Proceedings of the Library and Information Services Policy Forum

Changes in Library and Information Services: 1996-2001

May 15-16, 1995
Washington, DC

Funded by the
National Center for Education Statistics
and Co-sponsored by the
U.S. National Commission on Libraries
and Information Science

with the Cooperation of the
Office of Library Programs
and the
National Institute on Postsecondary Education,
Libraries, and Lifelong Learning

The views, opinions, and recommendations expressed in this Report do not necessarily reflect the official position of the National Center for Education Statistics, the Office of Library Programs and the National Institute on Postsecondary Education, Libraries, and Lifelong Learning of the U.S. Department of Education, or the U.S. National Commission on Libraries and Information Science

---

The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences -- Permanence of Paper for Printed Library Materials.

Federal Recycling Paper. Printed on Recycled Paper.

Proceedings of the Library and Information Services Policy Forum

Changes in Library and Information Services: 1996-2001

May 15-16, 1995
Washington, DC

Funded by the
National Center for Education Statistics
and Co-sponsored by the
U.S. National Commission on Libraries
and Information Science

with the Cooperation of the
Office of Library Programs
and the
National Institute on Postsecondary Education,
Libraries, and Lifelong Learning

U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW - Suite 820
Washington, DC 20005-3522

Library and Information Services Policy Forum

Changes in Library and Information Services: 1996-2001

CONTENTS

Summary Highlights

The third annual Library and Information Services Policy Forum, jointly sponsored by the National Center for Education Statistics (NCES), the Office of Library Programs (LP), the National Institute on Postsecondary Education, Libraries, and Lifelong Learning (NIPELLL) of the U.S. Department of Education, and the U.S. National Commission on Libraries and Information Science (NCLIS) was held in Washington, DC, on May 15 and 16, 1995. In addition to federal officials from the U.S. Department of Education, the Library of Congress, the Department of Commerce, NCES, and NCLIS, the Forum involved library administrators, officers of library and information service associations, government officials, educators, researchers, and statisticians. Dr. David P. Boesel, Acting Director, National Institute on Postsecondary Education, Libraries, and Lifelong Learning served as the Forum Moderator.

This year's Forum focused on *Changes in Library and Information Services: 1996-2001,* and included forecasts for the next five years regarding economic, social, and technological changes, and changes in education.

Economic -- Gail Makinen (Congressional Research Service, Library of Congress). If a recession occurs, it should be short and shallow because interest and inflation rates are already low. The Federal Reserve will try to engineer a soft landing. Possible pitfalls are foreign economics, supply shocks, and the behavior of the American public in general, e.g., influences on spending of optimism or pessimism.

Social -- P. Royal Shipp (Congressional Research Service, Library of Congress). There are not many social forecasts; most forecasts come about with respect to legislation. The following factors make optimism difficult: sense of moral decline, age of great uncertainty, globalization of economy, lack of common purpose, aging of population.

Technological -- Jane Bortnick Griffith (Congressional Research Service, Library of Congress). Technology will continue to develop at a very rapid pace and computing power will continue to expand. Storage capacity and interconnectivity will increase; network bandwidth will grow; and globalization will continue. Software will become more sophisticated and user-friendly. There will be more and more data available in distributed modes, from more and more channels of information, with the pace getting faster and faster and with less time in which to process the information. The challenge for libraries is integrating traditional formats with electronic formats. There are unique opportunities for library and information science professionals, i.e., finding useful information, verifying what is real and accurate, serving as knowledge navigators, knowing how to organize and index large amounts of information, participating in and/or organizing peer reviews and synthesis of electronic information.

Education -- Luncheon speaker Ramsay Selden, Director, State Education Assessment Center, Council of Chief State School Officers, spoke on *Changes in Education: 1996-2001*. Mr. Selden stated that the overriding factor will be the federal attempt to balance the federal budget by 2002. For the next couple of years, he predicted there will be nothing more than level funding (in education) and beyond that substantial cutbacks in every domestic program. There will be consolidation and reorganization of federal education programs. All in all, he noted, it is not a particularly rosy picture.

According to Mr. Selden, the overriding education issues over the next five years will be:

- Resolving the issues over education content and standards;
- The way in which the educational system is oriented to its users, including students, parents, and communities;
- Instructional improvement, including teaching and learning processes and long-term participatory networks for teachers to improve their knowledge and practice;
- Improving equity by generating and delivering on high expectations for disadvantaged students; and
- Developing information systems, technology, statistics, and the integration of those systems. The need for integrated, not isolated, data sets and more integration among functions.

A Special Francis Keppel Award for the *development of the NCES/NCLIS Library Statistics Program* was presented to the Hon. Emerson J. Elliott, NCES Commissioner, 1988-1995. Mr. Elliott expressed his surprise and pleasure for the award stating, "I have been especially pleased to work on library statistics, partly because everyone's so energetic and enthusiastic."

Focus Groups

The major portion of time at the Form was devoted to five concurrent focus group sessions on the following topics:

1. National Level Changes
2. State and Library System Changes
3. Public Library Changes
4. School Library Media Center Changes
5. Academic Library Changes

The groups were asked to focus their discussions on seven questions outlined on pp. 51-52.

Following are some of the key observations and recommendations of the several Focus Groups:

National Level Changes

- Public support and pressure will be essential for libraries to continue to receive resources needed.
- Use of new technology by libraries will continue to advance and costs will continue to decrease. The result will be beneficial to library users and to library support.
- Training of library staffs in use of technology is important. Library workers will serve as techno-guides to users.
- Some federal roles in the further development of library and information services were identified as:
  --A spur for innovation, a catalyst for change;
  --Provide assurance for public access to government information;
  --Recognize and deal with the equity issues relating to the information 'haves and have nots';
  --Attend to the issues of copyright and seek a balance between the rights of authors and the needs of users in terms of fair use.
- Develop factual data on what users need and are getting from library services and relate that data to public support. Marketing techniques can help libraries understand user needs.
- Need for demographic data on library users and non-users.
- Access results of interlibrary cooperation.

State and Library System Changes

- The federal government has a long-standing partnership with the states in improving library services. This small but significant investment becomes more important in a networked society in terms of equity of public access to information.
- Data is needed on the impact of library services on people with special needs; the value that libraries add to information; the use of shared library facilities and resources.
- Studies are also needed on access to government information and the impact of libraries in extending access.
- By 2001, the majority of libraries, including medium-sized libraries, will connect with Internet and state funding will be essential to accomplish.

Public Library Changes

- By 2001, public libraries will be customer-centered, enterprise-driven, community-based, culturally-responsive, and outwardly-connected.
- They will be able to demonstrate the value for the public dollars received.
- Data are needed on electronic services, staffing patterns, and the relationship between types of governance to financial health.

- Federal assistance in creating validated surveys that would be useful to individual libraries.
- Public libraries need to contribute to the national digital library.
- Data on public library branches are needed as well as data on special service programs; for example, teaching literacy.
- Studies are also needed on effective models for library collaboration and methods of measuring the value of library service.

School Library Media Center Changes

- Educational reform requires library media center professional services and resources.
- Data are needed on how library media center services support the curriculum and student achievement.
- Data are also needed on currency of library collections, and relationship between use of technology and student achievement.
- Studies are needed to identify the most effective technology for teaching and learning.
- By 2001, partnerships between types of libraries will increase.

Academic Library Changes

- Future surveys will reflect the status and changes in funds expended for print and electronic resources.
- Copyright will continue to be an issue pending a technological solution to property rights management.
- There will be more cooperation between types of libraries.
- Academic libraries, as with others, will continue to search for ways to access their value to colleges and universities including their impact on users.
- Distance learning will expand greatly and will affect the role of libraries as information resource providers.

These key points reported and provided by the Focus Group chairs and recorders were greatly enriched by the total Forum discussions which followed the report of each group and are included in these Proceedings.

Library and Information Services Policy Forum
Changes in Library and Information Services: 1996-2001
Monday, May 15-16, 1995
Washington, DC

General Session
9:30 - 11:30 a.m.

Introduction to Forum
By Co-Chairs and Moderator

EMERSON ELLIOTT: Good morning. I am Emerson Elliott, the Commissioner of Education Statistics, U.S. Department of Education. I very much welcome you to the third Library and Information Services Policy Forum, jointly sponsored by the U.S. National Commission on Libraries and Information Science, the Office of Library Programs, the National Center for Education Statistics, and our new co-sponosor, the National Institute on Postsecondary Education, Libraries, and Lifelong Learning. David Boesel, the Acting Director of the Institute will serve as Moderator for the Forum.

I would like to ask everyone to introduce themselves and to indicate if they attended the second Forum held a year ago. I want to do this exercise because this meeting room is easily twice as large as last year's meeting room. I think the size of this year's group represents a certain maturing of this organization, which is wonderful. I am delighted that our friends from the Congressional Research Service are present to take part in today's conversation, as well.

The objective of this Forum is to address public policy data needs for all types of libraries. This being Washington, DC, I know it is difficult to disentangle this issue from announcements made last week regarding the terminations of various agencies, reductions in force, and the terminations of many, many programs in the U.S. Federal Government. If you read the fine print, at least one termination prominently mentioned was that of federal library grant programs. I trust that this is not news to anyone here. But, I know that it is going to be hard to disentangle those announcements from today's conversations.

I would like to take a minute to discuss the philosophical basis for holding these Forums. It is always fun to talk about data. If you look at the agenda, you will see that it prominently features issues of an economic, sociological, and technical nature. The question behind all of it, and one which we need to have addressed for our participation in this Forum is, "Where does all this fit in from the point of view of the data that are needed by public policy makers?" Many public policy makers are in Washington, but

they are not *all* in Washington. They are in all of our communities; they are city managers, serving on local boards, state legislatures. There are many people who have to make decisions about the future of libraries, library funding, training for libraries, and the support for libraries in this country. That is finally where we want to go. And, each of these issues is an important issue in and of itself — sociological, technological, and economic. That is what we draw out for the purposes of this conference. I think they each have a life of their own, and need to be pursued. And, you will pursue them in other Forums.

A planning Forum was held in September 1993, and it was concluded that the next Forum would look especially at the economics of library services and the impact of technology on libraries. So, in May of 1994 the second Forum was held and many of you participated and many of you did not. We want you to catch up and to be a part of this new Forum. The economic issues that were discussed in May 1994 were on the adequacy of library funding, library costs, and the impact of the library on the economy. Again, a very important conceptual issue when we are talking about dealing with people who need to understand libraries better in order to make decisions about them. What is the effect of libraries on the community and on the economy?

The technological issues focused on the impact of Internet and the National Information Infrastructure.

So, that moves us to today where we especially want to look at the changes that may be anticipated for all of the libraries with which we are dealing: public libraries, school library media centers, academic libraries, and state libraries and library systems, as well, over the period from 1996 to 2001.

Since we last met, the Office of Educational Research and Improvement (OERI) has had its own authority amended and extended. One of the pieces of that authority created an institute that has a responsibility for dealing with postsecondary education and lifelong learning, and also dealing *explicitly* with research issues relating to libraries. I welcome the change that Congress has made in the authority for OERI because I think it offers a potential for an additional qualitative dimension to the data concerns that I know are of concern to the library community everywhere.

With those few preliminary remarks, I take great pleasure in introducing the Honorable Jeanne Hurley Simon, the Chairperson of the U.S. National Commission on Libraries and Information Science.

JEANNE HURLEY SIMON: Thank you so very much, Emerson.

I do want to add my welcome to this Forum on behalf of the U.S. National Commission on Libraries and Information Science. I also want to introduce several of the Commissioners here today: Shirley Adamovich from Durham, New Hampshire; Bob Willard from Dayton, Ohio; Carol DiPrete from Bristol, Rhode Island; Bobby Roberts from Little Rock, Arkansas. These are the outstanding Members of the Commission here today to contribute. From the Commission staff we also have Mary Alice Hedge, Associate Executive Director; Peter Young, Executive Director, is ill today, and I regret that because I lean on him very much; John Lorenz, Coordinator, Library Statistics Program; Jane Williams, Research Associate; and, of course, running the whole show are Barbara Whiteleather and Kim Miller.

As Emerson just said, this is the third Library and Information Services Policy Forum co-sponsored by NCLIS and NCES. I was here last year when I was truly surrounded by statistics that I did not understand and policies that I was just beginning to grab hold of, and probably still a little bit in the dark. I am especially pleased with the cooperation and the collaboration that these Forums (or should I say 'Fora') represent. They do reflect an interdisciplinary spirit that is proving to be essential in an era characterized by radical and revolutionary change. You have heard the word "revolutionary" lately on the House side of the Congress. Perhaps not a wise use of the word "revolutionary," but there it is.

And, which of us in library and information services are not experiencing some kind of change? For those of us in the federal sector and those of you in the libraries, associations, and/or industry, we all are increasingly aware of the impact of change on our institutions, our policies, and on the information needs of our communities. That is why I am so glad that we are talking about change this morning.

I am sure it is no secret to any of you that change is a way of our contemporary life. When the President designated me the Chairperson of this Commission in November 1993, I thought I knew a little bit about libraries. But, over the last 18 months, my vision has been expanded, and I have developed a whole new respect for the meaning of that word, "change." I have learned that technological changes brought on by networks and the global Internet are only one of the many forces that are reshaping libraries and information services. Social, economic, political, education, and policy changes in information technology will have a fundamental impact on libraries by the year 2001. But, what is most impressive to me about the changes in libraries and information services is the rapid rate with which they are coming. But, without being able to measure these changes, managers and policy makers will not have the tools they need to be effective. That is why we are here today — to develop informed projections about the state of the future.

Your assignment at this Forum is to conceptualize the future. I heard John Lorenz say, "To conceptualize the future is the real meaning of this Forum." The future is not

just for ourselves, librarians, or associations. It is not just for schools, states, agencies, or constituents. It is for the people; our children, our grandchildren, and for the people of the 21st century who require adequate library services. Only then, when we have the services, can they participate fully in civic, social, intellectual, and economic life of our country.

Peter Young suggested that I quote from a Bob Dylan song that I think you all know, "The times they are a' changing. So, you better start swimming, or you will sink like a stone, because the times they are a' changing." So, right now, I think I had better start swimming by introducing David Boesel, who represents a change in the Office of Educational Research and Improvement. David is the Acting Director of the National Institute on Postsecondary Education, *Libraries*, and Lifelong Learning. (Applause)

DAVID BOESEL: Thank you, Jeanne. Welcome to this Forum on *Changes in Library and Information Services: 1996-2001.*

It is very appropriate that we are taking on this subject at this time because we are clearly in the midst of sweeping changes, both national and international — the globalization of economies, the proliferation of information technologies and attendant social and political changes, questions of the relation of citizens to government, and the role of government in the United States.

We are today to discuss how these changes affect libraries, but also the role that libraries can play in the midst of these changes. How can libraries better meet user needs, and how can libraries better provide the kinds of information that policy makers need to make informed policy decisions? We think that is very important. Informed policy decisions.

We are rapidly approaching the year 2000, the end of the millennium. Over the course of the last decade, there have been any number of commissions and bodies that have looked at or examined their disciplines in light of the end of the millennium. We have had Goals 2000, and we have had Work Force 2000. And, now, as we actually approach the end of the millennium, the years are beginning to slip into 2001, as here, or 2002, when we all hope to have the budget balanced.

Introductions

DAVID BOESEL, Acting Director, National Institute on Postsecondary Education, Libraries, and Lifelong Learning. As we approach the end of this millennium and the beginning of the next, we have here a group of distinguished millenniumists, and we are going to ask them to introduce themselves and to say a few words about their affiliation and to offer one sentence or so of thought about the future as it relates to libraries. And, in the course of this, as Emerson suggested, please mention whether you were at the last conference or whether you are new at this one.

SHIRLEY ADAMOVICH, Member, U.S. National Commission on Libraries and Information Science. I was not present for the last Forum. I am a former State Librarian of New Hampshire, and a former Commissioner of Cultural Affairs, which is tied into the National Endowment for the Arts and Humanities. We were one of the early states in collecting statistics, and it meant a very great deal to us in New Hampshire and in New England. I do work very closely with the school libraries in New England and I am happy to see them included in this Forum.

RICHARD AKEROYD, State Librarian of Connecticut. I was not present at the previous Forum, and I am looking forward to participating in this one.

JOHN BERTOT, School of Information Studies, Syracuse University. However, I will soon be with the University of Maryland's Baltimore County Department of Information Systems. Last year, I was co-author with Chuck McClure and Doug Zweizig on the NCLIS-sponsored study, *Public Libraries and the Internet*, with research assistance provided by Carrol Kindel and NCES. I am currently working again with Chuck McClure on developing, again for NCLIS, costing models of public library Internet services.

JULIA BLIXRUD, Program Officer, Council on Library Resources. I was at last year's Forum. I look toward this Forum to give me some guidance in terms of the answers that this group might have.

LAURA BREEDEN, U.S. Department of Commerce. I direct a grant program in the National Telecommunications and Information Administration. NTIA makes grants to public institutions and state and local governments so that they can acquire and use the information infrastructure. There are some grantees here, and I am sure there are some "would be" grantees here, as well. My boss, Larry Irving, has a commitment to make public schools and public libraries access points for people who might not have access otherwise and for everybody, really, to the information superhighway.

ADRIENNE CHUTE, National Center for Education Statistics, Library Statistics Unit, U.S. Department of Education.

SANDY COOPER, State Librarian in North Carolina. I was not at the last Forum, and I, too, am looking forward to this Forum as an opportunity to think and re-focus some of my own thinking on where we are going with our state and federal policies on libraries. I need to persuade our General Assembly to increase data.

EVELYN DANIEL, Professor and former Dean at the School of Library Science at the University of North Carolina. For a long time I have been interested in change, especially change propelled by information technology. I am currently chairing the American Association of School Librarians' Library Statistics Committee, and, like Joe Shubert, I, too, am an optimist and looking forward to these discussions.

BLANE DESSY, Acting Director, National Library of Education. I did attend the first meeting.

CAROL DIPRETE, Member, U.S. National Commission on Libraries and Information Science, and Dean for Academic Services, Roger Williams University, Bristol, Rhode Island. I have had a wonderful experience in dealing with statistics since I have been on the Commission, 1990. I have been to two of these Forums, and I always find them exciting because I do think data is absolutely essential as we continue to move into new areas. I am delighted that I am here.

CHRIS DUNN, Acting Director, Discretionary Grant Programs Division, Office of Library Programs. I also work with the National Center for Education Statistics on fast-response surveys and public library services for children and young adults and work on a contract that we have with Westat on the Role of School and Public Libraries in the National Education Goals.

