PPM and LAS Conference held at Universiti Sains Malaysia, Penang, 1-3 March 1974, edited by Lim Huck Tee and R.Begum. Penang, Persatuan Perpustakaan Malaysia and Library Association of Singapore, 1975, 155-166.

117. LINE, M.B. The British Library Lending Division. In British librarianship today, edited by W.L.Saunders. London, The Library Association, 1976, 86-108. (A Library Association Centenary Volume).
118. LINE, M.B. The case for information officers. In Educating the library user by J.Lubans. New York, Bowker, 1974, 383-391.
119. LINE, M.B. Centralised versus de-centralised loans system for international lending. Paper presented at the Western European Seminar on Library Interlending, Banbury, England, March 10-15, 1973. (mimeo).
120. LINE, M.B. Library surveys. London, Bingley, 1967.
121. LINE, M.B. Principles of international lending and photocopying. Int.Libr.Rev.,9(3) Jul 1977, 369-379.
122. LINE, M.B. Universal availability of publications. Unesco Bull. Libr.,31(3) May-Jun 1973, 142-151.
123. LINE, M.B. Universal availability of publications and developing countries. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 162-169. (IFLA Publications, 14).
124. LINE, M.B. and STEEMSON, R.J. Interlibrary lending in the United Kingdom; summary of a national survey conducted in February, 1977. Interlending Rev.,6(2) Apr 1978, 31-38.
125. McHALE, J. The changing information environment: a selective topography. In Information technology; some critical implications for decision makers. New York, Conference Board,1972.
126. MACHLUP, F.P. The production and distribution of knowledge in the United States. Princetown, N.J., Princetown University Press, 1962.
127. MANTELL, L.H. On laws of special abilities and the production of scientific literature. Amer.Doc., 17 Jan 1966, 8-16.
128. MASSIL, S.W. The background to planning for co-operative use of MARC tapes. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G.Saur, 1979, 234-242. (IFLA Publications, 14).
129. MEADOWS, A.J. and O'CONNOR, J.G. An investigation of information sources and information retrieval in astronomy and space science. OSTI Report 5044, 1969.
130. MINDER, T.J. Organisational problems in library co-operation. Libr.J.,95(18) 1970, 3448-3450.

131. MOID, S.A. Northern Regional Library. Nigerian Libr.,1(4) Sep 1965, 175-176.
132. MOSER, C.A. and KALTON, G. Survey methods in social investigation, 2nd ed. London, Heinemann, 1971.
133. MULLER, R.H. Toward a national plan for co-operative storage and retention of little-used library materials. In Resource sharing in libraries: why, how, when, next action steps. Based on papers presented at the conference Resource Sharing in Libraries, held April 11-12, 1973, at Pittsburgh, Pennsylvania.... edited by Allen Kent. New York, Marcell Dekker, Inc., 1974, 119-128.
134. MUNN, R.F. The use of modern technology in the improvement of information resources and services in developing countries. Int.Lib. Rev.,3(1) Jan 1971, 9-13.
135. NANCE, R.E., KORFHAGE, R., and BHAT, U.N. Information networks: definitions and message transfer models. J.Am.Soc.Inf.Sci., 23(4) Jul-Aug 1972, 237-247.
136. NATIS News. One general information policy for Unesco. Unesco Bull. Libr.,31(2) Mar-Apr 1977, 62-63.
137. NIGERIA. Ahmadu Bello University. Department of Library Science. Syllabus, 1971-1972. Zaria, Ahmadu Bello University, 1971.
138. NIGERIA. Bayero University. Department of Library Studies. Prospectus, 1978-1979. Kano, Department of Library Studies, [1978].
139. NIGERIA. Committee of University Librarians. Co-operative acquisition of African government publications. Working Paper.[1975]. (Typescript).
140. NIGERIA. National Library. Libraries in Nigeria: a directory. Lagos, National Library, 1974. (Publication no.38).
141. NIGERIA. National Library. Meeting of the Working Group on Interlibrary Lending, Ile-Ife, April 24 and 25, 1974. (National Library Publication no.30).
142. NIGERIA. National Science and Technological Development Agency. Regional data bank on technologies in Africa. First progress report (September 1979). Lagos, NSTDA, 1979.
143. NIGERIA. University of Ibadan. Department of Library Studies. Abadina Media Resource Centre (School Library). Foundation Report, 1974-1977. Ibadan, Department of Library Studies, 1977.
144. NIGERIA. University of Ibadan. Department of Library Studies. Academic staff and internal students, 1979-1980. Ibadan, Department of Library Studies, 1979.