EMERSON ELLIOTT, Commissioner, National Center for Education Statistics, U.S. Department of Education. I am happy to be present for this, the third, annual Forum.

GORDON GREEN, Chief, Governments Division, U.S. Bureau of the Census. We collect a lot of statistical information on libraries as part of our regular program and also for our sponsor, the National Center for Education Statistics. I think the challenge for us is to use the latest technology available to produce the very best possible statistics for the library community. I was here at the previous Forum, and I am looking forward to the one this year, as well.

JANE BORTNICK GRIFFITH, Acting Chief of the Science and Technology Division, Congressional Research Service, Library of Congress. Working in the area of policy and information technology issues, over time I have seen a growth in interest in both the awareness of and policy attention to issues of access to information.

MARY ALICE HEDGE, Associate Executive Director, U.S. National Commission on Libraries and Information Science. I have been with the Commission now for 28 years. We had a Planning Forum two years ago to plan for last year's Forum, and it is just so incredibly stimulating to go back, even now, and look at the results of that Forum. Just know that what you do here today will have a resounding effect as we go on and will help policy makers as they attempt to deal with today's trying times.

GLEN HOLT, Executive Director, St. Louis Public Library. Like, my colleague Marilyn, I am a "newey." I am involved in a couple of things in St. Louis that are relevant to what we are talking about here today. We have been trying to do true cost accounting within our operation, and it has been both exciting and frustrating. We have also been trying to actually measure the value of children's services. I am looking forward to the Forum. I am grateful to be here.

BARBARA HUMES, National Institute on Postsecondary Education, Libraries, and Lifelong Learning. I have been there a short time, but during the past six months I have become keenly aware of the paucity of data that we do have on the diverse libraries and the communities that they serve, and the value of that service.

[David Boesel noted that Barbara Humes is the Team Leader working on libraries and library research issues in the Institute.]

NEAL KASKE, Office of Library Programs, Office of Educational Research and Improvement, U.S. Department of Education. I attended last year's Forum. I am a Program Officer dealing with Higher Education Act discretionary grant programs.

CARROL KINDEL, Head of the Library Statistics Unit, National Center for Education Statistics. I was here for the first policy Forum. My main interest is in participating and hearing about the changes that you see coming so that we can keep up with the data collections and be able to have the data that are really needed to not only inform but to give the information needed as we undergo these changes.

ROBERT KLASSEN, Acting Director, Office of Library Programs, U.S. Department of Education. We have seven library grant programs, and we hope there will be continued funding for those kinds of programs. In the past we have joined the National Commission and NCES in supporting these Forums. So, we are very much interested in the data that will be collected here in our discussions.

ROSLYN KORB, Director, Postsecondary Institutional Studies Unit, National Center for Education Statistics. We do Postsecondary surveys including part of the Academic Library Survey.

ELAINE KROE, National Center for Education Statistics. I help implement the library surveys at the National Center for Education Statistics. I was not at the first Forum.

KEITH CURRY LANCE, Director, Library Research Service, Colorado Department of Education. Last summer, in Olde Town, Alexandria, Virginia, I got into a carriage with a couple of colleagues who were from other distant states, and the driver turned around and asked us why we were all there together. I said, "We are here to meet for three days about library statistics." The driver looked on us with great pity, like she could not imagine a more deadly topic for three days of meetings. I just patted her on the hand and said, "You are going to have to trust me on this. It is a more exciting topic than you could possibly imagine."

JOHN LORENZ, Coordinator, Library Statistics Program, U.S. National Commission on Libraries and Information Science. I have had about 30+ years of federal library service and there is one sentence that has sustained me throughout: "This, too, shall pass away."

MARY JO LYNCH, Director, Office of Research and Statistics, American Library Association. I have been at the previous Forums, and I have worked very closely with the National Center for Education Statistics on public library statistics, school library statistics, academic library statistics, and state library statistics. I am looking forward, a lot, to this day.

GAIL MAKINEN, Specialist in Economic Policy, Congressional Research Service, Library of Congress. I have been at the Research Service for 11 years. If I have to talk about the future, my basic belief is that we should keep funding libraries, or information services, in general! I will vote every time I have a chance to expand libraries and library facilities, either at the local level or at the federal level. Keep up the good work.

BETTY MARCOUX, Head Librarian of a dual high school campus in Tucson, Arizona, and Adjunct Faculty Member at the University of Arizona School of Library Science. Currently, I am Chair of the Visions Guidelines Committee for the American Association of School Librarians, which is in the process of developing, and will be writing shortly, new guidelines for school library programs.

I am delighted to be here. It is my first opportunity, and I am really excited to see what we come up with.

SUSAN MARTIN, University Librarian, Georgetown University. I guess I should also mention that I am President of the Association of College and Research Libraries (but that is only for another six weeks). In Emerson's terminology, I am new; I was not at the previous Forum. I have been involved in information technology and libraries since 1964, so I guess in that sense, I am "old."

I am particularly interested in statistics and measurement. As a former Member of the ARL Statistics Committee, we felt there was a good deal to measurement of access in terms of quality in addition to quantity.

MARILYN GELL MASON, Director, Cleveland Public Library. I have been there for eight years. Previously, I was the Director of the Atlanta Public Library, and way back, in another incarnation, I was Executive Director of the first White House Conference on Library and Information Services. I believe this meeting is extremely important as we are what we measure. I think libraries, right now, are ahead of what we are measuring and without accurate measurements we have no way to communicate what we are doing to the rest of the world. I am a "newey."

JOAN MICHIE, Westat. I am directing a study looking at the role of school and public libraries in support of Goals 2000 and school reform. We are currently in our survey development phase, and I hope this Forum will be a potential source of questions for us.

KIM MILLER, Special Assistant, U.S. National Commission on Libraries and Information Science.

MEB NORTON, Director of Libraries, Metairie Park Country Day School, Louisiana. This is my first Forum. I am also on the Vision Committee of the American Association of School Libraries.

PAUL EVAN PETERS, Executive Director, Coalition for Networked Information. Before that I was in charge of systems for New York Public Libraries and Columbia University libraries. The Coalition is a vehicle of collaborative action in the networked information environment. I published an article in *Library Journal* in April entitled, "Information Age Avatars." The title conveys where I am coming from; in particular, I advance the view that a number of the major questions of the quality of life in the 21st century depend upon librarians beginning to think of themselves as in the vanguard of the information age. I offer, what I hope you will find entertaining, the metaphor of librarians being "birds in the cage" for the information age. . . being held forward by our communities as they progress forward trying to determine whether the environment ahead is toxic. I am pleased to observe that in this month's issue of the *Harvard Business Review* there is an article entitled, "Trust in Virtual Organizations," that advances the same view. . . that libraries, with health care and a couple of other "knowledge industries" are in the vanguard of coping with the real issues of the Information Age. I was at the original Forum, and I am glad to be here today.

BABETTE 'BABS' PITT, Media Specialist, Richard Montgomery High School, Montgomery County, Maryland. In fact, I taught a class there this morning, and I am right into the new technology using PC Globe, Info-Finder, and lots of other sources using Sailor, which is a wonderful Maryland Telecommunications System. So, I am into change. I have seen pupils every day. I have been in elementary schools, although now I am in a secondary school. I think I am a perfect person for looking at change since I work with students and teachers in partnership every day. This is my first Forum.

DENNIS REYNOLDS, President, CAPCON Library Network, Washington, DC. I was at the first Forum. I am interested in the role of libraries and publicly-funded institutions.

BOBBY ROBERTS, Member, U.S. National Commission on Libraries and Information Science and Director, Central Arkansas Library System, Little Rock. Our System is for about 300,000 people and it is a rather odd mixture. We are the only urban library in the state. We also serve one county that is probably one of the poorest counties in the South, which I can assure you makes it very poor. As far as statistical information, we have a problem in that the type of information that is collected and that works well for urban areas is not necessarily useful when I am trying to deal with the quorum court in Perry County, Arkansas, which is a very rural county. I am very interested in what kinds of statistics we are collecting and how you deal with a conflict with what you need in an urban area and what you need in a rural area. And, I am having to deal with both of them. So, sometimes I am not sure what kind of statistics I need and what works best.

ELEANOR JO RODGER, President, Urban Libraries Council. Prior to this position, I was Executive Director of the Public Library Association. Prior to that I was a hired pen on the early output measures. My interest at this point is in understanding libraries as 'means', not as 'ends', and in the statistical and research efforts we need to talk about those 'ends' significantly.

P. ROYAL SHIPP, Acting Chief of the Education and Public Welfare Division, Congressional Research Service, Library of Congress. Our Division handles support for social policy questions, including Social Security, health care, Medicare, Medicaid, education problems, welfare reform, and so forth. So, very quickly, we get into social policy issues working with the Congress. It has been a very busy time for us working with the new majority in the House and Senate.

JOSEPH SHUBERT, State Librarian and Assistant Commissioner for Libraries in New York State. I have been at the New York State Library for 17 years. Before that, I was State Librarian of Ohio and, way back, State Librarian of Nevada for three years. I was at the Forum last year.

The New York State Library is a research library for the government, people, and libraries of the State. It is a member of the Association of Research Libraries. The State Library has a Division of Library Development, which has responsibility for the continuous improvement of New York's 7,000 libraries and the cooperative systems which support them. The Library Development program is supported by $81 million in state aid. We also administer the Federal Library Services and Construction Act in New York State.

Discussion of change and the future of library services is important because people's library and information service needs are changing. Statistics are important as libraries change to meet people's needs for information and education.

JEANNE HURLEY SIMON, Chairperson, U.S. National Commission on Libraries and Information Science. Bob Willard, I think you are all wrong on that Abraham Lincoln quote. I think it is St. Theresa of Avila who said it a long time ago. (Laughter)

GARY STRONG, Director, Queens Borough Public Library. Previously, I was the California State Librarian. Prior to that I was the Deputy Director of the Washington State Library. I am very interested in being here. It is the first time I have been at the Forum, but I have been in and out of the National Commission's activities, it seems like, over a lot of years. I attended the first Commission hearings in 1967 in Seattle, so this view is one that is long in coming in terms of the collaborative nature of it. I am interested in that collaboration that is emerging as we look at the policy issues that really need to be answered. While I am interested in measurement in statistics, I am far more interested in the policy issues that are facing libraries today.

BETTY TUROCK, Director, School of Communication, Information and Library Studies, Rutgers University. I have been there for about ten years. Prior to that time, I held administrative posts in eight states in school, academic, but mostly in public libraries. I am President-elect of the 57,000 member American Library Association (ALA). That number tends to move Congress when I speak to them. Fifty-seven thousand advocates represents a lot of votes.

The focus of my year as President of ALA will be insuring a major role for libraries in the evolving electronic national infrastructure. In fact, my theme is, "Equity on the Information Superhighway," equity for people, for libraries, and for Nations. One of the things I learned as a very active, traveling President-elect is that decisionmakers need facts about libraries. When I testified before Congress, or when I have had the opportunity to speak with Reed Hundt, the Federal Communication Commissioner, and to Members of Congress, they all gave me a variation on the same theme, "Show me the data. Give me the facts. What will libraries produce if they are active members of the information superhighway?" So, my interest in this Forum is keen.

ANN WEEKS, Director, School Division and the Young Adult Library Services Division at the American Library Association and the Coordinator of the National Library Power Program, which is a major initiative of the Readers Digest Fund. One of the things we are finding through that program is that school libraries can really serve as catalysts for change. I think that with a future characterized by change, kids have to have new opportunities for teaching and learning. I am delighted that school libraries are a part of this Forum this year. I was not here last year.

BARBARA WHITELEATHER, Special Assistant, Library Statistics Program, U.S. National Commission on Libraries and Information Science.

ROBERT WILLARD, Member, U.S. National Commission on Libraries and Information Science. I am in my second year as an NCLIS Member. In real life I work for a legal publisher and have been a fairly consistent advocate for the commercial marketplace as a primary means for meeting the library and information needs of the population. But, I also recognize the need for wise public intervention when the marketplace fails. I am interested in the topic of the future. I have three favorite quotations about the future. The first one is, "The future ain't what it used to be." Second, "If you do not know where you are going, then any way will get you there." And, the third is: "The best way to predict the future is to create it." Unfortunately, I cannot give proper attribution for any of those quotations; I have just heard them forever. However, as a student of Abraham Lincoln, I can give attribution for John Lorenz's quotation—that was actually presented by Lincoln in a speech in 1859 to some farmers in Wisconsin.

JANE WILLIAMS, Research Associate, U.S. National Commission on Libraries and Information Science. Last week I quoted to Chairperson Simon something that I had read recently talking about a person acting as though a moment's thought is a moment wasted. I think a Forum like this can be very important in giving us time to think. I think it is even more important given our political and fiscal climate.

JEFF WILLIAMS. National Center for Education Statistics, Library Statistics Unit, U.S. Department of Education. I am also Project Officer for the Academic Library Survey and the School Library Media Center Survey.

FRANK WITHROW, Director, Learning Technologies, Council of Chief State School Officers. I believe that the new Digital Library is essential to all education reform, and I will go so far as to say that we will not have education reform unless we have good digital libraries accessible to all of our citizens on a lifelong basis.

Forecasts for Next Five Years, 1996-2001

DAVID BOESEL: It is now time to turn to the presentations. We have three presentations of about 20 minutes each, and then one-half hour for discussion and general questions and comments. I ask you to hold your comments and questions until the end of the third presentation so we can maximize the opportunity for discussion.

We have three distinguished speakers here today from the Congressional Research Service.

Our first speaker is Gail Makinen, Specialist, Economic Policy, Congressional Research Service, Library of Congress.

Forecasts for the Next Five Years, 1996-2001
Economic

GAIL MAKINEN: Good morning. I would like to preface my remarks this morning with a "thank you" to all the librarians present.

Over the past nearly 30 years that I have been doing research, my success has, in no small measure, been due to the efforts of countless librarians. Yet, I seldom see these individuals whose tireless devotion to their job makes my job a lot easier. Just in case you are one of the individuals who have handled my numerous requests over the years, thanks again. You are truly the unsung heros of my life and I owe you a great debt of gratitude. It is a pleasure to acknowledge it.

This morning I have been asked to talk about the outlook for the U.S. economy for the coming five years. Let me begin by talking about where we are, right now. Our current economic expansion is 50 months old. As economic expansions go, this one is nearing middle age. If you take a look at the nine completed economic expansions since the end of World War II, their average age is exactly 50 months. So our current expansion of 50 months is average or middle-aged.

Averages, however, can conceal a great deal of variation. And so it is with business cycles. We have had two very-long economic expansions among these nine since World War II. One of them dominated the decade of the 1960's and it ran for 106 months. It is the longest economic expansion in American history. The second longest economic expansion dominated the decade of the 1980's and ran for 92 months.

We have also had some very short economic expansions, one of which lasted 12 months and another lasted 24 months.

We are now at a crucial point, I think, in the current expansion. The Federal Reserve has been attempting for the past 12 months to engineer what is termed in the newspapers, "a soft landing." Now, what exactly is a "soft landing?" Well, through interest rate hikes and decreased credit availability, the Federal Reserve has been attempting to slow the growth in aggregate demand to match the sustainable growth in our capacity to supply output. Our capacity to supply output is estimated to grow at about 2½ percent per year, and it is a combination of two factors. The estimated growth in our labor force and the estimated growth in our productivity. Our labor force is expected to grow over the decade of the 1990's by about 1 percent. Our productivity is expected to grow about 1½ percent per year.

The combination of the two, then, gives the long-run ability of the economy to grow on a sustainable basis; that is about 2½ percent. What the Federal Reserve is attempting to do through the interest rate hikes that we have had over the last 15 months and decreased credit availability is to slow the growth of demand to match the growth in our ability to supply goods and services.

The Federal Reserve will be successful if the growth of gross domestic product (GDP), which is our measure of total output, is cut to about 2½ percent. The GDP data are in for the first quarter of 1995, and what do they show? During the first quarter, GDP grew at an annual rate of 2.7 percent. While that number is going to be subject to some revision, it seems to indicate that the Federal Reserve is about on target.

During 1994, for example, GDP grew 4 percent, approximately. During the fourth quarter of 1994, it grew at an annual rate of 5 percent. So, it appears that these interest rate hikes that we have seen and the decreased availability of credit are, in fact, beginning to take hold since GDP growth has been reduced to a little under 3 percent. However, there is weakness in that growth rate number. The principal weakness has to do with the fact that about 35percent of the extra output produced in the first quarter of this year — I am not talking about the total output produced in the first quarter, but just the extra output produced over what we were producing in the fourth quarter — was not sold. It was added to inventories. Now, this is not necessarily bad. After all, the fourth quarter was a time of good sales, and you have to replenish the shelves a bit. But 35percent of the new (additional) output produced in the first quarter of this year was simply added to inventories, it was not sold.

If this continues on into the second and third quarters of this year, production will have to be adjusted downward to match the decrease in demand. When that occurs, the possibility looms of a recession. When we starting cutting back production to match demand, there is the possibility of a recession.

However, if a recession does occur later this year, and I will talk about the possibility of that, it should be a very short and shallow recession for one important reason. That being that inflation is not very serious right now. We have a very low inflation rate for this point in the business cycle. A primary reason for past recessions has

been to deal with an inflation rate that policy makers believed was too high. The resulting recession with its decline in demand and rise in unemployment has been the traditional means for dealing with inflation. We create a recession. The purpose of the recession is to get the inflation rate down.

If we should have weakness in demand this time around, or a recession, it is going to be because of difficulties in fine-tuning an economy through monetary policy, not because we need to reduce an inflation rate that policy makers think is too high. I emphasize fine-tuning the economy through monetary policy. There is no magical formula for its executions. The Federal Reserve has raised the interest rate seven times between February 1994 and February 1995. There have been seven rate hikes. This has been done with a lot of judgment involved. There is no magic formula that says, "If you raise the federal funds rate from 3 percent to 8 percent you will slow economic growth down from 5 percent to 3 percent." There is no rule like that. A lot of these adjustments are based on historical evidence. Sometimes, the Federal Reserve does make mistakes. It tightens up too much.

If signs of weakness in the economy do occur, these signs will be of two types. First of all we will see GDP growth slowing down considerably; it will be below 2½ percent and, second, the unemployment rate will rise above 6 percent. If the unemployment rates rises above 6 percent, the Federal Reserve will realize that it has made a mistake. It has tightened too much. Because there is no serious inflation problem, it will be able to reverse its policy course immediately.

Had there been a substantial inflation problem, the Federal Reserve would have had to wait until the evidence showed that the inflation rate was down before it reversed policy. By this time around, since inflation is not a serious problem, if the Federal Reserve made a mistake by tightening too quickly, too much, it can reverse policy very, very quickly. It would not take much time to do so.