145. NIGERIA. University of Ibadan. Department of Library Studies. Prospectus, 1976-1977. Ibadan, Department of Library Studies, [1976].
146. Nigeria lists scientists. West Africa, 3249, Oct 1979, p.1953.
147. NIGERIAN LIBRARY ASSOCIATION. Annual Report of the Council for 1972-1973. Nigerian Libr., 9(3) Dec 1973, 195-204.
148. NITECKI, A. Directory of libraries in Ghana. Legon, University of Ghana, Dept. of Library and Archival Studies, 1974. (Occasional Publication no.11).
149. NITECKI, A. Library education in Ghana. Ghana Libr.J., 4(2) Dec 1972, 35-40.
150. N'JIE, S.P.C. A study tour of Ghana, Nigeria and Sierra Leone, 7th January to 6th February 1975; an evaluation [with a section on The Gambia]. Banjul, The Gambia National Library, 1977.
151. NOLTING, O.F. Mobilizing total library resources for effective service. Chicago, American Library Association, 1969.
152. NORTIER, M. Inter-library loans: some problems and possible solutions. Unesco Bull.Lib., 28(2) Mar-Apr 1974, 67-72, 78.
153. NWOYE, S.C. and ANAFULU, J.C. Instructing university students in library use: the Nsukka experiment. Libri, 23(4), 251-259.
154. OBI, D. Content and structure of library education in Nigeria. Paper presented at the Colloquium on Education and Training for Librarianship in Nigeria, [held at] the Department of Library Studies, University of Ibadan, 15-19 March, 1974. (mimeo).
155. OBI, D. Education for librarianship in Nigeria. Nigerian Libr., 11(3) Dec 1975, 221-251.
156. ODERINDE, N.O. Our professional association, 1948-1968. Nigerian Libr., 6(1 & 2) Apr & Aug 1970, 65-105.
157. ODERINDE, N.O. Public library development in Nigeria; past, present and future. A Master's thesis submitted.... for the award of Master of Arts, Loughborough University of Technology, May 1978. (Unpublished).
158. OECD. Information for a changing society; some policy considerations. Paris, OECD, 1971.
159. OGUNDIPE, O.O. Education for librarianship in Sierra Leone: the need. Unesco Bull.Lib., 29(3) May-Jun 1975, 151-155.
160. OGUNSHEYE, F.A. Abadina Media Resource Centre (AMRC); a case study in library service to primary schools. Unesco J.Inf.Sci.Lib. & Arch.Admin., 1(1) 1979, 29-36.

161. OGUNSHEYE, F.A. Formal programme development in library education in Nigeria. Paper presented at [the] UNESCO-FID-CONACYT-UNAM Pre-Session Seminar on Education and Training, Mexico City, 20-24 September 1976. COMLA Newsletter, 17, Aug 1977, 19-24.
162. OGUNSHEYE, F.A. Nigerian library resources in science and technology. Ibadan, University of Ibadan, Institute of Librarianship, 1970. (Occasional Paper No.2).
163. OGUNSHEYE, F.A. Presidential address: planning for nation building. Nigerian Libr., 6(1 & 2) Apr & Aug 1970, 11-16.
164. OKORIE, K. The new Regional Central Library, Enugu. WALA News, 3(4) Feb 1960, 184-187.
165. OLANIYAN, B.F., ARIKENBI, J.A., and UGONNA, J.A. Instructing students in the use of the library in the University of Lagos. Nigerian Libr., 11(1 & 2) Apr & Aug 1975, 123-133.
166. OMBU, J.A. Acquisition problems in developing countries. Int.Lib. Rev., 9(1) Jan 1977, 83-93.
167. OSUNKOWA, G. Is our legal deposit law defective? Nigerbiblios, 1(3) Jul 1976, 16-17.
168. OVERHAGE, C.F.J. Information networks. In Annual Review of Information Science and Technology, vol.4, edited by Carlos A. Cuadra. Chicago, Encyclopaedia Britannica, 1969, 339-377.
169. OYELESE, W.O. Acquisition in university libraries: problems in developing countries. Unesco Bull Libr., 31 (3) May-June 1977, 81-86.
170. PARKER, E.B. Information and society; a report to the National Commission on Libraries and Information Science. Washington, D.C., NCLIS, 1973. (ED 073 776).
171. PARKER, J.S. Library development planning; a comparative study of the development, diffusion and application in developing countries of the concept of integrated national planning of library services with special reference to the work of Unesco. Thesis submitted for [the] Fellowship of the Library Association, February 1978. (Unpublished).
172. PARKER, J.S. Regional co-operation in library services. IFLA J., 2(1) 1976, 1-33.
173. PATON, W.B. Presidential Address: the profession of librarianship. Libr.Ass.Rec., 64, Oct 1962, 367-372.
174. PATRICK, R.J. Guidelines for library co-operation; development of academic library consortia. Santa Monica, California, System Development Corporation, 1972.

175. PATTERSON, L.D. Consortia in American higher education. Washington, D.C., ERIC Clearinghouse on Higher Education, 1970. (Report no.7).
176. PEAKE, D. and CASSIDY, M. CONISA? Co-operative Operational National Information System for Australia. Austr.Lib.J.,25(13) Oct 1976, 320-329.
177. PEELER, E.H. Education for librarianship in West Africa. Nigerian Libr.,1(2) May 1964, 61-75.
178. PENNA, C.V., FOSKETT, D.J., and SEWELL, P.H., eds. National library and information services: a handbook for planners. London, Butterworths, 1977.
179. REYNOLDS, M.E. Authority and responsibilities of a network director. In Proceedings of the Conference on Interlibrary Communications and Information Networks Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 277-280.
180. RICHARDSON, W.D. Networks: some general considerations on their characteristics and structure. LASIE,6(4) Jan/Feb 1976, 7-20.
181. RUSSON, D. Transport schemes for interlibrary loans. Interlending Rev.,6(4) 1978, 115-117.
182. SADDINGTON, G.H. The Greater London Audio Specialisation Scheme. Libr.Ass.Rec.,74(11) Nov 1972, 218-219.
183. SAMUELSON, K. Challenges to theory and methods of systems cybernetics and information networks. In Systems, cybernetics and information networks. 1972 (FID Publication no.498).
184. SANDERS, T.R.B., ed. The aims and principles of standardisation. Geneva, ISO, 1972.
185. SAUNDERS, W.L. The environment of library education. Paper presented at the 46th IFLA General Conference on the Development of Libraries and Information Systems, held in Manila, The Philippines, 18-23 August, 1980. (mimeo).
186. SHARR, F.A. Library needs of Northern Nigeria. Unesco Bull.Lib.,18(6) Nov-Dec 1964, 259-262.
187. SHERIF, G.M. Resource sharing in West Africa. Paper submitted (but not presented) to the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, [1-12].
188. SHOYINKA, P.H. The potential of MARC for Nigeria: the North American example (Part 1). Int.Cat.,6(3) Jul/Sep 1977, 32-36.