My discussion thus far raises the question, "What is the possibility of a recession coming in the next 12 months?" Or, put another way, "What is the possibility that the Federal Reserve will be successful in engineering a soft landing?" I can go to two sources for an answer to those questions.

First of all I can take a look at the economic forecasts that have been made. There are plenty of people making economic forecasts. They are in the academic community, in the financial community, and in the business community. These people make forecasts that are updated monthly. The most recent forecasts I have are for the month of May; they were prepared in April. These forecasts say that, almost to a person, (and I look at about 50 of them), the Federal Reserve is going to be successful, that is, it will be successful in engineering a soft landing. Almost all of the forecasts, if you look at the next 12-18 months, expect GDP growth to be 2-3 percent; that the unemployment rate will be kept close to 6 percent; and that the inflation rate will be low. That is the evidence from the forecasters.

There is also other evidence. There are a lot of people out there who put money on the line and they put it into the stock market. The stock market may be a good indicator of whether the investing public thinks that the Federal Reserve will be successful. Well, what have we recently observed? Over the first five months of this year, the Dow Industrial Average has increased by nearly 20 percent; that is the investing public's confirmation that they think the Fed is going to be successful.

If the Federal Reserve is successful in engineering a soft landing, this does not mean that we, over the next three or four years, might not have some problems. Where will the problems come from? Well, there are a number of pitfalls that may occur. One of these has to do with foreign economic behavior. We are not the only country in the world and what happens in foreign countries has an affect on our economy. One of the ways that we are insulated from economic developments in foreign countries is through the use of flexible exchange rates. Flexible exchange rates tend to balance off what happens in foreign countries relative to what happens here. If their business cycles do not coincide with our business cycle, the foreign exchange rate helps to ensure that their business cycles do not have much of an effect on our business cycle.

However, there can be transitory effects, to be sure. And, those transitory affects can affect US GDP growth for a quarter or so. Foreign economic developments are, thus, one possible source of problems for us in the coming five years. Another source of problems is what are called, "supply shocks." And the most noticeable supply shock that you are familiar with are oil price disruptions. We had them in 1973, 1979, and the most recent one was associated with the Gulf War. Those supply shocks can have very serious affects on America's ability to produce. They can raise the price of oil dramatically, and that has an affect on production costs, and, through production costs, on the inflation rate. So, we have to worry about supply shocks. The biggest ones that we have noticed are oil price shocks. But, there are also food price shocks that come about every so often.

The final kind of pitfall that may affect the economy is the behavior of the American public. How optimistic are we about the future? How pessimistic are we about the future? This can influence how much we spend. That is, if the business community suddenly gets very optimistic about the future, outlays for business investments will likely go up. If the consuming public becomes optimistic about the future, they tend to buy more big ticket items. All of this helps to boost economic growth in the U.S. We cannot discount the fact that individual behavior varies over time and that individual behavior has an affect on the U.S. business cycle.

Thus, over the next five years, if the Fed is successful in engineering a soft landing, as the forecasting public tends to believe it will, there is still the possibility that the U.S. economy will be subject to shocks along the way. These are the events that we cannot forecast.

Suppose we are successful and there are not any shocks; and the Federal Reserve engineers a soft landing. What can we look forward to over the next four to five years?

Remember, the longest economic expansion we have ever had in American history lasted 106 months, and that economic expansion came to an end because of the Vietnam War. If the Vietnam War had not occurred, one wonders how long that expansion would have lasted.

Given that the current economic expansion is now 50 months old, and if it goes on for another 50 months, that is almost to the year 2000, what can we expect in terms of growth ? We can expect an economic growth rate of about 2½ percent a year in real terms. That is not very high compared to our historic average, but it is about what we can expect.

Let me summarize by saying that the economic expansion now is middle-aged. There is no reason why it cannot go into old age if we manage to engineer a soft landing which market participants think we will be successful in doing. We can look forward to another four or five years of slow but steady growth. We will have a GDP growth rate of about 2½ percent, an unemployment rate that stays at about 6 percent, and an inflation rate that will probably be in the neighborhood of 2 percent. That is the consensus forecast for the remainder of this century.

Thank you. Let me just conclude by saying, "Who says that economists cannot be optimistic?"

DAVID BOESEL: Than you, Gail. Our next speaker is P. Royal Shipp, Associate Director, Office of Research Planning and Coordination, Library of Congress, on the topic of social and policy issues as they relate to changes in libraries over the next five years.

Forecasts for the Next Five Years, 1996-2001
Social

P. ROYAL SHIPP: My credentials as a supporter and lover of libraries are also strong. I have worked for the Library of Congress for 17 years. In addition, ten years ago we moved from the City of Alexandria to another Washington suburban community and, when we left, there was a nice article about our family in the local community newspaper in Alexandria which talked about the accomplishments of our children in school and their athletic, musical, and academic accomplishments. It talked about my wife and her community service; she was involved in community, school board, and church activities. And, when it got to me, it said that I was a well-known and valued customer of the Burke Branch of the Alexandria City Library, which, in fact, was the case.

I said earlier that we hope that the Library of Congress is spared during these cutbacks. It is not clear that it will be. In fact, on this very day there is a hearing before the Appropriation Committee in the Senate on the Legislative Branch, and, specifically,

on the Library of Congress. One of the things that our Director has been doing is going around and talking with all of the Congressmen about how valuable the services of CRS are to the Congress. We have been heavily involved in the considerations leading to legislation during these months of the 104th Congress, and I expect we will continue to be.

Those of you who know the Congressional Research Service (CRS) know that one of the things which we claim we do that makes us most valuable to the Congress is our non-biased and non-partisan approach to issues. We work with both Democrats and Republicans in the same way and provide the same kind of information. While we say we are not biased, in one sense we probably are. That is, we value the institution of the Congress more greatly than the general public does, I suppose. That is one way to say it. Many of us have the view also that all of the many problems there are in democracy, the best cure for them is more democracy. That could be discussed I expect, but that is not the purpose here today. I am saying this just to give you an idea of how we have tried to approach the work of policymaking in the Congress.

In economics, which Gail described, there are many forecasters and forecasts. The idea of a social forecast is very complicated, and there are not many social forecasts. Most of them come about in the context of legislation; Goals 2000, the education program is an example. Most pieces of legislation indicate that things will get better as a result of enactment of this legislation. For one thing, a five-year period is not very long to think about changes in social conditions. At the end of five years, one would think that social conditions will not have changed much from what they are now. They will be driven by some factors and policies will certainly change, but the conditions, themselves, may not.

One of the things we do for the Congress in working with them is to provide a framework of analysis in thinking about issues. This is what I will try to discuss today, rather than make a specific forecast about how social conditions will change. I will start by talking about some pretty fundamental ideas, because that is how I think about this issue, but it is also the way this current revolution has been couched by its promoters. I looked up the word, "social" in the *Oxford English Dictionary* and it talked about it as "being capable of being associated with, or united through others. Characterized by mutual intercourse, friendliness, geniality, united by common ties. Living in communities. Desirous of enjoying the society of others. Connected by the society as a natural and ordinary condition of human life."

Social issues, following from this then, are those that result from such associations and connections. We think of them, and they are described often in common and political terms, as "freedom," "safety," "health," "prosperity," or "economic opportunity." A feeling about the future; a feeling of optimism; progress, particularly with regard to future generations. Indeed, one of our founding documents, the Declaration of Independence, couched it in these terms, "We are endowed by our creator

by inalienable rights having to do with life, liberty, and the pursuit of happiness." And, in a shorthand way to think about all this, is the American Dream.

But, to make a social forecast, five years is a short time. Very quickly, then, you get into policy and legislative issues. To do this kind of analysis, you would want to describe where we are now; a baseline or starting point. And, there is substantial disagreement about that. However, there is substantial consensus that in terms of social policy we are not on the right track. These ideas were formulated during the last election as a breakdown in family values, societal problems with sex, drugs, violence. You will be familiar with the Speaker's formulation which he stated often, and which was picked up by other candidates, about 12-year old children shooting other 12-year olds; 14-year olds having babies; and 17-year olds receiving high school diplomas that they could not even read.

So, clearly, the discussion about social values and social policy moves very quickly into the social realm, which, in fact, is where questions of values are discussed in our country and are debated. Politics are about values; it is about other things, of course, too, including the distribution of public government benefits and jobs. The one thing about the political process is that it is the nature of politicians to act. And, indeed, the actions we are seeing results from the outcome of the election.

In conducting this debate, not only is there disagreement about where we are but about how we got to where we are, the root causes. What has worked and what has not worked. The debate has long been about the value of the Great Society programs. Now it may move even further back to discuss the New Deal and the value of those programs. Social Security, after all, was the first of the big entitlement programs. And, this debate is taking place in some very basic concepts having to do with individual freedom versus community; public versus private activities. The question about shrinking the government, market solutions to problems in terms of vouchers and choice for education, the question of public versus private, gets into most social debates. It did in the health-care debate last year and again this year, and I expect will again when the Social Security issue is debated sometime in the future.

Out of all of this, somehow, came the great push to balance the Federal budget by the year 2002. That idea and commitment, of course, is what is driving much of the policy today. This debate, also, is taking place within the context of what certain economists might call "exogenous variables." There are factors that affect the debate that are really outside of the policy makers to control. I think the sense of moral decline is one that is hard to get a handle on. It has already been mentioned the fact that this seems to be an age of great uncertainty. Great changes in terms of the globalization of the economy are taking place. It is a fact that we seem not to have a common purpose to unite us as much as we did during the time when we were fighting our way out of the Great Depression or winning the second World War or winning the Cold War. There are many factors that make this a particularly difficult time for people in thinking about the future and having optimism in the future.

There is also the factor of the aging of the population. The first, depending on how you measure it, of the babyboom generation is reaching age 50 about now. This first wave of the babyboom generation will be 65 in the year 2010 and it is really at that time and for the next 20 years, that the great pressure of a retired and aging population will come strongly to bear.

The role and the size of the government almost become an exogenous variable (this is where I am not quite on target, Gail). Over the past several years, the expenditures of the federal government have been 22 percent of the GDP. The revenues coming into the federal government have been 19 percent. Around there, is where we have been since 1980, almost, and it is going to be very hard to move away from it. That is what the balanced budget debate really is, our deficit is 3 percent of GDP. That is what the debate is about, and coming to grips and dealing with that are difficulties we will see in the debates over social policy, and, particularly, the budget.

Another of these kinds of factors that are exogenous. It is a little bit like the Food Stamp Program. The Food Stamp Program really is not an entitlement program, but it acts just like one so it is always lumped together with the entitlement programs. The intractable rise of health care costs will make it difficult for us to deal with the questions of Medicare. Health care takes up 15 percent of the GDP in this country; that is substantially larger than other countries, including other industrial countries. That is about $1 trillion a year, but, of course, that is not all federal; the federal share of that amount is much smaller. That is the total expenditures in the economy on health care. And, you can see with $1 trillion at stake why the debate over health care is very passionate and very, very difficult. There are huge resources that come to bear.

And, finally, the intractable nature of some social problems — education reform might well be one. Another one I will mention also is welfare reform, because it has come to mean such a big constellation of issues. It used to be that when we talked about welfare reform (and remember this is not the first time we have talked about welfare reform) it was how to get people off of welfare rolls and into jobs. And this is still part of the debate. But, the debate has become more than that now. It has to do with our ideas about federalism; what the responsibilities of the state government vis a vis the national government's responsibilities. It has to do with how to deal with the question of out-of-wedlock births, which is a big problem in this country and in other industrial countries, too. The debate has to do with the nature of entitlement programs because welfare programs up until now have been entitlements. That is, if you were eligible for the benefits, then you got the benefits. Now, under the current proposal, that will no longer be the case. It is something that was raised at the beginning of the debate, not so much now, but it is still there. There is the matter of under what conditions do you take children away from their parents and have them dealt with in other types of institutional settings.

To demonstrate the hazards of the social forecasts, we need to keep in mind that the social agenda now is much different than it would have been had the election last

November turned out differently. The social agenda could change again, but we do not know that, and I will not attempt to make any predictions about the election. The really smart people who follow this a lot were, in fact, a few months before the election predicting that the House of Representatives would go Republican in the last election, which is something that seemed almost impossible to think about a few months before that. But, the election did turn out a certain way, and the political debate is much different as a result of that election. Mr. Gingrich said, "If this is not a mandate, I would like to know what a mandate looks like." And, they have been acting very much as if it were a mandate, of course.

In talking about what the social agenda is and what the social policies are, it is often discussed in two different ways. One is the programs and legislation mostly having to do with economic growth, regulations, taxes, and the federal budget. And that is what the House of Representatives spent its first 100 days doing. However, there is a social agenda, as you all are aware. And, sometime during this week there will be a press conference by the Christian Coalition and other organizations to talk about a contract with the family. And, the social agenda is much different from the one that has been enacted so far in the House of Representatives, although it has some strong features, of course. The people who promote the social agenda are often referred to as social conservatives and their agenda includes abortion legislation, school prayer, sex education, and abolishing NEA, NEH, and even the Corporation for Public Broadcasting.

The economic issues have been divisive and will continue to be so. The social agenda is usually thought to be potentially much more divisive and difficult for the Congresss to deal with .

To sum up, the main elements, it seems to me, in this social revolution that we have seen underway in terms of our policy, and in watching the policy on through the rest of this Congress will be as follows. I have already mentioned welfare reform. That is an issue that, again, has changed and it is much broader now in what it is attempting to do and what it is attempting to accomplish, and what its promoters are advocating for it, and the way in which the debate is being couched. The big debate over Medicare spending simply pre-stages a bigger debate which will be coming sometime in the next several years over the question of generation equity. One can make the argument that the elderly part of the population is getting more of the largess of the government in some ways than other groups of the population. It seems to me that will be how the debate will be couched. The questions of racial equity, and class equity, will also be considered. But, generation equity will be a big issue. Many of the elderly population now are quite prosperous. They have good pensions, good Social Security coverage, and good health insurance. And, it is not clear at this point, that that will be sustainable, particularly when the big baby boom generation begins its retirement in 15 years from now.

The other basic idea behind this revolution is the shrinkage of the federal government. That is specific in the legislation dealing with balancing the budget without raising taxes. Now, you can balance the budget lots of ways. In order to shrink the

federal government, though, you have the balance the budget without raising taxes. This will be a big part of the issue.

Well, after this revolution, what can we say about social conditions. Will social conditions be any better as a result? That is the intention, but will it actually be the case? That is an area, of course, where this is much disagreement and that is what the political debates come down to. One of the problems in trying to make such a forecast is that there is not much agreement in some of these areas about what will work as federal policy. This is particularly true, again, in the case of welfare reform. I think one of the attractive features of the current way that debate has been carried out has been a recognition of the fact that people do not have ideas about what will work in terms of getting the welfare recipients off the roles and into jobs. They do not have nearly as much confidence in their ability to do that as there used to be.

Let me just stop there.

DAVID BOESEL: Thank you for the very broad presentation. It will provide a lot of food for thought in our discussions. I think it covered a great many important subjects.

Our next speaker is Jane Bortnick Griffith, Specialist, Science and Technology, Congressional Research Service, Library of Congress. Jane will be speaking about technology and technological changes over the next five years or so.

Forecasts for the Next Five Years, 1996-2001
Technology

JANE BORTNICK GRIFFITH: Technology forecasts, though interesting, are generally wrong in both directions: in the short term and in the long term, They are usually in the short term wrong because things just do not happen quite as fast as people think they will. They are usually wrong in the long term because things happen faster than people think they will. So, I always hesitate to make any kind of technology forecast.

In general terms, technology will indeed continue to develop at a very rapid pace, certainly in the area of computing and telecommunication information technologies, which is what I will focus on today. The indicators are that the price-performance ratio that we have seen (where price comes down and performance goes up) over time is going to continue to improve, and we can pretty much count on that. I do not think that the challenge is so much that technology will get better — we know that technology will get better. The challenge is really related to: (1) seeing how effectively we are able to use that technology; (2) how well it is accepted; (3) what kind of markets develop as a result; (4) what the impact will be; and (5) how technology will be applied. I think there are a lot of variables associated with this that I will get to.

As I said, I do think that we can count on basic things. For example, computing power is going to continue to expand. Recently in an article in *Computer World,* Gordon Bell estimated that we will be getting 32 megabytes on a single chip and that will be the norm by the year 2000. In addition, the processor will be running about 400 megahertz to 1 gigahertz. So, if you take those kinds of projections you see a lot of capacity and a lot of power there. Another thing we can count on is increases in miniaturization which means that you can imbed computers in all kinds of devices which gives you a lot of capacity to do things in new kinds of ways. The miniaturization will also lead to the fact that some of the clumsiness associated with existing larger systems can be replaced with, perhaps, clusters of smaller computers working together to achieve the power of what today's large systems can do. So, as I said, the computing power as we know it is going to get better.

We also can anticipate that storage capacity is going to increase. Again, estimates are that 2½" magnetic disks will cost less than five cents. A megabyte can hold 200/bytes of information; that is equivalent to about 10 hours of video or 20,000 books. So, we have this capacity now to store a lot more information. And, when you add to that the advances that are being made in data-compression technologies, that again provides another mechanism for getting more and more information in smaller spaces. That also relates to the growth in the network bandwidth. In a recent article in *Science Magazine* where scientists were asked to look to the future and make projections across all fields of science, William Brinkman from Bell Labs projected that transmission of a terabit per second over a single fiber would be accomplished by the year 2000. So, we are seeing tremendous growth in terms of bandwidth capacity becoming available.

And, it is not just the telecommunication lines themselves. Additionally, the other components, like the switching technology, the routers, and all of the other elements of the network, are becoming more sophisticated, adding to the overall capacity of the network.

One of the other certain trends that we can count on is interconnectivity. We see linkages between all kinds of technologies; true multimedia in terms of different formats being brought together. Probably, the most visible example we have of great interconnectivity is the Internet. The Internet is growing at an incredible rate and is anticipated to continue to grow at a large rate.

The software involved is becoming much more sophisticated. We are getting greater ability to do more kinds of tasks; more integration of different kinds of functions. As a result, you get software that can do multiple things rather than having to get different software packages. And, increasingly user-friendliness capability has added tremendously in terms of the number of people that can use the system.

And, of course, linked to all of this is the greater amount of data. And, I will use the word 'data' for now rather than 'information,' or, particularly, 'knowledge." Everybody is a publisher today, or can be. Information is increasingly created in digital

form. Actually, Paul Peters and I were in a meeting last week where he made an interesting statement trying to identify differences in terms of the kind of digital data that we are dealing with. In many cases, when people talk about digital libraries, they are really talking about taking things that have a paper analog and digitizing them. And, that becomes their digital library. In some cases, I think what people are talking about is that we are creating information in digital formats, but we are still talking about primarily text. I know this from our experience at CRS. All of our analysts have PCs on their desks and they sit there and develop their reports. When that report is done, it is already in digital form; we do not have to digitize it. So, there is that aspect of it, as well.

But, thirdly, there are new and unique digital objects that are being created. The National Library of Medicine (NLM) has been creating a digital human body. You may have seen the digital frog on the Internet. But, these are new kinds of objects that do not have a paper analog. They do not have the same kind of attributes, and that, in and of itself, creates a lot of interesting challenges and opportunities, as well.

But what all of these trends also reflect is a greater distributed capacity. People have the ability to do things in a much more distributed mode, which means you have opportunities, for example, to create virtual libraries, virtual institutions, virtual meetings, and so forth. And, as I said, it has a lot of implications in terms of the whole globalization of activity.

It also has another implication that I deal with everyday; that is, the pace is getting faster all the time. We are getting more information, and it is coming in faster. We have more channels of information. Everyday when you come in you have to check your voice mail, your paper mail, your e-mail, and do not forget, you still have to check in with the person sitting next to you to find out what is really going on. We have all of these channels of information opening up to us, and in a sense what has happened is that we have less time to process that information and to transform it in ways that are important.

I would like now to talk about what the implications are for these kinds of trends. I think that just simply looking at the growth rate of the technology does not really tell the whole story. There have been a lot of different prognoses about what the indications will be. I do not know how many of you remember the 'Paperless Office' of the future. There actually was a model here in Washington, DC, several years ago. Well, I can go into any office in CRS, and I can tell you, there is no such thing as a 'paperless office'. In fact, it is getting worse and worse and worse all the time. Concepts of the totally electronic library are interesting, and I think there are clearly lots of opportunities to take advantage of the technology. But, I think, if we are talking about the coming five years, we still have to think in context of a mixed environment, and that, to me, is really the challenge. How do you integrate some of the traditional formats with the electronic formats? Where do you make your choices? I know myself, as a person who still does some research and as someone who has responsibility for managing a group of researchers, I am always trying to make decisions and asking the questions: Should we get this information on a CD ROM? Should I get it through an online subscription?

Should I get it in paper? What is going to work best for the particular need and for the particular kind of information that it is? I think that it is a real challenge to try to figure out how to integrate and how to make use of the different formats in creating new information.

It also raises interesting thoughts about new opportunities for new types of documents. For example, at CRS we do an "Issue Brief" which gives a synopsis of key issues before Congress, and pending legislation, and presents a brief analysis of it. We have it available in the paper format and you can also get it by dialing into our online system. So, we have taken it to that next step. But, the reality is, why should I not be doing an issue brief that has in it a video clip, that has in it a segment of the speech that the President or the Speaker has made or that has in it, perhaps, in a dynamic way, some way of seeing different models manipulated. You can begin to think about possibilities for creating whole new kinds of documents.

Part of the problem is that most of the analysts at CRS are not fresh out of school (I will put it kindly that way), and most of us think in terms of paper documents. I think there is something to be said about new ways of thinking and approaching how we acquire information. We are getting better at acquiring information in electronic formats, but we have a long way to go before we start thinking in a truly multimedia way. How do we truly develop these new kinds of information products that can transfer information in really creative ways?

Another thing that I think is interesting to look at is that that many of these new opportunities in technologies are really a double-edged sword. There was an interesting article in the paper yesterday about people who travel all the time for a living. It made the interesting comment that the technology actually makes it possible for them to travel more because they take their office with them. It is portable. They are able to take their fax machine and their PC and their cellular telephone and they are able to literally go all over the place and take their office with them. This gives them a lot of mobility to then meet with people face-to-face which they find is the most important thing, after all.

Now, on the other hand, you have the growth of video-conferencing activities, and the concept that we do not have to travel as much and can use the technology instead. But, the article was an interesting way of talking about what the impact might be from both ends. And, interestingly, one of the examples used was Vint Cerf, whom you all know is President of the Internet Society, who apparently spends every day on the road.

I am always looking at how we are using the technology. By and large, a lot of it is still focused on personal communication. When they developed the original ARPANET, the idea was to enable computers to talk to one another. But what happened was that you had all of these scientists and engineers sending e-mail back and forth and the major use became e-mail. It is interesting to look at some of the statistics on things like America Online and CompuServe in terms of how much are people using it for data

acquisition and how much people are using it to communicate with other people. A lot of the technology is to fundamentally communicate with other people.

One of the other things that is happening is that we are running up against a situation where people are deciding that the glories of the information superhighway might not be so glorious after all; maybe we oversold it. I must say that I find this interesting. Cliff Stoll has gotten a lot of publicity recently for saying that there is more to life than spending your life online. Which, to me, seems pretty obvious from the start. I think he has something like 12 e-mail accounts, and that says something. There are people who are now saying, "This is not the answer. This really is not the whole approach to life." We have to rethink the more appropriate role of technology within the context of other activities.

I used to be able to read the newspaper and not think about work. That has changed. You cannot read the newspaper anymore without information technology being in the forefront. There was an article yesterday about the shake-up in the CD-ROM business and, indeed, how a lot of these initial ventures into new technologies do not turn out to be as easy to market as people anticipated.

I think that while there are a lot of long-term growth rates that have a lot of potential, that many people are going to fail in the process of commercializing them for a lot of different reasons. For example, standards were mentioned as being a key problem. I think that points to a more general problem, which one of the participants raised as we initially went around the room introducing ourselves, and that is, the issue of quality versus quantity. There is a lot of stuff out there and for those of us who do get online and search, there is a lot of not very useful information out there. I think the information-glut problem is a real problem. More and more, I find that when I get online and know exactly what it is I want, I can find it. But, if I just want general information, I am more likely to go a different direction. All of us have seen the very fancy Web-Home pages where there is really nothing behind them; a lot of good graphics that take forever to get on your screen. There is much frustration when you have sat there and had it finally come on screen, and then there is nothing very useful in the way of information. I think that we have a way to go in terms of seeing that transition take place.

For all of these reasons, I think that there is a unique opportunity for people in the library and information science community to really be leaders. That is because finding useful information, verifying what is real and accurate, having people who are knowledge navigators, being able to index large volumes of material, providing some sort of peer review and synthesis kinds of functions — all of the traditional library functions married to the capabilities of the technologies — offer real potential. To rely solely on the technology without bringing those skills and that experience to bear, means that we will lose out a lot. And, there will be a lot of disappointed people who sign on and do not get very much. Or many will find that it is just too much to try to tackle this new world. If we can bring these skills to bear, then I think there are real opportunities here for realizing

much of the potential of this information infrastructure; potential that can be realized for large segments of society.

Finally, I would like to say that when we talk about how various technologies might become widely integrated in society, one of the key components, of course, is the various policy issues. Right now on the Hill, there are a number of these being debated in various ways. Obviously the regulatory regime for the telecommunications industry is front and center on Capitol Hill. There is pending legislation in the Senate, with the expectation that it will be considered on the floor this month. There is legislation now on the House side as well. So, you have a lot of legislative activity. At the same time, of course, as has been the case in the telecommunications area for a long time, no one is waiting for Congress in this area and the courts are proceeding to make determinations and the FCC is moving ahead, as well.

Other key issues include the role of government. What is the government's role in terms of providing incentives; in terms of being a safety net? What about education and technical literacy? How do we assure that there is some kind of universal access? Intellectual property is a key issue that needs to be dealt with. Privacy: how much are we willing to give up, and for what? Security is clearly still a key problem. The encryption debate continues. The issue of law enforcement now has become more visible again because of the recent tragedy in Oklahoma City. The issue includes using the Internet for finding out how to build a bomb or for hate groups communicating. Pornography is another issue that is being debated on the Hill. All of these policy debates will certainly play a part in seeing how the technology proceeds in terms of its acceptance throughout society.

General Discussion
11:00 - 11:30 a.m.

DAVID BOESEL: We have had three very good presentations. There are lots of ideas and lots of policy issues that we will want to discuss.

Let me just start with a few comments about the presentations and a few questions. These are not questions that I am presenting to the presenters, rather they are questions that I am throwing out for your consideration and as something to think about in framing your own questions.

Gail spoke about the economy and made some projections for the next five years. It was, generally, an optimistic forecast. One, that there is gradually expanding of the economy that may be followed by a 'soft recession.' At the same time, there are important questions of income distribution and what is happening to that distribution in this country. I think those are related to broader economic issues. We have seen a good deal of economic change and even dislocation in the last decade, much of it related to globalization.

Robert Wright has referred to what he calls the 'anxious classes' — people who are being displaced or feel they are in danger of being displaced: Economically, we see sort of an extreme manifestation of the political views of the 'anxious classes' in the militias. We need more information on these groups. But, I am beginning to get the impression that they are composed of displaced farmers, mechanics, industrial workers, certain small businessmen whose businesses are threatened by global forces that are difficult to understand. What Robert Wright called the 'anxious classes' take a generally dim view of government, of welfare, of social expenditures of one kind or another. Those expenditures might include the expenditures for libraries and library programs.

Royal mentioned the aging of the population as a major factor in changes that are occurring. Clearly, that is taking place and it has a major role in the debate over health care. In talking about generational equity, Royal could be referring to what may be the coming contest for federal dollars for health care, on the one hand, and education and younger people, on the other. And there may be implications there for libraries, as well as public expenditure and support for libraries.

On technology, Jane has mentioned the growth of interconnectivity and the globalization of technology. One issue that seems to be very important here — it will be a familiar issue to many of you — is the access by technology to the globalized network. I think we must consider what the role of libraries should be in this area. I am sure that Betty Turock is very engaged in that issue right now.

So, with that, let me ask for comments, questions, and discussion. The Forum is open for discussion for one-half hour, or so.

BETTY TUROCK: One of the issues that I think implicit on all of our agendas when we talk about changes in library and information services and the data we need to collect is that our Nation is becoming more and more diverse. What data on diversity will we need to design and implement services in 2001, and, particularly, how does that data figure into the preparation of libraries for an electronic future?

P. ROYAL SHIPP: One of the issues that seems to resonate in terms of the last election had to do with immigration policy, and there is legislation being discussed on that and it is one of those areas where the issue is very political. Earlier I mentioned some ideas about what politics is. One of the things that politics is about, is about winning, of course.

I was talking with someone over the weekend (this is a person who has been involved in the Senate for many years) and he was commenting that he had never seen a time when debates were more divisive and partisan than they are now. I expect immigration policy will get caught in that debate. I do not really have anything to add about the need for data for libraries. Jane, could you comment on that?

JANE BORTNICK GRIFFITH: Actually, I think that technology provides some opportunities to acquire, in a distributed fashion, information from different communities that can be accessed by broader groups of people. From that standpoint, I think there are possibilities now to not simply rely on traditional collections of materials but to augment those with other kinds of information. Again, in different cultures you may have, not so much the written word, but other visual kinds of materials that may be equally as important, but the technology provides some opportunities there, as well.

There are certainly some challenges, but there is much that is being developed technologically that can provide avenues for addressing a variety of languages simultaneously so that users with different language backgrounds can access materials. I think it is a challenge that will require some positive action; it is not going to happen on its own. There has to be acknowledgment — whether it is at the state level, local level, and so forth., to make the investment to ensure that the diverse populations have access to important materials and that that information is shared. In fact, the advantages of having a multicultural society are that you have an awareness of the various benefits from these different cultures. And, the technology can provide an opportunity for doing this. But, I do not think it will happen automatically; it will require specific action.

PAUL EVAN PETERS: Would you say more about currency because academic and research libraries are very sensitive to currency fluctuations and the value of the U.S. dollar. That said, it has been very hard to understand, in traditional terms, why the U.S. currency is ravaging library budgets yet once again. And, on the other side of it, that is closer to the action agenda, what can we do with data that will allow library planners who are thinking about acquisition budgets over multiyear timeframes to look at indicators that would help them do a better job in anticipating fluctuation? What was that nice,

elegant term you used — 'supply shock?' For certain kind of libraries, we are in a 'supply shock' period, and it seems to be related to currency.

GAIL MAKINEN: I do not have a ready answer to your question simply because I do not know why the dollar fluctuates as it does over time. I think the long run trend for the dollar is to depreciate — that is to become cheaper in terms of foreign currency which is going to increase your budgetary costs. That is because over the last ten years the United States has borrowed abroad more than a trillion dollars. More than a trillion dollars has come into this country in the form of foreign capital, and that amount has to be serviced.

To give you some feel for what this costs: in the early 1980's, our net earnings abroad on our foreign investments — were about $30 billion. In 1995, we will pay out money to foreigners, net. So, there has been a shift of more than $30 billion in just interest and dividends, alone. Well, in order to pay out that money, we have to earn more in exports. That means that the dollar, in the long run, will depreciate. And, we are still importing foreign capital at the rate of approximately $200 billion per year. So, the long-run trend for the dollar is downhill. That is as close as I can really come.

Actually, if you take a look at the fluctuations in the value of the dollar over the last five years, there has not been a trend; it has gone up and down. If you look at the Federal Reserve Foreign Exchange Index , you will see that, basically, over the last five years, there has been no trend. For example, from the middle point of last year to about right now, the dollar has fallen in value about 20 percent. Between 1991 and 1992, it fell more than 20 percent. Then, however, it recovered all of the lost ground. My advice is: Buy your subscriptions at the right time! (Laughter)

The basic long-run trend for the dollar has got to be in the downhill direction. We have been very fortunate to have been able to borrow as heavily as we have been over the years. If we had not borrowed, interest rates in this country would be much higher than they are. Rather than having a foreign-trade deficit, we would have had less investment expenditures and a lower rate of growth.

PAUL EVAN PETERS: I am eager to ask Gail a question of clarification.

You characterized the current cycle as middle-aged. But, if I understood what you told us, it is middle-aged against the longest ever. If we are 50 months into it, and 106 is the longest ever, and we are half-way through the longest ever, what percentage of the way through are we in the median cycle?

GAIL MAKINEN: The mean length for all nine cycles is 50 months, so we are at the mean right now. I do not know about the median, but we are at the mean right now.

PAUL EVAN PETERS: So, without creating a panic, it could be argued that if we are at 50 months — which is the mean — then we are at old-age.

GAIL MAKINEN: You might look at it that way. This expansion started slowly. It has only really gotten underway for about seven quarters now, but there is no reason why it cannot continue. The biggest thing we have going for us is a fairly low inflation rate. Usually that is the thing that gets us off track all the time. The inflation rate has been low, and it has been low since the expansion began. And, it does not seem to be accelerating. For example, the March number for the Comprehensive Wage Index, which is a big indicator of future inflation, was practically the lowest in 20 years. That is the good thing going for us. If we have a recession, it will be because policy made a mistake, but it can be easily reversed. This time we would not have to wait until the inflation rate falls before we reverse policy. The inflation rate is low, and we can reverse quickly.

DAVID BOESEL: Thank you. Since we are talking about economics and the economy, are there further comments on that subject?

JOEY RODGER: I guess this question is related to economics. Do you see that one of the things that is happening with the anti-government movement in this country is the pressure against using federal, state, and local funds to fulfill social needs?

I would like to ask all three of you to comment on the role of the private sector. Public libraries are now primarily supported by public sector money. I do not think that is the way it will continue. My question is, "What services besides libraries are going to have to make substantial changes from being considered totally funded by the public sector to much greater private sector support?"

GAIL MAKINEN: I will pass this on since I do not have a lot of information in this area. But what I do have is a confusion in the public minds about what it means to privatize functions, that is, in some particular cases, a privatizing function means that the private sector does it but the federal government pays for it.

That is what some people mean by privatizing. All they want to do is contract it out, but the government still pays for it. It is a line-item in the budget. It does not decrease the portion of the public expenditures. You mean that you want to totally privatize. If it were a formerly a public function, you think it should be totally privatized?

JOEY RODGER: No. I am talking about partnership responsibility to make sure that people living in America have the information resources they need when they need them and you can do that indirectly through pushing the money through your taxing structure and then back into the economy through publicly funded institutions. I simply do not think that is going to be viable much longer because the pressure on that system is going to be too great once the federal cut-backs really start taking effect. I think we have to look for substantially different kinds of models.

JANE BORTNICK GRIFFITH: There has certainly been much discussion about this in the research and development area, the role of the federal government in funding research and development, what areas the government decides to move out of, and how they want to provide incentives for the public sector to get more involved. For example, if the federal government decides to no longer fund research facilities on university campuses — how do you get the private sector to invest in that?

One approach, which is currently being suggested, particularly by the Chair of the House Science Committee, is that you use tax credits or other types of tax incentives, to get the private sector to make investments. In other words, if a company will decide to build a research facility on a campus that they would get certain tax incentives for that. In addition, they get a guaranteed access to that facility which they share with the university. So, I think, that certainly in the research area there is a lot of discussion about what kind of models, different from some of the current federal funding models, might work and what are the pros and cons, because these ideas need a lot of analysis including looking at the pros, cons, and opportunities.

GAIL MAKINEN: Let me add one point to that statement. The problem with privatizing a lot of these functions is simply that the private sector simply cannot capture the rewards for it all. That is why the government has to be in the picture. That is, if a private company develops a technology and that technology is not patentable, or all of it is not patentable, everyone else has access to it. And, as a result, they do not reap the rewards from it. There is not any way to simply do that. And, for that reason, we in the economics profession, refer to these as sort of 'externalities.' And, these 'externalities' cannot be captured by the private sector; hence, I think there will always be a role for government, whether it realizes it or not. It has to be in the picture here; research and development in particular.

The model that Jane was talking about is a tax-credit subsidy. And, that still involves the government and it still is in the budget picture. Those subsidies have to be paid, whether they are paid through the expenditure side of the budget or through the text side of the budget, that is a subsidy being paid to private business, so there is still going to be an effect on the federal budget.

The basic reason why there is a role for the federal government, and, I think, for libraries in particular, is that a lot of this stuff cannot be captured by the private sector totally, and so the government has to subsidize this or else it will not be done.

DAVID BOESEL: Thank you. NCLIS Chairperson Simon has a comment.

JEANNE HURLEY SIMON: Last week, the House and the Senate came out with budget resolutions and they both project a balanced budget by the year 2002. If, by some weird chance, this should happen, would your predictions be a little more rosy?