189. SIERRA LEONE. Education review: all our future. Final Report; the results of the Working Groups and the combined proceedings of the two conferences... in Freetown, 1973-1976. Freetown, University of Sierra Leone, 1976.
190. SIERRA LEONE. University. Fourah Bay College Library. Library Assistant Certificate Course - City and Guilds Examination. [Freetown, Fourah Bay College Library].
191. SIERRA LEONE LIBRARY BOARD. First [Annual] Report, June 1959 - March 1961. Freetown, Government Printing Dept., [1961].
192. SLATER, M. Manpower planning and research. Aslib Proc., 32(10) Oct 1980, 381-386.
193. SOLTANI, P. The role of processing centres in developing countries in relation to resource sharing. In Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977, edited by H.D.L.Vervliet. München, K.G. Saur, 1979, 136-142. (IFLA Publications, 14).
194. [STANDARD CHARTERED BANK LTD.] Post and telecommunication projects (Ghana). Standard Chartered Rev., Jul 1979, 33-34.
195. STEVENS, C.H. Governance of library networks. Libr.Trends., 26(2) Fall 1977, 219-240.
196. STEVENSON, M.B. Education in the use of information in university and academic environments. Aslib Proc. 28(1) Jan 1976, 17-21.
197. STEVENSON, M.B. User education in the United Kingdom. IATUL Proc., 9, 1977, 5-10.
198. STONE, E.W. Introduction. Libr.Trends, 20(1) Jul 1971, 3-18.
199. STUART-STUBBS, B., FRIESEN, M. and McINNES, D. Interlibrary loan in Canada; a report of a survey. Ottawa, National Library of Canada, 1976.
200. SWANK, R.C. Interlibrary co-operation, interlibrary communications and information networks - explanation and definition. In Proceedings of the Conference on Interlibrary Communications and Information Networks..... Airlie House, Warrenton, Virginia, September 28, 1970 - October 2, 1970, edited by Joseph Becker. Chicago, American Library Association, 1971, 18-26.
201. SWEENEY, G.P. The knowledge economy; its implications for national science and information policies. Inf.Scientist, 11(3) Sep 1977, 89-98.
202. TARVER, E. Regional processing: advantages and disadvantages for the college and university library. J.Cat. & Class., 2(4) Oct 1955, 212-216.

203. THOMPSON, J.S.T. Library development in Sierra Leone. Sierra Leone Libr.J.,1(1) Jan 1974, 7-17.
204. THOMPSON, J.S.T. Post-war development of librarianship in former British West Africa; a historical description of library development in Ghana, Nigeria, Sierra Leone and The Gambia. Master's Thesis, University of London, 1968/69. (Unpublished).
205. THOMPSON, J.S.T. comp. and ed. Directory of libraries and information services [in Sierra Leone]. Freetown, Sierra Leone Library Association, 1971.
206. TVETERAS, H.L. International loans. Unesco Bull.Lib.,19(6) Nov-Dec 1965, 297-301.
207. UNESCO. Development of public libraries in Africa: the Ibadan Seminar. Paris, Unesco, 1954. (Public libraries manuals, no.6).
208. UNESCO. Expert Meeting on National Planning of Documentation and Library services in Africa, Kampala, Uganda, 7-15 December 1970. In UNESCO. Regional Meetings of Experts on the National Planning of Documentation and Library Services. Summary of main recommendations. Paris, UNESCO. 1974. (COM.74/NATIS/REF.1).
209. UNESCO. Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris, 23-27 September, 1971. Final Report. Paris, Unesco, 1975.
210. UNESCO. Intergovernmental Conference on the Planning of National Documentation, Library and Archives Infrastructures, Paris, 23-27 September 1974. Working Document 1.3.2. (COM-74/NATIS/4).
211. UNESCO. NATIS; national information systems. Objectives for national and international action. Paris, Unesco, 1975. (COM-74/NATIS/3 Rev.).
212. UNESCO. Scientific and technical translating and other aspects of the language problem. Paris, Unesco, 1957.
213. UNESCO. UNISIST; study report on the feasibility of a World Science Information System. Paris, Unesco, 1971.
214. UNESCO. UNISIST; synopsis of the feasibility study on a World Science Information System. Paris, Unesco, 1971.
215. UNITED STATES. National Academy of Sciences. Committee on Scientific and Technical Communication. Scientific and technical communication; a pressing national problem and recommendations for its solution. Washington, D.C., National Academy of Sciences, 1969.
216. UNITED STATES. National Commission on Libraries and Information Science. Toward a national program for library and information services: goals for action. Washington, D.C., NCLIS, 1975.