GAIL MAKINEN: No, they would be a little less rosy because that will have a negative effect on total aggregate demand. Part of it will be offset because as the federal government borrows less in financial markets, the interest rate will fall. And, part of those funds that would have gone to the federal government will then go to the private sector. But it will not offset it totally, which means that the Federal Reserve will have to step in and be a little more accommodating. I think Mr. Greenspan has indicated that if the budget is, in fact, balanced, he will accommodate those demands so that you can smooth out the business cycle a little more.

But, clearly, this will be a decrease of about $200 billion a year in an economy that is now, roughly, a little over $5 trillion. So, we are still dealing with something that can have a substantial effect on aggregate demand and GNP growth. What will have to happen is that the Federal Reserve accommodates to some of this.

SUSAN MARTIN: I have a comment and a question. The comment is that in meetings like this where there are so many people who are solidly in the public sector — and some of us go back and forth between publicly funded and privately funded — there is a very small number of people who are in the so-called "private sector," so we have a tendency to talk to ourselves and say things that we all want to hear. I am very concerned that there is not enough representation from the private sector to gather a real sense of what their reaction and/or response would be.

Now my question. I appreciated the presentations, and I am looking at the draft questions for the focus groups. I am acutely aware that we only have a few minutes in a plenary session before we go into focus groups, which will continue tomorrow morning. I would like very much to hear what meeting organizers think we should focus on this afternoon and tomorrow morning to most effectively use the time to come out with a result, to come out doing something. I may be in the minority, but I am not clear on exactly what we are to do. On what do we focus our action items? For example, how do we do this so that what we discuss will work?

JOHN LORENZ: I think Neal Kaske, chair of your focus group, will be able to brief you on the discussion held by the moderators and recorders earlier this morning.

EMERSON ELLIOTT: This is an extension of some of the questions that have been raised, and I think it is one that cuts across all three of the speakers this morning. Jane has made the point that not only is there an enormous increase in the amount of information but that also getting that information requires a great deal more sophistication.

I would like to ask all three speakers if they have any more thoughts on the question of how people can effectively make use of what is there when, perhaps, not everyone has all of the sophistication. Is that going to have a consequence of age discrimination, educational achievement discrimination, or another type of discrimination in society?

JANE BORTNICK GRIFFITH: Even as we have some advances in terms of user friendliness in software, I think, by and large, it does not meet what is required. I think most people who work with the technology will tell you that the major costs are not so much the hardware and the software but that the training and troubleshooting are ongoing costs that are very substantial in terms of bringing the technology into an organization. We are now expecting our CRS analysts to be able to explore the resources that are available electronically as well as explore the resources that they traditionally used in paper form, and that requires some skills that many of them do not have and that we need to deal with. When you take that and extend that to the general public, you can certainly imagine that there is going to be a lot of diversity in terms of the skill level involved. I think that is one place where the schools will come into play and linkages between libraries and schools will be very critical to insuring that: (1) the people get the training that is required, and (2) that you have the staff that has the sophisticated capability available to assist people.

JOHN LORENZ: Jane, can you give us your impression as to what degree the Congressional offices are now using the new technology?

JANE BORTNICK GRIFFITH: It varies quite widely from some offices who have their own Web Page and are very sophisticated to other offices that have only dumb terminals. They are attempting now to upgrade the capacity across the hill, but as you can imagine, each Congressional office is its own little fiefdom, and it has its own characteristics. But, there is certainly an interest in upgrading the capacity, making more information available, and getting everyone connected. But, at this point, there is clearly a rather significant variation and much of it depends upon the individual office having somebody who turns out to be interested or having the expertise to take the lead and to bring the rest of the office up to speed.

NEAL KASKE: I have a question about the two kinds of literacy — the kind we think of basically and information literacy. I wonder if the three panelists can give us current information on the level of basic literacy and what skills one needs to be information literate.

GAIL MAKINEN: I want to comment briefly, not on Neal's question, but on the prior question asked. Whether you folks do anything or not, there is a financial incentive for people in the marketplace to know how to access these systems. The U.S. participates in international trade on the basis of human capital, basically. Education, that is the big thing that we export, in one form or the other, both physical capital and human capital. Part of the reason why the income distribution has been becoming so skewed in recent years is because of international trade. Our markets are far more open in 1995 than they were in 1980. We exported probably twice the amount of our GDP in 1990 than we did even 15 years ago. Well, when we export goods and services, we are exporting the resources that we have in this country. One of the resources that we export is education, in one form or another. It is in the form of management; it is in the form of skilled labor. It is, basically, a human capital form. That is the incentive for the people at the bottom-

end of the income distribution to hustle. A friend of mine refers to this as, "The ultimate revenge of the Nerds." That is, it is the Nerdy folks that are doing well in the marketplace because they know how to operate all of these systems. And, it is soon going to dawn on some other folks that they have to become a little more Nerdy, and you folks are going to be there to supply a lot of the information for them.

DAVID BOESEL: That is a very important observation. Neal, would you like to repeat your question or comment?

NEAL KASKE: It was about the level of literacy in the country, and also about information literacy. Obviously, to use these kinds of tools you have to be a little Nerdy.

DAVID BOESEL: So, in effect, your question was addressed.

BARBARA HUMES: Royal spoke a bit about the social conservative movement, and Jane spoke about the broad capabilities of technology. Now, when we throw those two together in a mix, I am wondering whether libraries will probably experience even stronger attacks on intellectual freedom. We would want to know what librarians need to know and what data we need to prepare for this. I was wondering what your drumbeats are on the notion of intellectual freedom vis-a-vis the social conservative movement and the broad technology that we have at our fingertips. What do you all see as possibly happening?

P. ROYAL SHIPP: I will try to answer, and perhaps Jane will, too. It seems to me that questions of freedom of information and freedom of speech have been issues for as long as we have had a country. The changes in technology do not change this very much. It is a question of organization. The Christian Coalition and other groups are very well organized and very well focused. There has always been a debate about freedom of information and freedom of speech in this country. It has come up, of course, in the context of things that Jane mentioned earlier, for example, access to the Internet and the talk show hosts. But I do not see anything different in that.

JANE BORTNICK GRIFFITH: I think there are people who believe that we need to revisit some of those principles in the context of a 'wired society.' Just last week, there were hearings over in the Senate Judiciary Committee, as I mentioned, about the use of the Internet and the terrorist-types of activities. I think that there will clearly be an emerging debate here that will require a lot of input from people who can provide perspective on how the electronic environment is the same in many respects in terms of fundamental principles, but may be different in other respects. There needs to be more analysis on how to apply those principles within the context of the electronic environment.

LAURA BREEDEN: This is partially in response to a question that was raised. I think one of the most important things that we can focus on this afternoon — and it has been touched on in a number of these remarks — is, "What is an appropriate role for the public institution?" And, that includes the public library, the public school, and the public university (many of which are represented here). Some of those issues may be ideological, but someone spoke very eloquently to the need for data. If you are going to convince the people who control the purse strings — whether it is the school board, the University Board of Trustees, the state legislature, or the city council — that public institutions are worth investing in, then you need a rationale that includes some data to back up the rationale. I would encourage the groups represented here to develop the needed rationale and because I think that is one of the fundamental needs. Right now, the country is going through a very critical reexamination of the role of public institutions, including the federal government and including all of these symbols of our government, such as libraries, schools, and universities.

BABETTE "BABS" PITT: I have a question. Maybe it is because of my naivete or maybe its is because I sometimes work with 15 classes a day, but frequently I have to fill out forms, and sometimes it is for the statistics that people collect. I know where the forms go on my desk; they go to the bottom of my pile because I am too busy teaching and managing to stop and fill out the forms. I know, here, that you see the importance of collecting these statistics, but in education (and maybe in the libraries) it is very hard measuring a lot of immeasurables and intangibles. Measuring education is not like measuring consumable goods or other things. I think it needs to be easier to collect statistics or, perhaps, we need better training in collecting and reporting. Then, at least, we can see report on results.

Unless we have education, access will not be very important. We are getting to be more and more "haves" and "have nots" when two and three-year olds are growing up with computers, and, then, we have children who do not see a computer until they get to school, if they are in a school that is lucky enough to have computers. Our diversity is growing, not only multiculturally, but within groups.

DAVID BOESEL: Do you think that information collection is interfering with education?

BABETTE "BABS" PITT: I do not think it is interfering, but I think the people who are in the trenches may not be the best collectors.

FRANK WITHROW: My question is to Jane. You mentioned that — for want of a better term there is a lot of 'junk' on the Internet. Ray Kurzweil talked some about this when he was discussing libraries, and he said that as we move to the 'digital world' everyone, in effect, can be a publisher. One of the greatest things about publishing in libraries is that we have editors who screen things out in scientific journals and we have peer review. Do you see in the electronic world, in the Digital Library, new pathways that enable us to have some degree of accountability? If I go down to the library, and

certainly to the Library of Congress, I have some idea that a process is in place to prevent me from receiving pure propaganda.

Another comment along these lines is related to the Nicholas Negroponte's book, "Being Digital." He views the library by saying, "We are in a world of bits, and not a world of atoms." And, that radically changes the way we store and retrieve information. How will it all work out?

JANE BORTNICK GRIFFITH: A number of ideas have been floated around regarding different ways to provide, in effect, peer review or some type of quality control. For example, there have been proposals that government agencies who provide information to others, who then repackage or redistribute it, can have some sort of seal of approval that this is verified information. There have been cases where professional societies have decided on what the mechanisms are to provide that kind of peer review online as compared to traditional ways. There are certainly ways of saying this information has been reviewed by such and such organization, institution, or individual. There are times when people do it on the basis of what they like. In other words, there is some quality control in the sense of you distributing information and a lot of people like it and use it. There are different mechanisms, it seems to me, that are going to be employed. I think it is going to be a variety of things that people will use to do that. People will identify what information is fundamentally good information to use.

While there is a lot of junk out there, there is also a lot of very useful information. We get many requests from Congress and in the last couple of days I, personally, answered two requests on the Internet and one using our Division's CD-ROM that saved me a lot of time. There is some very useful information that has certainly facilitated access to materials for people, like me, who have to get access quickly.

DENNIS REYNOLDS: I have a question for Gail about the 1½ percent growth and productivity forecast. Do these figures take into account changes in multi-cultural demographics? Do they take into account changes in the technology and adapting to technology among the work force, retraining, and keeping up to date with what seems like very fast changes? Does the 1½ percent forecast take such factors into account, or are they based on historical factors — assuming nothing changes faster than it has?

GAIL MAKINEN: Basically historical. The growth rate of the population comes from demographics. The Census Bureau actually makes these forecasts, and that is where the growth rate of the labor force comes from; you can tell how many people will become 18 in each of the years and enter the labor force.

The productivity numbers are very hard to come by; they are guesses. We used to have productivity at about 3 percent a year and around 1993 the productivity rate dropped by ½ percent, and economists still cannot explain why it dropped, but it did. So, the numbers we are looking at for the 1990's are guesses. You must also remember that many of the changes being discussed are marginal changes, in the sense that we have a

labor force now of more than 120 million people. There will be more than 120 million people working over the course of the next five years, and the changes to this figure will be quite small. While the things you are talking about are going to be insignificant; they will be quite small relative to the size that we are dealing with and probably not have much of an affect.

MARY LEVERING: I would like to add a note to your comments, Gail, and highlight some of the economic issues. The total U.S. copyright industries are a critical component of the U.S. economy. They represent 5.6 percent of the U.S. Gross Domestic Product, and they employ more than 5.5 million people, roughly 4.8 percent of the U.S. work force. Moreover, in a time of large trade deficits, the core copyright industries have extensive foreign sales. These core copyright industries (including newspapers and periodicals, book publishing and related industries, radio and television broadcasting, cable television, records and tapes, motion pictures, theatrical productions, advertising and computer software and data processing) contributed at least $36.2 billion in foreign sales to the U.S. economy in 1991 and preliminary data indicated that foreign sales would exceed $39.5 billion in 1992, according to an economic study prepared in 1993 for the International Intellectual Property Alliance (IIPA). [*Copyright Industries in the U.S. Economy: 1993 Perspective,* prepared for the International Intellectual Property Alliance by Stephen E. Siwek and Harold Furchtgott-Roth, Economists Incorporated, October 1993.]

The Intellectual property protection of digital information on distributed networks is exceedingly important to these industries and to the economic well being of this country. Their copyrighted works — including text, video, films, publications, scientific and technical articles, popular reading materials, software, images — represent intellectual content for which protection is exceedingly important. Often, when you go to a homepage on the World Wide Web at this time, you will see nothing of substance behind it. It is a superficial presentation. Rightsholders are incredibly concerned about mounting and giving general access to their valuable property on Internet without protections to insure authenticity and accuracy, and for the rightsholders to realize return on their investment. You alluded to that too, Gail. It is extremely important. While rightsholders recognize that some may be inevitable, they want to avoid wholesale losses. It is a major disaster, for example, when commercially valuable software is mounted on a server and results in a loss of hundreds of millions of dollars because of piracy.

These issues are very important to libraries, as well. How are libraries going to balance the needs of these rightsholders to have their material protected, at the same time made accessible to users through library operations in a way that does not represent major leakage? This is an important issue that this group needs to address.

GAIL MAKINEN: Let me add one statement. What you say is true, without a doubt. In the major international trade pacts that are negotiated, the important thing is intellectual property-right protection for American-produced output, which are being pirated all over the world. This is a very important part of the total export picture for the United States. One of the important and difficult things to negotiate are the trade projections so that we could reap the rewards of U.S. output.

MARY LEVERING: We are going to have to look at it in terms of libraries. For example, how do you deal with electronic intellectual resources in ways that still provide protection and recompense to the owners? How are you going to deal with digital preservation and electronic distance learning? How will libraries fulfill their functions in ways that avoid major leakage and piracy, but still make the materials available? These are all key issues.

DAVID BOESEL: Thank you very much. We could continue this conversation for a very long time. We do have lunch scheduled now. We will reconvene in the focus group sessions at 1:30 p.m.

Luncheon Speaker:
Ramsay Selden, Director
State Education Assessment Center
Council of Chief State School Officers
11:45 a.m. - 1:15 p.m.

"Changes in Education: 1996-2001"

PAUL PLANCHON: Good afternoon. I am Paul Planchon, Associate Commissioner, National Center for Education Statistics. It is my pleasure to introduce our luncheon speaker today.

Ramsay Selden is the Director of the State Education Assessment Center at the Council of Chief State School Officers. The Center leads efforts by states individually and collectively to enhance the breadth, quality, and comparability of information about education and to improve the use of that information by educators, educational policy makers, and the public. The Center conducts projects to develop the consensus frameworks for the state-by-state testing of the national assessment of educational progress. It encourages the establishment of standards for American education so these assessment programs can be anchored on fundamental societal judgments of what students ought to learn. The Center also conducts projects to improve statistics and other indicators of how well the school systems are doing in preparing students.

Prior to joining the Council, Dr. Selden worked at the National Institute of Education (NIE). At NIE, he directed research programs on reading, literacy, and education. Dr. Selden completed his Ph.D. in education at the University of Virginia and serves as an Adjunct Professor at the American University.

It gives me great pleasure to present to you Dr. Ramsay Selden.

RAMSAY SELDEN: It is nice to be introduced by a good and wonderful colleague like Paul. Thank you.

It is a pleasure for me to be with this group today. Statistics is the one sector in education and public service that I have not had an opportunity to work with. This is a good opportunity for me to think about the issues affecting your field and to get a sense of what they are and how they play out.

In my comments this afternoon I would like to do two things. One is to try to make some projections on what is going on in education over the next five years, as the theme of your Forum suggests. Secondly, I would like to identify and talk with you about some issues which I think need to be worked out over the next five years in order for education to move collectively and constructively forward and for reform to be truly

accomplished. I hope I can get through all of that briefly enough to allow time for questions and interaction.

First of all I would like to speak to projections regarding where education is going in the next five years. I must say I found this exercise interesting. Five years is an interesting timeframe. I am sure you have been talking about that in your other sessions today, as well. Usually when someone asks you to project the future, it is longer term than that — 15 or 20 years. What is interesting about five years is that it is short enough to be really concrete. You can almost take the job seriously because within the next five years, you can almost figure out what is going to happen. If you are projecting for 10, 15, or 20 years, you can almost assume that things are going to be different when you get there. I am not familiar with the work of futurists, but when you are working on projecting a five-year time frame what is interesting how useful a resource it is. It forces you to think about where you are now, and to figure out what reasonable projections are, or actual projections from the current conditions. I guess what I am trying to say is that it gives you a kind of empirical base for making those projections. Whereas, in the longer term, probably, you would not attempt to use an empirical base.

I am going to concentrate my comments on projections in two areas, assuming that you have received good insights on population trends, social changes, and analysis and projections on services. I would like to look at the specific issues of budget funding, program relationships, and/or organization and consolidation, because I think they are hot and timely right now.

First, *budget.* I think the overriding and overwhelming event affecting our view of the next five years in education is the attempt to balance the federal budget by the year 2002. That has to be an all-consuming fact and factor to ponder and to work with in making projections. I think that there is a great likelihood that attempts will be made to try to put together a federal budget which, over the next several years, works toward balance by the year 2002. There are just too many strong pressures driving things in that direction. There are commitments by the Republicans to do it, and they have made a commitment to the American public to balance the federal budget. It is difficult for the Democrats to very actively or seriously counteract the basic concept of working toward a balanced budget.

I think there will be a lot of discussion and a lot of political effort around <u>how</u> the budget is cut and *how* it is configured. I would predict that there will be some trade-offs between Defense and other areas, which has not yet become an issue. To me, if the Democrats are going to do anything in this effort to reduce the budget, they are going to have to deal with the relative balance between Defense and other areas, which I think they have not done yet. The Republicans, I think, have done something that many of us wondered if they would be able to do and that is, at least for starters, to come forward with some suggestions for areas like reducing future Medicaid and Medicare costs. And, this has all happened within the last few days and it is changing our context rather dramatically.

I would like now to project forward in terms of budget and funding for the next five years. I think, first of all, that we can certainly anticipate for the next year or two nothing more than level funding. We have been fortunate that education statistics and assessment funding has been maintained and actually increased while there have been efforts to reduce the overall federal budget. So, within the area of education where things have been problematical, statistical support and assessment have been supported well. It would seem to me that given the kind of circumstances that we are seeing, we are at a minimum for the next year and, perhaps, second year out, looking at level funding. Beyond that, as the efforts to balance things by 2002 get worked out and come into play, I think that we are facing substantial cutbacks in virtually every domestic program. I think we can hope that the load is spread and that education and libraries and other services are not dramatically over-cut in terms of their suffering. But, if you think through what is required to lower the U.S. budget to the extent that will balance it in, essentially, six years, we are looking at very, very substantial limitations in funding and resources and for those to kick-in fairly quickly, probably within the second or third year out. And, it will be with us for some time as we take up the slack.