217. UNITED STATES. President's Science Advisory Committee. Science, government and information; the responsibilities of the technical community and the government in the transfer of information; a report... (Chairman, A.M.Weinberg). Washington, D.C., U.S.Government Printing Office, 1963.
218. VERVLiet, H.D.L., ed. Resource sharing of libraries in developing countries. Proceedings of the 1977 IFLA/UNESCO Pre-Session Seminar for Librarians from Developing Countries, Antwerp University, August 30 - September 4, 1977. München, K.G. Saur, 1979. (IFLA Publications,14).
219. VOOS, H. The information explosion; or redundancy reduces the charge! Coll.Res.Libr.,32(1) Jan 1971, 7-14.
220. WALLACE, J.B. Computer use in independent Africa: problem and solution statements. In The computer and Africa: applications, problems and potential, edited by D.R.F.Taylor and R.A.Obudho. New York, Praeger, 1977, 13-41.
221. WEHMER, C. The organisation and origins of German university libraries. Libr.Trends. 12(4) Apr 1964, 491-512.
222. WERSIG, G. and NEVELING, U. The phenomena of interest to information science. Inf.Scientist,9(4) Dec 1975, 127-140.
223. WILLEMIN, S. Technique of union catalogues: a practical guide. Paris, Unesco, 1966.
224. WILLIAMS, E.E. Farmington Plan. In Encyclopaedia of Library and Informtion Sciences, vol.8. New York, Marcel Dekker, Inc., 1972, 361-368.
225. WOOD, D.N. Discovering the user and his information needs. Paper presented at the Joint Conference of the Midlands and Northern Branches, Oxford, 10th-12th April, 1969. Aslib Proc., 21(7) Jul 1969, 262-270.
226. WOOD, D.N. The foreign language problem facing scientists and technologists in the United Kingdom - report of a recent survey. J.Doc.,23(2) Jun 1967, 117-130.
227. WOOD, D.N. Library education for scientists and engineers. Bull.Mech.Engng.Educ.,8(1) 1969, 1-9. .
228. WOOLSTON, J. The future of international information systems. In Proceedings of the American Society for Information Science, vol.9: A world of information; 35th Annual Meeting, Washington, D.C., 23-26 October, 1972, edited by John H. Wilson. Washington, D.C., ASIS, 1973, 23-24.
229. WYSOCKI, A. and TOCATLIAN, J. A world science information system: necessary and feasible. Unesco Bull.Libr.,25(2) Mar-Apr 1971, 62-66.
230. YOUNG, A.P. Generating library goals and objectives. Illinois Libr.,56(9) Nov 1974, 862-867.

APPENDIX 1LIBRARY CONSORTIUM DEVELOPMENT PHASES AND STEPS1. EXPLORATORY PHASE

- Step 1. Find out if there are any existing consortia that could provide the desired benefits. If there are, contact them and explore the possibility of joining.
- Step 2. Identify potential members for a consortium and attempt to generate interest among them.
- Step 3. Hold a meeting or a series of meetings to discuss with potential members the desirability and feasibility of establishing a consortium.
- Step 4. Consider the implications of being a component of a ... consortium.

2. PLANNING PHASE

- Step 1. Identify the objectives of the consortium.
- Step 2. Decide upon the organisational structure of the consortium and draft by-laws.
- Step 3. Develop tentative program plans.
- Step 4. Determine the amount of financial support needed.
- Step 5. Devise a plan for obtaining funding and other support.
- Step 6. Make any legal or other arrangements necessary to establish a consortium.
- Step 7. Appoint a library Consortium Director.
- Step 8. Locate facilities for centralised headquarters, if desired.

3. DEVELOPMENT PHASE

- Step 1. Develop a detailed design of each activity to be undertaken.
- Step 2. Assign personnel and committees to specify development tasks.
- Step 3. Establish implementation schedules.
- Step 4. Develop policies to guide ongoing functions.
- Step 5. Make frequent progress reports to the Consortium Director, advisory committee, member institutions, etc., on development tasks being undertaken.
- Step 6. Define a methodology for operational system/project evaluation.
- Step 7. If necessary, modify goals and objectives based on current knowledge and results of the planning effort.

4. OPERATION AND EVALUATION PHASE

- Step 1. Implement each activity in a trial operational mode.
- Step 2. Evaluate the effectiveness of each activity.
- Step 3. Make design modifications indicated by the evaluation.
- Step 4. Implement the fully operational mode.
- Step 5. Evaluate the consortium and its activities.

Source: PATRICK, R.J. Guidelines for library co-operation; development of academic library consortium. Santa Monica, California, System Development Corporation, 1972, 23.



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PHW/JPF

16th July 1979

Dear Colleague,

I hope you will feel able to fill in the accompanying questionnaire formulated by Mr. Boadi. As you may know, the Department is greatly interested in librarianship and information work in developing countries, and his work will be another contribution to the series of studies we are undertaking to assist the development in this field. Your collaboration in this enquiry will be greatly appreciated and duly acknowledged.

Yours sincerely,

P. Havard-Williams

P. Havard-Williams



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16th November 1979

Dear

QUESTIONNAIRE ON EXISTING RESOURCES

You may recall that about four months ago I sought your assistance in the completion of a questionnaire in an attempt to establish the true extent of the library and information resources in the West African sub-region. In the covering letter I stated that I was currently engaged on an investigation into the possibilities of networks for library and information resource sharing in the sub-region and that I would find information on your library/information centre an indispensable aid to an objective study of the situation.

As I have not received your completed questionnaire I thought I would send you this reminder and also inform you that even though the dateline I gave for the return of the questionnaire (i.e. 16th October 1979) has already expired, I would still find information on your library/information centre useful to the project. I should therefore be very grateful if you would return the completed questionnaire at your early convenience.

I thank you for your co-operation in this matter and hope to hear from you soon.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'B.Y. Boadi', with a horizontal line underneath.

B.Y. Boadi

EXPLANATORY NOTES ON QUESTIONNAIRE

1. WHERE ALTERNATIVE ANSWERS ARE GIVEN, PLEASE TICK (✓) THE APPROPRIATE BOX(ES). (This applies throughout the Questionnaire).
2. WHERE SPACE PROVIDED FOR ANSWERS IS INADEQUATE, PLEASE USE ADDITIONAL SHEETS OF PAPER, INDICATING THE NUMBERS OF THE QUESTIONS. (This applies throughout the Questionnaire).
3. 'Information centre' is used here to include documentation centres and information services of similar nature which exist independently or within some other organisation and whose main concern is the management of specialised information (i.e. its collection, processing, etc.) and the supply of that information in suitable formats to those who need or request it, (see Question 1).
4.
 - a) Natural Sciences, i.e. the basic sciences, e.g. physics, chemistry, earth sciences, space sciences, mathematics, etc.
 - b) Engineering & Industrial Technology Sciences, i.e. the applied sciences, e.g. engineering (civil, electrical, mechanical, etc.); technology (construction, manufacturing industries, etc.).
 - c) Medical Sciences, e.g. medicine, pharmacy, dentistry, etc.
 - d) Agricultural Sciences, e.g. agriculture, forestry, fisheries, veterinary science, etc.
 - e) Social Sciences and the Humanities, e.g. economics, law, statistics, political science, etc., (see Question 9).
5. Professionally trained librarian/information officer here means the holder of a recognised qualification in librarianship/information science, e.g. ALA, BLS, Post-Grad.Dip.Libr., FLA, MA, MLS, M.Sc.(Inf.Sci), and equivalent qualifications, (see Question 13).
6.
 - i) For the purpose of estimating the number of professional staff, place those with more than one professional qualification in one category only (e.g. count as information scientist only, a librarian who is also a qualified information scientist but whose services are mainly employed as an information scientist), (see Question 15).
 - ii) Computer/Systems Analyst is interpreted as one who is trained and employed as such and not a librarian/information officer (or any other person) who may be knowledgeable in computer/systems analysis, (see Question 15).
7. Sub-professional staff means the junior and intermediate staff, i.e. holders of Diplomas/Certificates in Librarianship and equivalent qualifications; technical staff refers to staff (of whatever qualifications) for Audio/Visual, Binding and similar technical services, (see Question 16).

8. If your reckoning year overlaps, please give figures for corresponding year (e.g. for 1976 give figures for 1976/77, etc. and delete whichever year is not applicable), (see Questions 15-16, 18-19, 21-22, 27-28, 49e-f).
9. If your accounting/recording system does not tally exactly with the form in which information is being requested, kindly present accounts/records in whatever form available, (see Questions 19 and 49e).
10. For convenience, the term 'periodicals' is used in the Questionnaire (in preference to 'serials') and therefore includes annuals, numbered monographic series, proceedings, transactions and memoirs of societies and, of course, periodicals, (see Question 20).
11. Please give measurements and seating capacity for the whole unit if the library/information centre has more than one service point, (see Question 29).
12. Kindly send specimen copies of listed publications if possible, (see Question 43).

QUESTIONNAIRE ON EXISTING LIBRARY AND INFORMATION
RESOURCES IN THE WEST AFRICAN SUB-REGION

Where alternative answers are given, please tick appropriate box(es).
Where space provided for answers is inadequate, please use additional sheets of paper, indicating the numbers of the questions.

GENERAL INFORMATION

Administration

1. Name of library/information centre (see Note No. 3) _____

2. Full mailing address of library/information centre _____

3. Type of library/information service (see Note No. 1)

- | | | | | | | | | |
|---------------------------|-------|----|----|----|----|----|----|---|
| a) Academic library | .. | .. | .. | .. | .. | .. | .. | <div style="border: 1px solid black; width: 20px; height: 20px;"></div> |
| b) Government library | .. | .. | .. | .. | .. | .. | .. | |
| c) National library | .. | .. | .. | .. | .. | .. | .. | |
| d) Public library | .. | .. | .. | .. | .. | .. | .. | |
| e) School/College library | .. | .. | .. | .. | .. | .. | .. | |
| f) Special library | .. | .. | .. | .. | .. | .. | .. | |
| g) Information centre | .. | .. | .. | .. | .. | .. | .. | |
| h) Other (Please specify) | _____ | | | | | | | |