Now, what is going to happen as a result, I do not know. Already, there is beginning to be tension between those who have been driving to cut the budget and those who think the economy was showing signs of growth and health, and I think that if we had stayed on course, we could have maintained a reasonable, moderately-growing economy without going through drastic cuts, like trying to balance the budget but the year 2002. I think there will be a policy debate about whether or not to cut things to that extent.

Let me now shift to the area of *consolidation* or *reorganization* of education and other programs. The big one which is facing us in education is the prospect of having the U.S. Department of Education eliminated and being consolidated, most likely, with the Labor Department in a federal reorganization. For us, I think there are three areas important to talk about if, in fact, that happens: (1) A thematic question of emphasis; (2) What does this mean administratively?; and (3) What happens to the statistical programs, if this happens?

In the thematic area, the obvious question at issue is the positive and negative potential consequences of a merger between the Departments of Education and Labor. The advantages of such a merger are cost savings and efficiency. And, with this merger, there is a potential of a more productive relationship between education and labor. Hopefully, it would make possible better coordination of efforts programmatically and increase the potential that education would have in pay-off, in terms of our labor force and productivity. There is a down-side in potentially having <u>too much</u> of a school-to-work focus.

Administratively, huge questions remain regarding how the current programs administered by the two agencies would be handled. You can expect there to be one set of administrative services — contracting, personnel, planning — in contrast to two sets

of services at present. All of that, I think, would have to have a cathartic effect as they merge and centralize programs.

In the statistical area some interesting and not necessarily comforting possibilities are emerging. One of the prospects, of course, would be if there were simply a merger between the Departments of Labor and Education, you could work out some type of relationship between the Bureau of Labor Statistics and the data collections at the National Center for Education Statistics and other Education programs.

That kind of merger creates an opportunity for putting solutions together in the most creative and productive way possible. There are strengths and relationships in the two organizations that could be built upon and capitalized upon. I think, again, the big danger is that the statistical services in Education, which have been developed at the federal level in a way which serves the education programs and community very well, will be sacrificed and their services to the program area of education would be diminished. The same probably applies to the Labor programs. We need to be careful if these two organizations are merged that the productive relationship between the statistical programs and the sectors that they serve are not harmed or diminished.

One particularly interesting concept, which Emerson Elliott has talked about on several occasions, is the notion of a 'merger' of a lot of the federal data collection functions and agencies into one mega-statistical agency which would serve most of the government. This has been proposed by the Heritage Foundation, along with proposals for reorganization of the Departments. That, of course, raises incredibly intriguing concepts, both negative and positive. Can you have a big centralized statistical agency that meets its different sector functions well? On the other hand, the potential power and utility of centralizing some of the programs, expertise, and functions offers some tremendous potential.

At the federal level, the prospect of some type of redefinition of the Department of Education and a merger with other agencies is a huge part of the picture for the next five years. What is going to happen? How will it happen? What will its effect be on programs?

Among the education issues that need to be worked out over the next five years, I would put first and foremost resolving the fight over standards, in which we are currently embroiled. This is the fight over what are the national standards, for example, for the teaching of world and U.S. history. Is the right process being used to generate these standards? If we are going to have controversy around the standards, should we have standards developed? We must find ways to resolve this issue constructively because it is in a stage of virtual deadlock and confrontation, which is most destructive in its nature. This is a highly-publicized issue, and neither side seems to be finding or offering solutions. We are watching states going through many of the same processes and encountering many of the same conflicts and issues. I think there are many positive ways of resolving these issues, if the situations can be contained. The focus must be on the real

issues instead of allowing them to be politicized and allowing opportunists to capitalize on, and stir up, the emotionality of these issues. Focusing on the questions of content and making sure that people deliberate those questions in terms of reality, as opposed to what has happened over the last several months (for example, much dialogue in the field and in the press revolving around hearsay and erroneous information). This only serves to inflame peoples' reactions to rumors, as opposed to really looking at the standards and conscientiously addressing whether or not they are moving in the right direction.

There is a huge danger now because of the controversy surrounding the history standards and the enterprise of developing instructional standards could go by the boards. I think we will need to let the National Education Standards and Improvement Council (NESIC) go as a sacrificial lamb, or as a lightening rod, because it seems to be the object of a lot of concern and antagonism. At the same time, we need to try to maintain the enterprise of developing and using standards in an uninstitutionalized, voluntary, but still national and progressive, way.

A second issue that needs to be worked out is the way in which the education system is oriented to the public, to its users, and to its communities. It is clear that the public and constituencies of services like education are demanding a new kind of attention and relationship by these institutions. I think it is going to be absolutely essential for these enterprises to figure out how to be more engaged with, and responsive to, the communities that they serve. For us, and for educational policy and administration, that probably means letting things become decentralized to a greater degree. We have been thinking in terms of statewide solutions, statewide standards, frameworks, and policies in areas like teaching and assessment because we believed in statewide leadership and direction. And, it is also much neater from a policy standpoint to operate things like assessment and accountability on a statewide basis.

But, the public is telling us that they want more control, interaction, and determination of services at the local, grassroots level. I think we need to figure out the way to respond to that demand and to give them the control and engagement they want.

A third issue is what I call, 'school or instructional improvement.' This issue is the big, classic problem of how we really bring about meaningful improvement in educational services, and by that I mean, broadly, to include the role of libraries and the other kinds of resources which need to be brought into play. We have not yet figured out how to improve the education system on a broad scale. We have anecdotes, instances, pilot projects, and demonstrations which succeed. But, for the vast majority of circumstances and situations, we have not yet figured out how to really deliver improvement in things like teacher knowledge and capability to pervasively result in more effective instructional practices.

We do have some ideas about how to do this. In the particular area of professional development, we know that the old model, weekend workshops and dog-and-pony shows, do not work. The model that will work is tough and complicated to

implement. I would argue that in areas of professional development, we know what we need to do, but we need to go through the tough work of doing it. In professional development, it is things like creating long-term participatory support networks that give teachers access to knowing how to do a better job of teaching in their field, giving them communication networks so they can interact with one another and support one another, and providing them with applicable models for improving their practice. Those kinds of networks, like the National Writing Project or the California Project in Math, are viable ways for bringing about valid teacher improvement; they have been extremely limited in their participation. What we need to do is figure out how to root out all the old activities and replace them with new state and local activities that provide teachers with teacher development and other strategies which they need.

Finally, over the next several years, we must deal with the *equity* problem of generating high expectations for all students and helping teachers and schools figure out ways of delivering high-quality instruction that meets those expectations. Just look at the very demanding standards coming out in history, geography, and the arts. These are very ambitious and demanding standards. If we had standards like those, it would go a long way in setting high expectations for disadvantaged kids. In programs like Chapter I, you will see states and localities moving toward these types of high standards for disadvantaged students, which will make a big difference.

The last area I wish to talk about is *information systems technology, communication systems, and statistics*; all of which are becoming interrelated and which we need to deal with in an integrated way. Some integration of these systems is already taking place. I think we have examples of school systems and other service providers who are beginning to use computers and communication technology to integrate their information supporting services, their statistical collections and reporting, and so forth. Much more of this needs to take place.

We are painfully aware of the limited extent to which state and local data collection programs are becoming computerized. This is a sensitive issue because of the concerns about inappropriate roles and actions by the government. So, it is not something we can barge into lightly. But, from our vantage point, information and communication systems must be automated. We are finding that the progress toward automation is taking place too slowly; it needs to move much faster. And, we have not quite figured out how to do that.

In addition, we need to start figuring out how to do various kinds of integration of our data collection and data use programs. One of these is <u>within</u> data bases. In Education we have a tradition of having each sector with its little data base on its users, constituents, or participants, and this is just an inefficient way to go. It does not allow you much power in terms of analyzing the data, and it is also inefficient to create a separate data base for each program, whether it is special education, bilingual education, vocational education, library users, and so forth. We need integrated data in a sense that indicates what kinds of services the student has, what sort of needs the student has, and

what sort of activities and instructional services they are participating in. We also need more integration among functions. We have figured out that relationships between the education services that kids get, their health care, welfare services being provided to the family, services being provided to students in households in a variety of functions need to be connected in terms of their information system.

We also need better integration among levels. We have students who move from one level of service to the other and the data collection program is isolated to that level; they basically start over. We pioneered with the postsecondary education community a transfer system so that as students move from K through 12 to postsecondary education, their data can be forwarded automatically with proper safeguards for security and privacy. That is a huge leap forward in terms of providing for integration among levels in the system.

One of the things that is striking about the Internet phenomenon is that it is making telecommunications commonplace. People like me did not 'do' telecommunications until about a year ago, and there are many people around just like me. The advent of office networks and the explosion of the Internet and other kinds of e-mail services is making electronic communication for average citizens a commonplace part of our lives. We need to take advantage of that, not just in using the telecommunications as a way of serving users, but also as a way of gathering information about services being provided. As we get communication with our clienteles, we ought to be able to build on our interactions with them to generate much of the data that we need in order to support our institutions and to report to other levels in the system what we are doing. A last issue that needs to be worked out over the next several years is exactly how technology is going to be used. The widespread participation in computer-based telecommunications can be capitalized and drawn upon.

In summary and in conclusion, my projections over the next five years in education are not a particularly sanguine or rosy picture, but I sense that what you are trying to do is to look realistically at the years ahead from the perspective of this sector in education. I think there are some things that we can see coming, and there are other questions and issues that we as an institution and as a field need to address, now more than ever, in areas such as equity.

I would like to take an opportunity to shift gears and recognize someone in our audience who has been a real servant in the vineyards that we have been talking about, and that is Emerson Elliott. Emerson has announced a desire to not seek another term as Commissioner of Education Statistics and to retire and create a time in his life to do other things and to not deal with some of the pressures that he has dealt with over the last several years.

I would like to highlight some of the ways in which Emerson has manifested his dedication. service, and accomplishments in the field of Education Statistics. First, everyone should know and understand how much he has worked to professionalize NCES

as a statistical agency. I think this is one thing, in particular, which Emerson has taken on. It was direly needed when he took over the agency at NCES, he has worked with Congress and has responded to the National Academy of Sciences, and he has responded on his own to truly enhance the professional caliber of NCES as an institution.

Secondly, in his own accomplishments in educational statistics, I think you can see that he has extended the breadth, the substance, and the utility of a large number of the NCES programs. I am particularly familiar with NAEP, the international studies, the early childhood survey, and other areas, including the library and postsecondary statistics, where he has worked to make the programs more comprehensive and useful to people.

Emerson also deserves a great deal of credit for ensuring that educational statistics do not become politicized, as is witnessed by his handling of programs and setting objectives in a neutral and even-handed tone and in his relationships with the Department, other statistical agencies, Congress, the field, and the press. He has always insisted that the statistical issues be decided on an even-handed and professional basis, and not politically.

The last thing I would like to say is that at a time when public service has been given as low a name and regard as it could be in our society, Emerson has epitomized the concept and meaning of being a public servant — dedicating himself for many years as a real servant in education.

Emerson, congratulations and thank you.

(Applause)

Special Francis Keppel Award
Presented To
Emerson J. Elliott

JEANNE HURLEY SIMON: Emerson, as a very small token of appreciation for all you have done for education and education statistics, we present you with a Special Francis Keppel Award for the development of the NCES/NCLIS Library Statistics Program.

EMERSON ELLIOTT: This is very, very special award. My daughter knows how to work the abacus.

I am not a speaker today, and I do not want to impose on your agenda. I do, however, want to say a few words. I am especially pleased that Ramsay is here today because he allows me to make a point that I often feel about library statistics.

I have particularly enjoyed working on library statistics, in part because everyone in library statistics is so energetic and so interested. They were so pleased to have the public library data series re-begun, and it has been a real delight. But, the other side of the point is one that I took a stab at mentioning this morning, and it is one which I want to mention again following Ramsay's remarks. That is, for a profession whose very essence is information, there is a surprisingly small amount of information about it that is available. I say that in contrast with the kinds of things that Ramsay has been talking about, in particular, elementary and secondary education. For years, policy makers have been asking increasingly sophisticated questions; it is not any longer a question of how much money is spent, how many teachers there are, how many students are enrolled. But, rather, what are we actually getting for the public investment? What is it that students are learning? What do they need to know? All of these questions are part of the debate.

My aspiration for the Forum as a part of the library arena is the same thing — that you will begin to think of the more sophisticated questions that if we had answers for, would make it possible to carry on a more sensible debate than what took place last week when Mr. Gingrich had on his list the elimination of the library programs. But, you need to have that debate and you need that debate at all levels; the federal, state, local, and county levels. That is my aspiration, and I know that the leadership that we have here can achieve it. Thank you very much for this wonderful recognition.

(Applause)

General Information
Focus Groups

For the remainder of the day, from 1:30 to 5:45 p.m., the first and second Focus Group Sessions were held: The five Focus Group Sessions are:

National Level Changes
Robert Willard - Moderator
Carrol Kindel - Recorder

State and Library System Changes
Joseph Shubert - Moderator
Mary Treacy - Recorder

Public Library Changes
Eleanor Jo Rodger - Moderator
Keith Curry Lance - Recorder

School Library Media Center Changes
Betty Marcoux - Moderator
Ann Weeks - Recorder

Academic Library Changes
Neal Kaske - Moderator
Mary Jo Lynch - Recorder

The discussion for each of the Focus Groups centered around the following questions:

1. What changes will have taken place at national, state and type of library levels by the year 2001? (Develop as clear and graphic descriptions as possible.)
2. What specific premises (for example, economic, demographic, social, technological, educational, and political) were applied in arriving at changes conceptualized? (Alternative projections based on varying premises are an option.)
3. What public policy and professional influences were considered significant in arriving at the forecasts on changes?
4. What interrelatedness between and/or reorganization of type of libraries and information services will have developed by 2001 and to what degree?
5. What public and professional policies should be advocated over the next five years to achieve library and information service changes that will be most beneficial to economic, social, and educational improvement?

6. What national data will be needed for public policy and research purposes to measure and analyze changes in library and information services over and beyond the five-year period at national, state, and local levels?
7. What data and/or information will be needed to measure the value of the library and information services that will be provided to individuals, families, businesses, social institutions, and governments so that the public and private investment needed to achieve positive changes in library and information services can be justified?

[From 8:00 - 9:00 a.m. a meeting of moderators and recorders with forum staff was held for the purpose of reviewing progress, answering questions, and resolving issues.

From 9:00 - 10:45 a.m., the third Focus Group sessions were held.]

Summary Reports on Focus Group Sessions

Tuesday, May 16, 1995
10:45 a.m. - 12:45 p.m.

DAVID BOESEL: Good afternoon. We will spend the first hour hearing from each of the focus groups. There are five focus groups and each group Moderator and Recorder will have 12 minutes for their presentation, which we must adhere to. Following those presentations, we will have one hour for free-flowing discussions for the whole group.

The first group will be reporting on National Level Changes and Robert Willard is the Moderator.

National Level Changes

ROBERT WILLARD: Thank you, David. We had a very interesting and mixed group of people participating in our group. Our conversation, as you can expect, went all over the place because when you are looking at something at the national level all of a sudden you find yourself talking about public libraries or academic libraries, so we probably engaged in some conversation that was analogous to what was going on in other groups.

In response to the guidelines, we came up with about four points that we will now share with the group. We started out with a pessimistic assessment of the current environment. Obviously, we are all familiar with the budgetary pressures that are affecting the library world. And, as we talked about it more, although we characterized it as "troublesome" and said it could get even more "troublesome" depending on the outcome of the next election, we came to the conclusion that there is an inherent degree of public support for library institutions that probably will overcome the knee-jerk budget-cutting pressure that we are feeling now. But, this will only happen as a result of advocacy and hard work on the part of library advocates. If we really want to continue to receive the resources that these institutions need, a key factor is the need to involve the public in this debate. I think it is one of these cases where when things are going well people say, "Fine. We do not need to get involved." But, as we begin to see, for example, the library closed during evening hours and Sundays that will mobilize the public and bring pressure to bear that will be effective.

The second area we focused on was *technology*. We had a clear consensus that technology is going to continue to advance. As Jane Bortnick Griffith said yesterday, the costs are going to continue to decrease. But, equally important is that the perception of the information superhighway is now on the minds of policy makers. It is the "sexy" issue, and being sensitive to that and letting public policy makers, who are excited about the advances that will come about via the information superhighway, know that the

library communities serving as an integral facilitator for providing resources of the information highway to a broad constituency of users will be very beneficial for our cause.

Jane Griffith also mentioned yesterday that, while the costs of the technology may be going down, and what it may deliver may be improving, the costs of training and retooling is extremely important. We identified a need to develop training programs and to fund them; not simply for librarians, but for library workers who will be called on more and more to serve as techno-guides to the users of this technology as it gets introduced into the institutions.

Under the rubric of technology we also had a fairly extensive discussion on matters affecting cooperation between different types of institutions and libraries. And, understanding that this is going to be a crucial aspect of making sure that people have access to the greatest number of resources by sharing resources, for example, between public libraries and school libraries, never failing to recognize the unique missions of those individual institutions, but still recognizing that cooperative activities could be developed.

We felt there was a real strong need for articulating what the *federal role* is. We did, of course, acknowledge that this has been a continuing discussion for years and years and may be one never completely nailed down. But, we realize that in order to advance, we need to devote some energy to discussing and defining these roles. For example, and not surprisingly since a representative from the National Telecommunications and Information Administration (NTIA) was present who is responsible for their grants program, we discussed the role that the federal government plays in acting as a spur for innovation, as a catalyst for change. We also pointed out the role in a democracy that access to government information has and how important it is for the federal government to take steps to assure that. We made reference to the continuing discussion about the information "haves and have nots" and what the responsibility of the federal government is in dealing with those equity issues.

We felt it important to develop the policy framework for enhancing the growth of the information infrastructure with specific attention to issues of copyright, seeking a balance between the rights of the authors and the needs of users in terms of fair use; and, also in terms of telecommunications regulations. For example, developing a funding mechanism where rate payers may pay a little bit more in order for telecommunication providers to provide universal access (trying to define what are the fundamental needs the general public should be expecting to receive from telecommunication providers). Within this context, focusing on a federal role, we did acknowledge that there is a need for looking at other partnerships, and, repetitively, we kept coming back to the need for developing partnerships with the commercial sector.