4. Parent institution to which library/information centre belongs: _____

5. Is the library/information centre a main division in the organisational structure of the parent institution?

YES ☐
NO ☐

6. If the answer to Question 5 is 'no', under which division does the library/information centre come?:

- | | | | | | | |
|------------------------------------|-------|----|----|----|----|---|
| a) General Administration | .. | .. | .. | .. | .. | <div style="border: 1px solid black; width: 20px; height: 20px;"></div> |
| b) Information Division | .. | .. | .. | .. | .. | |
| c) Research & Development Division | .. | .. | .. | .. | .. | |
| d) Other (Please specify) | _____ | | | | | |

7. In what year was the library/information centre established? _____

8. If your library/information centre consists of more than one service point, please give details of the other service points, e.g. branch and departmental libraries/information centres, etc. _____

Subject Coverage

9. Considering the subject coverage, into which of the following categories would you place your library/information centre? (see Note No. 4):

a) Natural Sciences	<input type="checkbox"/>
b) Engineering & Industrial Technology	<input type="checkbox"/>
c) Medical Sciences	<input type="checkbox"/>
d) Agricultural Sciences	<input type="checkbox"/>
e) Social Sciences & the Humanities	<input type="checkbox"/>
f) All Categories	<input type="checkbox"/>

10. For each of the categories ticked in Question 9, please indicate areas of specialisation and special collections:

a) Natural Sciences: _____

b) Engineering & Industrial Technology: _____

c) Medical Sciences: _____

d) Agricultural Sciences: _____

e) Social Sciences & the Humanities: _____

STAFFING

Librarian/Information Officer

11. Name of librarian/information officer: _____

12. Official title of librarian/information officer:

a) Director	<input type="checkbox"/>
b) Librarian	<input type="checkbox"/>
c) Information Officer			<input type="checkbox"/>
d) Library Assistant	<input type="checkbox"/>
e) Other (Please specify)	_____								

13. Is the librarian/information officer professionally trained?
(see Note No. 5)

YES	<input type="checkbox"/>
NO	<input type="checkbox"/>

14. What is the title of the officer to whom the librarian/information officer is administratively responsible? _____

Categories of Staff

15. Professional Staff. (Please state the number of professional staff employed as in 1974, the current number (i.e. 1979), and the estimated requirement in 5 years (i.e. 1984) in the following categories (see Note Nos. 6(i-ii) and 8):

	1974 (74/75)	1979 (79/80)	1984 (84/85)
a) Librarians			
b) Information Scientists			
c) Computer/Systems Analysts			
d) Other (Please specify)			

16. Sub-professional and technical staff. Please give details as in Question 15, (see Note Nos. 7 and 8).

	1974 (74/75)	1979 (79/80)	1984 (84/85)
a) Sub-professional Staff			
b) Technical Staff			
c) Clerical Staff			
d) Other (Please specify)			

Staff Exchange Programmes

17. If you have staff exchange programmes please describe them briefly giving such information as institutions with which you have the programmes, categories of staff exchanged, duration, authorities responsible for administrative and financial arrangements, etc.

BUDGET

Income

18. From which of the following sources does your library/information centre derive its income?
Please indicate source (or sources if income is derived from more than one source) and the
income from each source for the years 1976-1978, (see Note No. 8).

SOURCE(S) OF INCOME (Please tick as applicable)	✓	Y E A R A N D A M O U N T R E C E I V E D		
		1976(76/77) Amount Received	1977(77/78) Amount Received	1978(78/79) Amount Received
Government				
Private				
Subscription				
Foreign Aid				
Fees for Services (Please specify services)				
Other (Please specify)				

Expenditure

19. What was your expenditure on the undermentioned items for the years 1976-1978? (see Note Nos. 8 and 9).

a) Books, Periodicals, etc.

	1976(76/77)	1977(77/78)	1978(78/79)
Books			
Periodicals			
Microforms and other audio/ visual materials			
Binding			
Administration (excepting Wages and Salaries)			
Other (Please specify)			

b) Wages and Salaries

	1976(76/77)	1977(77/78)	1978(78/79)
Professional Staff			
Sub-professional Staff			
Technical Staff			
Clerical Staff			
Other (Please specify)			

c) Capital

	1976(76/77)	1977(77/78)	1978(78/79)
Building			
Equipment (Please specify)			
Other (Please specify)			

STOCK AND ACCOMMODATIONBookstock

20. What is the total bookstock of your library/information centre? Please give figures for books and bound volumes of periodicals (see Note No. 10).

- a) Books
b) Bound Volumes of Periodicals

21. What were your annual book accessions for the years 1976-1978?
(see Note No. 8)

1976(76/77)	1977(77/78)	1978(78/79)

22. How many of your book accessions were received on exchange or as gifts? (see Note No. 8)

1976(76/77)	1977(77/78)	1978(78/79)

Periodicals

23. How many periodical titles do you hold?

24. How many periodicals do you currently subscribe to?

25. How many of your current periodical subscriptions are received on exchange or as gifts?

Microforms

26. How many microforms does your library/information centre hold?
Please indicate type and quantity.

Type	Quantity
Microfilms	
Microcards	
Other (Pl. specify)	

Withdrawals

27. How many books, periodicals, etc. were removed from the library/information centre stock during the years 1976-1978? (see Note No. 8)

1976(76/77)	1977(77/78)	1978(78/79)

- a) Books
- b) Periodicals
- c) Other (Please specify)
-

28. Of the items removed from stock, how many were discarded (i.e. removed from ownership, destroyed, etc.)? (see Note No.8) :

- a) Books
- b) Periodicals
- c) Other (Please specify)

1976(76/77)	1977(77/78)	1978(78/79)

Accommodation (see Note No. 11)

29. What is:

- a) The area (in sq. metres) of the whole library/ information centre?
- b) The stock capacity in linear metres?
- c) The approximate linear metres of books?
- d) The approximate linear metres of periodicals
- e) The approximate linear metres of other materials (e.g. microforms, etc.)?
- f) The floor space for library staff?
- g) The floor space for reading area?
- h) The seating capacity for users

CLASSIFICATION AND CATALOGUING

Classification

30. Which of the following classification schemes do you use?

- a) Decimal Classification (Please state edition)
- b) Universal Decimal Classification
- c) Library of Congress Classification
- d) Bibliographic Classification (Bliss)
- e) Other (Please specify)

Cataloguing

31. What form of catalogues are in use?

- a) Author
- b) Subject
- c) Dictionary
- d) Classified
- e) Indexes
- f) Other (Please specify)

32. What cataloguing rules are followed?

- a) Library of Congress Rules for Descriptive Cataloguing
 b) Anglo-American Cataloguing Rules
 c) ALA Cataloguing Rules for Author and Title Entries
 d) ISBD
 e) Other (Please specify) _____

33. If subject headings are used, what authority is followed?

- a) Library of Congress Subject Headings
 b) Sears' Subject Headings
 c) Other (Please specify) _____

34. Does library/information centre reproduce its own catalogue cards?

- ALL
 NONE
 SOME (Please specify) _____

35. If catalogue cards are reproduced by library/information centre, what method is used?

- a) Typing
 b) Stencil
 c) Photoreproduction
 d) Automatic typewriter (Flexowriter, etc.)
 e) Computer printout
 f) Offset
 g) Other (Please specify) _____

36. If catalogue cards are reproduced outside the library/information centre:

i) Who reproduces them? _____

ii) What method is used?

- a) Typing
 b) Stencil
 c) Photoreproduction
 d) Automatic typewriter (Flexowriter, etc.)
 e) Computer printout
 f) Offset
 g) Other (Please specify) _____

SERVICESAvailability of Services

37. Which of the following services are provided by the library/information centre?

- | | | | | | | | |
|--|----|----|----|----|----|----|--------------------------|
| a) Routing of periodicals | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| b) Circulation of books, pamphlets, etc. | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| c) Reference | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| d) Compilation of bibliographies | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| e) Literature searches | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| f) Accessions bulletins | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| g) SDI | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| h) Current awareness | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| i) Abstracting and indexing | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| j) Photocopying | .. | .. | .. | .. | .. | .. | <input type="checkbox"/> |
| k) Translations (Please specify languages) | | | | | | | <input type="checkbox"/> |
- l) Other services provided (Please specify) _____

38. Are your facilities open to the public?

- | | |
|-----------------------|--------------------------|
| ALL | <input type="checkbox"/> |
| NONE | <input type="checkbox"/> |
| SOME (Please specify) | <input type="checkbox"/> |

39. Do you charge fees for your services?

- | | |
|-----------------------|--------------------------|
| ALL | <input type="checkbox"/> |
| NONE | <input type="checkbox"/> |
| SOME (Please specify) | <input type="checkbox"/> |

USERS

40. What is the current total number of registered users of your library/information centre?

41. If you carry out user studies/surveys, please give brief description of surveys carried out, stating method(s) adopted (e.g. questionnaires, interviews, observation, etc.), frequency of surveys and the bearing of survey results on services provided by library/information centre: _____

42. If you organise user orientation/instruction programmes for your users, please give brief description of programmes, stating their nature and content. _____

PUBLICATIONS

43. Kindly list the publications of your library/information centre, if any. (see Note 12).

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

EQUIPMENT

Reprographic Equipment

44. Do you possess, or have access to, any of the following reprographic equipment?

Equipment	Possess	Access Only	Type	Quan- tity
Photocopying Equipment				
Microreproduction Equipment				
Microreading Equipment				
Microreader/printer				
Other (Please specify)				

Communications Equipment

45. Do you possess, or have access to, any of the following communications equipment?

Equipment	Possess	Access Only	Quantity
Telephone			
Radiotelephone			
Telex			
Other (Please specify)			

Computers

46. Do you possess, or have access to, any computers? If so, kindly indicate type and quantity.

Type of Computer	Possess	Access Only	Quantity

LIBRARY AUTOMATION

47. Which of the following activities/services of your library/information centre are automated, and which are planned for automation. Please state, in the case of the latter, when automation is expected to commence.

Activity/Service	Already Automated	Automation Planned	Date Commencing
Acquisitions			
Cataloguing			
Periodicals (Processing)			
SDI Services			
Current Awareness			
Production of: Union lists of Periodicals			
Union Catalogues of Books			
Bibliographies, etc.			
Other (Please specify) _____			

48. If you use machine readable tapes (e.g. MARC, MEDLARS, etc.) please indicate which tapes you use and for what purpose(s) they are used (e.g. for the compilation of bibliographies, centralised cataloguing, abstracting and indexing services, SDI services, etc.)