Finally, the last point was on the issue of *data requirements.* Although there have been lots of studies regarding user information, we wanted to emphasize that that was the

key element: What are users getting out of libraries and information services? Why are they coming to the institutions? What sort of data should be measured about the user's interaction with the library institutions? We felt it very important to focus on the role of research as a neutral fact-gathering process, not trying to develop the data that we would want to have for advancing library support or for advocacy. But, rather, doing a fair gathering of information and then being confident that that data would be useful in developing the public support that we need for our institutions.

There was a lot of emphasis on cost benefit and economics. We discussed trying to balance between valid statistical data and the more anecdotal stuff where you say, "So and so went to the library and found this information and this happened beneficially," and tried to make sure that there is a linkage. Different people respond to different pressure points; some people will respond to having the statistical tables that say, "Eighteen percent did this, twenty five percent did that, and so forth." But, when you find out that someone was able to get a job because of information that got faxed to them from the library at the last minute, it is persuasive data. So, we need to be sensitive to both those types of data gathering processes.

We concluded with a discussion on the need for understanding that if you are going to be dealing with the users, there are well-established marketing techniques for understanding user requirements. While there is not a lot of use, so far, of techniques such as focus groups, it probably would be in the interest of researchers to use that technique to pull together small groups (both of users and of non users), to try to elicit from them either what they were getting from the institutions or why they were failing to take advantage of the institutions.

That concludes our report.

DAVID BOESEL: Joseph Shubert will be speaking about State and Library System Changes.

State and Library System Changes

JOSEPH SHUBERT: We discussed federal policy relating to education of the people of the Nation, access to government information, telecommunications, intellectual property, security of the privacy of individuals, and the federal government's contribution to library and information services through its data collection, analysis, and publication.

Our first concern is that the federal government's role in library services, as a part of education and empowerment of people, is generally unappreciated or unknown. In these two days, our discussion repeatedly returned to the dollars that are transferred from the federal government to the states resulting in improved library services at the neighborhood, community, and school levels. The federal library programs administered by the U.S. Department of Education are a part of the federal responsibility for people. They are a small, but significant, investment in education.

The current political debate centers on the federal government's role in many aspects of our society and its responsibility for people. The argument is now advanced that the federal government should shed a large share of its current responsibility.

Central to our discussion in this Forum is the federal government's long-standing *partnership with the states* in library and information services as a part of education and opportunity for all Americans. The National Advisory Commission on Library and Information Science articulated the case for the partnership in 1968 when it proposed, as one of its five recommendations, the strengthening of State Library Agencies. That body was the predecessor of the NCLIS, which Congress created as a permanent, independent body in 1970.

The partnership, however, preceded the Commission's 1966-68 findings. The experience of the first years of the Library Services Act (LSA, 1956-64) and the Library Services and Construction Act (LSCA, 1964-) influenced the recommendation. The partnership has produced benefits for millions of Americans of all ages.

In 1995, we see the need for improving that partnership and for a clearer focus as outlined in our proposal for a Library Services and Technology Act (LSTA). In the networked society, in which telecommunications and the global economy come together to change every community in the Nation, the partnership is central. The partnership would be fundamentally changed if the federal partner largely or completely withdraws its financial support. Withdrawal raises, as well, big questions about equity and the federal government's concern for people.

We discussed the *training of library staffs* for library and information service in a networked society. Telecommunications technology transforms. Library services are different in this new environment. We also discussed our concern for *federal, state and*

local government information, in relation to equity of access and responsibility for dissemination of government information.

These concerns suggest new needs for training and for library services. Skills which reference librarians usually have used one-on-one with people who came into libraries (how to get information; how to evaluate information; and how to use information) now need to be shared with others, and they take on new dimensions. The State Library Agencies have an important role in the training aspect of library transformation. In some states, the State Library will carry the principal responsibility; in others, library systems will.

We also discussed *data needs*. We were struck yesterday by comments on the prosperity of the elderly population and the negative cost implications for coming generations. We know libraries enable elderly people to remain more independent and to continue their contribution to society as well as to enjoy it. We know library services are lifelines for millions of people, and we need data on the social, personal, and cost-effectiveness impact of these services.

There are many reports describing what libraries do for special populations, and how they do it. But we have a continuing need for impact studies of various types of library services to people with special needs, and to people who have, in some way, been pushed out of the mainstream, or who never managed to get into the mainstream.

We also need studies of the value that libraries add to information, economics of information access, and the utility and cost-effectiveness of different methods of sharing resources.

We face questions on the feasibility of joint school-public libraries. Today, we have "virtual re-location" of libraries — online catalogs and other new ways of sharing resources electronically enable school teachers and students to know exactly what is in the public library at any moment. And the homework counsellor at the public library can confirm with a student what specific information he or she can access electronically from home tonight, or can verify what reference sources are in the school library media center for use the first thing in the morning.

These developments should make it possible to improve services to students and teachers without reducing services to adults in the way that joint libraries in some communities have done for people who may not be welcome in schools. *We need studies of the use of shared facilities.* Decisions that affect the entire community require new sets of public policy information on access and location of library resources and services.

We also discussed our appreciation for NCES, NCLIS, and the Office of Library Programs and for their leadership in seeing that *library use questions* get into the national household survey and other Census surveys. Given the telecommunications developments, it is particularly important to study access to government information:

(1) ways in which the general public does or does not get access; (2) the ways government officials develop extending access to information; and (3) the extent to which librarians and libraries are influencing, leading, and helping local government organize and disseminate information.

Finally, we call attention to our continued interest in the NCES "Survey of State Library Agencies" and our concern for tracking the sharp changes that may take place in those agencies.

Public Library Changes

DAVID BOESEL: Thank you very much, Joe. Next we will turn to Public Library Changes, moderated by Joey Rodger.

JOEY RODGER: Our most salient finding, or observation, from our time together was that effective public libraries in the year 2001 will be characterized by six sets of values:

(1) They will be customer-centered; this is not the same as customer-driven.

(2) They will be enterprise-driven, which means that all employees will understand the business they are in and where their piece of the operation contributes to it. It is the system-thinking in the learning-organization kind of approach.

(3) They will be community-based, in the sense that they will acknowledge where the community power is, where the collaborators are, and where the community initiatives come from. (We had a fair amount of discussion about the importance of neighborhood organizations in urban areas as well as the importance of other groups.)

(4) They will be culturally-responsive to the diversity that is within our communities, whether those are Native Americans, aging people, or shy, reclusive (or gregarious) people in rural areas. This is not just about urban library cultural diversity; this is about responding to the cultural patterns of the individuals in our communities.

(5) Effective public libraries will be outwardly connected. They will be connected to a variety of community partners, including their funders and other community power groups. In some cases, these will be community connections, in some cases they will be statewide and national, and, in some cases, international connections, depending on the library's environment.

(6) They will provide value for the public dollars they receive and they will be able to demonstrate that.

These are the values that we believe in. We believe that missions will vary in terms of local priorities but will continue to be about education, information, and cultural enrichment.

Our second priority, in terms of reporting, is that we would hope that there would be some broadening of data collection. These are the areas which need to be addressed: electronic connectivity (both on and off site); library programs (whether these are programs for which everybody gathers in a room or whether they are outreach programs). We need information about library staff. One big issue is the training of those staff members.

Another issue was the question of who is working in our public libraries and how much does it cost? How many master's level librarians do you need? What are the staffing patterns? Acknowledging that this is our biggest budget item, we need to do some data collection on this. We also need data collection about the varieties of funding streams — particularly as public funds get tighter and tighter — to show the shift to various kinds of private money. We also need to know the relation of governance patterns to financial health.

We had an interesting and brief discussion about the fact that when local people can vote for library funding, which they can in some states based on state law funding, generally tends to be better than when it is 'downstream' in an allocation budget. That is a state law issue; we need some research on this subject.

And, finally, we would like to begin data collection on collaboration. If this is something we believe people should be doing, it would be useful to start asking them about it.

We had several other thoughts. One thought is that there is a level of data collection support that we need for local work — for non-aggregatable data — to enable us to better understand how our own libraries are running. There is a need for some of this to be done in aggregate formats. There is a need for some kinds of social science research. It was our comment that this is a very, very important kind of research for us to support. In light of decision making, this is a very difficult kind of research to get out of the federal structure. Another thought that came up, in terms of cut-back time at the federal level, is our wish not just for aggregated national statistics but for the development of tools that could be used locally so that there might be a new and fairly different federal role in support of data collection that would be to invent the tools with the definitions that can be used and applied locally. For example, the government might create survey questions for use in local user studies. "If you want to know this, here are the questions you should ask; they have been pre-tested and validated, and you can use them locally." To use the federal research 'brains," not just as implementers of studies, but as designers of stuff that we can use would be a great contribution to the improvement of library management.

We believe that a key trend in funding public libraries will be local, entrepreneurial efforts. We are anticipating radically reduced federal funding and very uneven strength in State Library Agencies based, to some extent, on how dependent they are on federal funds (which we want to make clear that we do not want, but which we see as fairly inevitable.) This means there will be a great deal of dependence on local funding. We are concerned that in those discussions we may be pitted against our traditional colleagues in the competition for money. That may mean competing with our colleagues in education, or our library colleagues, as we all lose the 'stove-pipe funding' that has come to us as types of libraries. There also may be a very strong demand for non-resident fees and charges as people begin to say, "You are not paying for this, so I

am sorry you cannot use it." We have shared out of largess, and as money gets tighter and tighter, sharing will be harder to do.

Finally, as we look back again at the national picture, we believe that public libraries have a great deal to contribute to a development of a national network of digital libraries. We are concerned that that discussion seems to be happening at a research library level. We believe that public libraries not only have resources that are important, but we have immense knowledge of what it is that real people need. We hope that richness can be brought into those discussions.

School Library Media Center Changes

DAVID BOESEL. I am struck by some common themes that are emerging here, and I think we may want to talk about some of them during our later discussion.

The fourth presenter will be Betty Marcoux on School Library Media Center Changes.

BETTY MARCOUX: Our group, as a whole, felt that school libraries as they are traditionally perceived are in real jeopardy, given the funding cuts and given the focus on the advances in the information technology needs area, as well as in educational reform.

We felt, as a whole, there were some large equity concerns that remain and will continue to grow as there is a potential transfer of control and power of funding, as well as the disregard of the importance of the conversation between important players in the field of education. As such, the school library group felt that libraries are essential to educational reform from the federal level to the local level. When we speak of libraries we speak of libraries now without walls; we speak of potentially shared facilities with professional facilitation. We speak of digitized as well as traditional formats.

We feel very strongly that as education is reformed and as teaching becomes more of a profession, the library media specialist will need to be more 'professionalized' as well. We felt that the school librarian is going to be asked, and is being asked, to be and do the following:

- Be an information integrity meister for their learners;
- Be an "in house" trainer of administrators, teachers, and students for the variety of information access and utilization points;
- Be knowledgeable of systems;
- To develop these systems based upon the needs of their learning communities;
- To be curriculum collaborators and reformers within the school setting; and
- To be vigilant in order to assure equity of access.

The distinction that the school librarian brings to the table from their other colleagues in different types of libraries is that they bring a teaching background to this focus, as well. In order for this to occur — for these librarians to be at the point of assuming these roles — the following may need to occur:

1. Continuous retooling of education, both formal and informal;
2. Ongoing professional development;
3. Data to support the viability of the library profession as an integral part of the learning community; and
4. Compensatory salaries that are commensurate with the level of expectations of this professional.

There is a critical need for national and political recognition of this body within the learning community. It seems to us that the school librarians, as a whole, are somewhat invisible, especially at the federal level. While we need to be more visible, more political, and more integral to both the political arena as well as the world of educational reform, we also need to be sure that we have strong connections with other public and state agencies that involve education. We need to partner ourselves with our professional colleagues. We need to define what the federal role is going to be in terms of school libraries and educational reform.

As such, we felt that it was important to look at some of the data needs, as well as the research needs with which the school library arena would be most concerned. We looked at what kinds of data and research would be needed. Our data list focuses on user needs and user outcomes. Some examples are:

- How libraries support the curriculum. (We want to stress that we are not just referring to school libraries, we are talking about all libraries.)
- How library holdings support student outcomes.
- How library personnel support outcomes.
- How student outcomes are correlated with student library use.
- How teacher use of the library and its information resources are correlated to student performance.

We need data to support what types of communication resources and technology can be used to support student outcomes. We need to understand where the money comes from that is spent and how it is spent on total resources and personnel based upon student outcomes.

We need to look at the rate of usage of new media by students. We need to track this against the quantity of media that is produced. We need to track, also, the rated usage of traditional sources vs. the amount that is currently published. As such, we would like to look at the growth of library holdings against the growth of the body of knowledge. In other words, the number of publications and software packages that are available.

We would like to look at the professional use of the library. We would like to look at continuing education opportunities of the profession, and how that correlates to the use of library resources by students and teachers.

We would ask for federal support to assist in designing and collecting this data. We would also ask that the federal level be concerned with and responsible for the dissemination of this data.

Last, but certainly not least, it was very strongly felt that partnerships with other types of libraries will increase. There will be increased collaboration between schools, public, and academic sites, especially. I would like to note that there was a lot of discussion about the fact that in many ways the school library parallels a special library in terms of its market. We would like to see partnerships in terms of collection development, technology liaisons, shared patron use, shared staffing, shared facilities, union catalogs, virtual collaboration, and programming.

We felt that school libraries could relate to a number of the issues that have been raised by other types of libraries in this room. We are all concerned about many of the same areas.

Academic Library Changes

DAVID BOESEL: Neal Kaske will talk about Academic Library Changes.

NEAL KASKE: I would like to highlight the high points of our discussion. Funding of academic libraries is changing. U.S. dollar flux will continue. Future reporting systems will reflect the true mix of funds spent for print and electronic resources. Property rights — there will be a technological solution to property rights management, but property rights will still continue to be an issue.

Distance education will be greatly expanded and libraries will play a major role in supporting it. The organization of information on the Internet will be better developed, but the Internet will still remain a frontier under development.

There will be more cooperation between types of libraries. Academic libraries — are they just for students and faculty? Academic libraries will be one of the providers of electronic products and services. Academic libraries will continue to search for ways to assess their value to their parent organizations (and we just heard that also from school libraries).

MARY JO LYNCH: I think people may not understand what you meant when you said that the budgets will reflect the true mix of expenditures. They sometimes do not now. Academic libraries, sometimes, have to hide expenditures on technology because if the faculty thought that they were not really spending the money on books, they would have a bit of a problem. We hope that issue will go away and we will be able to really know where the money is going, for electronic resources as well as for print.

DAVID BOESEL: Thank you for that breath-takingly brief presentation.

General Session
11:15 a.m. - 12:45 p.m.

DAVID BOESEL: I would like to make a couple of points and then we will have a general discussion. I heard the four following common themes mentioned by two or more of the presenters:

- The importance of customer orientation;
- The importance of libraries looking outward;
- Cooperation and partnerships;
- Linkages through technology and the use of distance education; and
- Increasing access through technology.

I am sure that you found other common threads. At this point, let's have an open discussion and question session.

MARILYN GELL MASON: One of the issues that we discussed that got buried a little bit in the report had to do with the digital library. I would be curious to know the response of some of the others in the room. It seems to me that if we can agree that we are going to embark on creating a National Digital Library then one of the issues would be who should be organizing and administering it? In our report we addressed the issue that public libraries should be involved, and not just academic libraries. At a time when funding is being cut for traditional library programs, I wonder about the possibility of funnelling some revenue through the Library of Congress that could go to participating libraries across the country for the cooperative development of a Digital Library. Surely this is something that has to be undertaken in that environment, and might, conceivably, be a way for us to keep the federal government involved in the development of this national-level service. I am not sure I have made myself clear.

MARY JO LYNCH: I have seen many articles about the Library of Congress going in for that in a major way. Does anyone have any knowledge if that is really happening?

MARY LEVERING: Yes, the Library of Congress has taken initiative in this area for the last five years through its American Memory Project which was a series of pilot projects to test the use of digitized historical primary-source materials in educational settings. The Library digitized about 12 major historical collections and tested those with 44 different educational institutions including school libraries, using CD-ROM based technology. In its National Digital Library Program, LC is now moving into full-scale digitization of its older, unique, collections — images, photographs, manuscripts, sound recordings, and so forth. Initially, LC is focusing on materials that are largely in the public domain, although some of them are still protected by copyright. In all instances where materials are still under copyright, the Library is seeking permissions and will respect the rights of rightsholders. The Library is seeking funding through public/private partnerships in order to do this because there is no way that this enormously expensive

undertaking could be funded totally with federal dollars. The Library's Congressional oversight committees have endorsed this approach.

In response to your suggestion about the Library of Congress serving as a conduit for grants to other agencies, I believe that the Library does not have the necessary authority or funding to make grants. There are other agencies in the federal department, such as the Department of Education, that do have granting authority, but the Library of Congress does not. However, the Library has reached out to collaborate with other organizations, including libraries, academic institutions, and others, to insure that the development of the national digital library is a collaborative undertaking because there are many other institutions who are also engaged in scanning and digitization processes.

The Library of Congress definitely has a leadership role to play in developing digital libraries but not necessarily through serving as a grant agency for funding other projects. It can serve as a leader in other ways.

MARILYN GELL MASON: I am aware of many of the things the Library of Congress has done in this regard. What I am suggesting is that that role ought to be extended to a coordinating effort and possibly to grant-making effort. This expanded role might require some Congressional legislation to empower the Library to do that. Or, this type of thing might be considered contractual with the libraries involved. I do not think we have to get too stuck on definition of terms. It just seems to me that it is a natural role for the Library of Congress to play.

DAVID BOESEL: It makes a great deal of sense, as the central depository of information for the government and for the people, for that role to be extended electronically.

FRANK WITHROW: I believe Bob Willard suggested that we might want to add under universal services some educational rates. I would call your attention to the fact that the Telecommunications Deregulation and Competition Act of 1995 will probably be on the floor of the Senate this week or next. There is a Snowe-Rockefeller-Exxon-Kerry Amendment which would provide educational rates for elementary and secondary education, libraries, and some special rates for rural community hospitals.

The Congressional Budget Office did, I believe, declare that providing universal service was not a tax which was, believe me, a winning kind of decision because if it had been declared a tax, then the Senate would have to have 60 votes to bring it up. If we as an educational and library community do not get it in, we may have to wait another 30, 40, or 60 years since the Communication Act of 1934 is only now this year, maybe, being revised. It is essential, if you want educational rates, to let your voice be known. The Coalition now has 30 associations; it is headed by ALA, the Chief State School Officers, the Software Publishers Association, ISTI, and the National School Board Association.