Type of Tape	Purpose(s)
1.	
2.	
3.	
4.	

CO-OPERATION

49. Are you co-operating with other library/information centres in any of the following activities?

a) Acquisitions YES ☐
NO ☐

If 'yes' please state:

- i) the type of materials acquired (e.g. microforms, backruns of periodicals, etc.)
 - ii) the type of arrangement (e.g. subject specialisation, joint purchase, etc.)
 - iii) the subject(s) if arrangement involves subject specialisation, and
 - iv) names and addresses of participating libraries/information centres:
-

b) Cataloguing YES ☐
 NO ☐

If 'yes'

- i) Kindly give brief description of co-operative cataloguing arrangement, and
- ii) names and addresses of participating libraries/information centres.

c) Storage YES ☐
 NO ☐

If 'yes', please state:

- i) the type of material stored (e.g. microforms, backruns of periodicals, infrequently used books, etc.) and
- ii) names and addresses of participating libraries/information centres.

d) Reference YES ☐
 NO ☐

If 'yes', please

- i) briefly describe existing arrangement, and
- ii) give names and addresses of participating libraries/information centres.

e) Interlibrary Loans YES ☐

NO ☐

If 'yes', kindly state:

- i) the libraries/information centres (local and overseas) you borrow from most,
- ii) the libraries/information centres (local and overseas) you loan to most,
- iii) the number of items borrowed and/or loaned for the years, 1976-1978 (see Note Nos. 8 and 9).

i)

BORROWING STATISTICS	1976(76/77)	1977(77/78)	1978(78/79)
<u>LOCAL</u> libraries <u>BORROWED</u> from most	No. of items Borrowed	No. of items Borrowed	No. of items Borrowed
1.			
2.			
3.			
4.			
5.			
6.			

ii)

BORROWING STATISTICS	1976(76/77)	1977(77/78)	1978(78/79)
<u>OVERSEAS</u> libraries <u>BORROWED</u> from most	No. of items Borrowed	No. of items Borrowed	No. of items Borrowed
1.			
2.			
3.			
4.			
5.			
6.			

iii)

LENDING STATISTICS	1976 (76/77)	1977 (77/78)	1978 (78/79)
<u>LOCAL</u> libraries <u>LOANED</u> to most	No. of items loaned	No. of items loaned	No. of items loaned
1.			
2.			
3.			
4.			
5.			
6.			

iv)

LENDING STATISTICS	1976 (76/77)	1977 (77/78)	1978 (78/79)
<u>OVERSEAS</u> libraries <u>LOANED</u> to most	No. of items loaned	No. of items loaned	No. of items loaned
1.			
2.			
3.			
4.			
5.			
6.			

f) Publication Exchanges YES ☐
NO ☐

If 'yes', please give:

- i) the number of institutions (both local and overseas) with whom you have exchange arrangements,
- ii) the names and addresses of six (6) of the institutions (for both local and overseas institutions) with whom you exchange publications most, indicating publications you send and receive on exchange:

i) Number of institutions: LOCAL
OVERSEAS

ii)

Publication Exchanges

<u>LOCAL</u> institutions	Publications SENT	Publications REC'D
1.		
2.		
3.		
4.		
5.		
6.		

iii)

Publication Exchanges

<u>OVERSEAS</u> institutions	Publications SENT	Publications REC'D
1.		
2.		
3.		
4.		
5.		
6.		

g) Union Catalogues/Lists

Please indicate if you possess, or have access to,:

- i) a union catalogue of books either local (e.g. departmental, etc.) or national,
- ii) a union list of periodicals (local or national),
- iii) state subject(s) covered, and whether the union catalogue and union list are manually-operated or computer-based:

Type	Possess	Access Only	Local	National	Subject(s)	Manual	Computer
Union Cat. of Books							
Union List of Per.							

50. Kindly give details of FORMAL arrangements (e.g. legal, financial, administrative, etc.) that exist, if any, to facilitate participation in the co-operative activities enumerated in Question 49 (a-g) above.

51. INFORMATION SYSTEMS AND NETWORKS

Do you belong to any of the following information systems/networks?

a)	AGLINET	..	..	..	..	..	..	..	..	..
b)	AGRIS	..	..	..	..	..	..	..	..	..
c)	CARIS	..	..	..	..	..	..	..	..	..
d)	DEVSIS	..	..	..	..	..	..	..	..	..
e)	INIS	..	..	..	..	..	..	..	..	..
f)	POPINS	..	..	..	..	..	..	..	..	..
g)	SPINES	..	..	..	..	..	..	..	..	..
h)	Other (Please specify)										

52. If you participate in any of the information systems/networks in Question 51, please give brief description of:

- i) the nature of your bibliographic contribution
(e.g. cards, tapes, lists, etc.) as well as
other contributions to the system(s)/network(s).
If possible indicate frequency and quantity of
contribution.

- ii) the services you receive from the system(s)/
network(s). If possible indicate frequency,
quantity and quality of service(s).

COMMENTS

53. Any additional information you wish to give, or comments you may wish to make, will be most welcome.

Thank you for answering the Questionnaire.

Date of Completion: _____

Signature: _____ (Official Title)

Please return to: B.Y. BOADI,
Dept. of Library & Information Studies,
Loughborough University of Technology,
Loughborough, Leics. LE11 3TU, England.

by: 15 October 1979