MARY JO LYNCH: I would like to ask one question since we have representatives from LC here. I remember from the articles I have read that the LC was going to be working with other libraries.

MARY LEVERING: Very much so.

MARY JO LYNCH: But you are just saying that the LC will not give them money.

MARY LEVERING: Right. I have not heard any discussion about LC serving as a funding source for others. In fact, LC is actively seeking funds for digitizing its own collections. But, in collaborating with other institutions, LC wants to help ensure that there is not duplication of digitization effort because this is such a massive undertaking that no one can afford unnecessary duplication.

GARY STRONG: I certainly do not want to detract in any way from the efforts that you are making at this Forum, but I think what we are suggesting, as well, is that there are other types of libraries beyond research libraries that can assist in this process. And, that the concentration be broadened beyond just the digitization and creation of the Digital Library to look also at how people will use the Digital Library. What kinds of resources should be targeted to be put into digital format, in addition to large and rare collections? It is in that spirit that I think we were making the suggestions. If we are truly going to make the Digital Library a national resource, we have to look at it in the context beyond the research community as being the only users of such a thing as a Digital Library.

MARY LEVERING: Those are very good points, Gary, and I am glad you brought them up. I would like to add one footnote. The Library has been endeavoring to develop a few pilot projects to test intellectual property management of copyrighted digitized materials. In that regard, perhaps we could work in collaboration, especially to identify what copyrighted materials users might need and want that the Library has in its collections and to which digital access would be an advantage if LC can secure permissions from rightsholders and develop workable mechanisms to make the materials available to users without harming the rightsholders.

If you are interested in this, or if you have some ideas, I would welcome your bringing them to my attention since I am a member of the LC's National Digital Library Coordinating Committee, and I am responsible for trying to develop some kinds of projects. I would welcome your information and ideas. My address and telephone number is in the Forum packet.

BETTY TUROCK: I think that this discussion illustrates the absolute necessity for greater collaboration within our own area, within librarianship. Here in Washington, DC, we have a funding agency within the Department of Education, that is, Library Programs (LP), with a base of support for research and for collection development. If we advocate strongly enough we might even ensure that LP continues. We have activities at the

Library of Congress, and the Washington Office of ALA, which deals with advocacy on a lobbying basis. We have to plan together more.

It seems to me that we do not talk to each other enough, even locally — and locally in DC is nationally. Locally, in Washington, means that we are dealing with national issues. The institutions exist right here in Washington and they should be talking about how to involve more than research libraries in the digitization of the Library, itself. It seems to me that it is a broader issue than the Library of Congress, although I know that Jim Billington is, in fact, seeking input from other areas. Yet, I think that the net has to be cast still more broadly. The agencies in Washington that deal with this particular issue must talk with each other and strategically plan together. Include the Department of Education. Include the Library of Congress. Include ALA's Washington Office, and any other organization involved in the Coalition for Education Funding.

NCLIS is a wonderful place for the kind of partnership and coalition we just talked about to be initiated.

NEAL KASKE: I would like to add a couple of pieces of information. I have been trying to understand what is going on with the Digital Library activity. I am sure we are all familiar with the National Science Foundation, ARPA, and the NASA project that is pumping $24.5 million into six projects right now. Those are three four-year projects which are to stretch the envelope on how one gathers information; how one organizes it; how one builds search agents, and so forth. Each one of those projects does have a library component now, or is getting one. I think one of the most exciting parts of this is the team at the University of Illinois at Champaign-Urbana, led by folks in the Library School and the Library, which is dynamite for us.

In reading their materials, and incidentally each one of their proposals and progress reports is up on the Web, if you look for any one of them, you will find a pointer for the others. What is interesting is they are looking at digital libraries, not one library but a group of libraries. That is a very important but subtle difference. We talk about the virtual library which we are all going to be using, but it is made up of digital libraries. I have been hearing about all kinds of different small projects where they are taking special collections that are in need of preservation and turning them into machine-readable files. Universities are doing this, some special libraries are doing this. These are not yet libraries but collections.

There is an area within the Department of Education — Library Programs — which administers the Statewide Fiber Optics Projects, $10 million have been granted to four states at $2.5 million a piece for three year projects. Louisiana is leading with the first one; Colorado just started in late 1994 and this year (1995) Iowa and West Virginia projects started. The project in Louisiana has the university library catalog up, the local newspaper up and is building databases of local materials. The Colorado project is going out and building databases at the local level. I think there is going to be an opportunity

for all of us to help build databases. Each agency is looking for their own project. I listen to people at the Smithsonian talk about their data files. When it comes down to funding, they say, "Well, if we cannot get budgets for new projects, then we will go for fuel on our own." They will fight with LC to get money because they may be approaching some of the same people. Digital library development is not organized across government, but there is much going on.

STEVEN FUNK: I am with the National Science Foundation (NSF), and I am involved with some of the digital library projects. NSF has more than the six that have been alluded to, but those six happen to be projects to develop the technology for digital libraries because they are far from being a fully-functional reality.

Some of us in education and human resources do not perceive the Digital Libraries as being the same as what is currently popularly perceived as a library. Rather, a confederation of digital collections that are not just storage. For example, we see teachers being able to go to or access the virtual library to find the multi-media resources, developing learning modules from these resources, and redepositing them in the "library"where students will be able to access and interact with those materials. When users do not find what they need within the digital collection, there may be pointers or outlets (to live humans) to enhance that learning process. So, whether that Digital Library configuration becomes a reference space, a learning space, a recreational space, or a work space depends very much on why you are there and what you are using.

That leads us to three issues related to the goal of the six Digital Library Technology Development Projects. First, there are some substantial unsolved technical issues for different users. Marrying technology development with the different users is something that we are striving to do. We now have six fairly robust research projects. Each project has taken on a very technical area that will be important to the end-point. For example, we still need to invent ways for being able to store visual data and recall it for different users in different ways other than word labels. We still are struggling with creating automated thesauri so that different users can access information using their natural language, terminology, or frame of reference rather than trying to learn the librarians' indexing methodologies. I think Illinois just used the preponderance of a super-computer's time for a couple of weeks in trying to generate just such a thesaurus and it only addressed electrical engineering.

The second point is that the user groups will be using an interactive process, not just accessing a repository as we know it today. The "walls" of the "collection" will be quite permanent. The collection may call up multimedia materials, objects, interactive courses, or simulations stored in a confederation of caches; but may well contain pointers to experts or related discussion groups or collaboration spaces. The "collection" will be defined by purpose versus the "objects" or their location.

The third point is the role of the libraries as preservers of our culture. The Library of Congress, the Smithsonian, the National Gallery, among others that we have talked to,

foresee that digitization may be the only way to store decaying artifacts or protect them from damage from disasters in order to be available for future study. This is a completely different set of users than typically are associated with research libraries, public libraries, and K through 12 media centers. So, there are a lot of interests involved.

While centralization might seem to be intuitively appealing, we almost see that as the antithesis of creative exploration, although we would like to see a wider variety of users involved in those that are doing the research, just so researchers do not research too narrowly. For example, most of those involved in our six main projects are scientists and engineers. As they design an architecture they typically hold a research library in mind, they have certain users on which they base their models. It is a little hard to change that and make them creatively uncomfortable. We will know within the next few months if we have been successful.

NEAL KASKE: It is also important to point out that those are not grants; they are cooperative agreements. So changes in the project are possible.

DAVID BOESEL: Are there any more comments on this very interesting and provocative set of issues. Centralized data sources, decentralized data sources, confederation of linked digital sources. Is there a need for centralized data sources in an electronic environment? Will the system get swamped by all of these other sources of information? If there is a centralized source, should it be limited to specialty information, rare books, and so forth?

MARILYN GELL MASON: I do not think that many people think it ought to be centralized. In fact, I do not know of anyone who thinks it ought to be centralized. I believe that many people feel it ought to be coordinated so that duplication is avoided. One of the problems in some of these local-conversion projects is that there is no standard that will insure that these will be interactive. And, there is no coordination to insure that different institutions are not converting the same documents. This is a role that needs to be played by someone. It is not centralization in the hierarchical sense. I think that technology has made that kind of an old-fashioned way of approaching those problems.

JOHN LORENZ: I would like to ask Steven if standards have been developed on which digitization can profitably and with assurance take place?

STEVEN FUNK: It is not simply a matter of just agreeing, in some cases. There are other areas, like full-motion video, where there are some evolving standards. What we are finding is that in some cases the technology does not exist sufficiently to even develop standards, so we are trying to invent the first use of some of these capabilities. For example, something as simple as digitizing text, we have OCR capabilities for doing some of that. However, when you look more broadly, there is still no universal OCR capability that allows you to digitize and store Old English Script, illuminated manuscripts, many kinds of graphics, or the different kinds of "objects" that you might want to put into a digital learning environment. Some other areas include photographs,

geodesic information, and script-kinds of materials. The technical capability for being able to digitize those and access them is still in the development stage. We are premature in some cases. In many cases, this has not been done even once very effectively. So, the issues about how to technically achieve interactivity must be solved. There are a lot of technical issues involved with interoperability.

JOHN LORENZ: I have one follow-up question. When standards are eventually developed, will these be standards of the NISO (National Information Standards Organization)? Will they be announced as national standards? What is your expectation on that?

STEVEN FUNK: I wish I knew. In most cases, we are not tackling the standards part because we are just trying to tackle technical feasibility and, hopefully, be able to inform the discussion among those who will be users and producers, which we think should be driving the debate on standards. So far, we are not seeing ourselves in the standards definition business, as a whole.

BETTY TUROCK: Just to bring the beginning and end of this discussion together. The idea of the strategic plan that I think both Gary Strong and Marilyn Mason were alluding to also directs itself to Steven's comments about technology facilitating the use of natural language. Librarians have been confounded by the methods we use for cataloging and classification over the decades. We have been very interested and involved in developing 'natural language' lead-in vocabularies or thresholds. I think that Gary, Marilyn, and I would agree that we are most interested in 'lead-in vocabularies' for persons who are not librarians, those who might be immigrants, or those who might be just the average person on the street coming in to use the library. We would not like to see this focus lost as we talk about digital conversion.

MARY LEVERING: I would like to add to Steven's comments which are extremely important to this dialogue. Although we are all searching for answers, some of the most helpful mechanisms to get answers are through pilot projects that test new ideas in an actual operational setting such as the six NSF-funded pilot projects, and others. Interoperability is a key. Before we can move to such standards, however, users and producers have to collaborate in real-life projects to see what the issues are and how to develop products and processes that work across multiple platforms that are usable by a variety of users. One important such project, for example, is the Getty Art History Information Program's "Museum Educational Site Licensing Project (MESL)," through which seven museums (including the Library of Congress) and seven universities are collaborating over a two-year period to test the use of digitized museum images in educational institutions. There is an enormous amount of very practical information being exchanged as part of that project. It is one of many such valuable pilot projects, and I think we need to continue to develop such projects in order to learn from them as we all move forward into the digital libraries of the future.

STEVEN FUNK: I would like to follow up on Mary's comment because it starts to address John Lorenz comment on interoperability. The initial efforts at digitization (in about four of the six projects) used the Internet standards of HyperText Markup Language (HTML), for example, to achieve cross-platform performance. Two of the library projects deal with visual data. One of them is now questioning whether, in fact, that standard can stand and still achieve the kinds and necessary ways to access. If we had coordinated a great big collection and conversion effort and put everything into HTML, we might have to reinvent the entire effort a year from now because it would not have the flexibility to do what we really need to do.

MARY LEVERING: Thank you, Steven. That is exactly the point that I was trying to make — the importance and value of test projects that are specific and containable and help test the various mechanisms to move us forward. It is really crucial.

BABETTE "BABS" PITT: I think it is really wonderful hearing this conversation, but it seems to me that in all this talk of the Digital Library, the academic libraries, and the National Science Foundation, there is something missing. And that is: do you want children to grow up to use these advances? Because unless this is brought down to the very basic level of K through 12 out in the public where we have users who do not know how to use these resources, we are going to lose this part of our population. You will end up with one-fifth of the population using these resources, and they will have to make a lot of money because they are going to have to support the prisons, the welfare population, and all of the other untrained parts of the population.

MARY LEVERING: May I add one footnote to that? Indeed some of the pilot projects that the Library of Congress is developing, using funding generously provided by the Kellogg Foundation, will test the use of digitized materials in K through 12. You are absolutely right. Elementary and secondary educational uses are one of the important aspects of this whole new spectrum of digital libraries.

ROBERT WILLARD: I would like to comment on Babs Pitt's concern because I think I take exactly the opposite perspective. That is, the technology is such that it is not here yet, but it is coming rapidly and it will not require the type of training or funding that she is concerned about. The price-performance characteristics that we are seeing with increased ability and decreased costs, coupled with the imagination of programmers that will get to the point where what we now see is science fiction. For example, in the Star Trek program where someone just says, "Computer, tell me 'such and such'." That will happen, and it will not be far away. I do not think that is a big concern.

I would like to readdress the standards issue. The question of standards has always been one of freezing innovation. To get to the point where you can say, "From now on, this is a standard," means that the next idea has a much tougher row to hoe in terms of overcoming being so much better than the older standard. Again, I come back to my base in technology. I think that the ability of computers to translate standards will become more important. There is not a popular word processing program on the market

now that will now output and input from a host of other popular word processing standards. While I think it would be great if we could say that everybody providing resources to the digital library system should provide them according to this standard, I do not think is realistic. I think what will happen is that, as part of building the infrastructure of the virtual library composed of digital libraries, there will be a standard-translating function within that structure.

NEAL KASKE: I would like to point out that in the Statewide Fiber Optics Projects, the system must be present in each county of the state, and in most cases they will be in the public libraries. Each one of the projects must have access in schools, too. Probably one place that would be the most interesting is the Star Schools Program in Iowa, and where it will get into almost all of the Iowa schools. But, I do not say this to diminish your pointed remarks that schools need to have access.

JOAN MICHIE: Obviously, as more information is digitized we would expect there to be more users. Since this Forum is looking at data, it seems that the usage of materials and resources may need to be documented in the future. I understand that some mechanisms are in place for doing this, however, it may demand that people reach some common decisions regarding what information should be collected and the mechanisms for that collection. If this is the wave of the future, this may be the start for collecting that kind of data.

DAVID BOESEL: I think there has been an excellent discussion of this topic, and we may want to come back to it.

At this point, Joseph Shubert would like to shift the discussion to Library Data Needs, related to staffing.

JOSEPH SHUBERT: What may be needed and what may be feasible in terms of data on staffing? On Sunday, I read a news article on salaries for various professions, and I was interested to see that librarians' salaries ranked below elementary school teachers, and not very far away from architects. There are a number of surprises in the comparisons, and I keep asking myself 'why'?

This morning I heard the characteristics of the public library — customer-centered, enterprise driven, community-based, culturally responsive. Then I heard from the school group the various roles of the school library media specialist; what I did not hear was the need for political skills on the part of all librarians. My questions are:

- What is needed and feasible in additional studies of library staffing across-the-board that would give us what we need to know about attitudes of staff, political skills, information skills, critical thinking skills, the recency of education, and how they may affect our ability to use technology effectively, and improve our management and organization?

- What is happening in other fields?

- What additional information about librarians do we need to collect? Our data cannot tell us little more than how many people there are, and how many have degrees.

JOEY RODGER: The most 'bang for the buck' I ever got out of statistics was a survey that the Urban Libraries Council (ULC) conducted of its member libraries which asked:

- Which individuals on your staff do you expect will be here in the year 2000?
- How much are you spending to train them?

The answer was most of them, and not very much. We translated that into a proposal for the Kellogg Foundation which gave us slightly more than $750,000 to develop a video-based, staff-development package that will go free of charge to ULC members. However, it was based on our saying, "Here is a need! You cannot run nuclear submarines with people whose idea of effectiveness is rowing in unison. And, it's not because they are bad people; it's because nobody has ever told them that it has to be different." I think one of the hardest things to develop in library staff is political skills because nobody will talk about them openly; to talk about them openly is to, in effect, betray the trust that you have in your relationship with your elected officials at home. (That's what the directors I have worked for have taught me.) Occasionally, in small groups, they will talk about the need to be political, but to even come forth with that as an agenda at senior-management level is very difficult. Most people who work in libraries think that the political position is neutral — that means we do not take sides. That appropriate non-partisanship is confused with the need to be politically sophisticated to acquire resources and to contribute to the partnership that you have with the funders in your community. I think it is a very hard set of questions.

GARY STRONG: I would like to expand on what I heard Joe Shubert saying. A need that I feel we have at the moment in a library of our size and complexity is not just to know how many librarians we have and what their characteristics are, but to know what other kinds of professions we now represent, or have represented in our staff mix. We have traditionally staffed libraries with librarians who have knowledge of other professions: accounting, automation, personnel management, business management, and so forth. I think a trend may be, though, that we are now hiring people to work in our libraries who come from those professions who may not have the library background because librarians are more scarce than ever before.

I think it would be helpful for us to know not just how many librarians and non-librarians we have, but the professional mix that it takes to run an effective library in this day and age. I am particularly interested in public libraries.

BETTY TUROCK: Gary, I agree with you, but I think the data should be on all library workers. I would like to look at the people who staff libraries at all levels and determine:

- Their background;
- Their education; and
- The recency of their education.

There are a multitude of issues here, and they would make a wonderfully useful study.

NEAL KASKE: Just a side comment on one of the projects under the Institutes Program, HEA Title II-B. Coming out of the College of DuPage it is a ten-session video conferencing program which has been reaching over 10,000 people in all 50 states and three foreign countries. One of the fascinating pieces of it is that the staff profiles, for which they have sample data, do not ring true to what we think are support staff people. You would assume that they do not have college degrees, but many do. It is fascinating. The detailed data will be coming out at the completion of the project, in approximately six months.

ANN WEEKS: I think in the school-field increasingly we are getting more information about who is staffing the library media programs through the SASS survey. One of the things that we are finding is what we are saying people ought to be doing is not necessarily what they are doing. And, the perceptions of the administrators about what they need and what is actually happening is unfortunate. I think there are a lot of reasons for that, and a lot has to do with insufficient training and insufficient ideas about what the role should be in the school. I think there are just not enough opportunities for people to get the retraining and to have professional development to really change into the kinds of people that we believe are effectively meeting the user needs. I think we are getting some of the data but what the data is showing is that we are going to have to make some radical changes in how we prepare these people and how we re-educate them.

RICHARD AKEROYD: I would like to hear more about Joey Rodger's sense of lack of political skills and/or lack of willingness to talk about politics in libraries and library staffs.

My experience in the last ten years, in both Colorado and Connecticut, tells me that there is an enormous amount of very highly sophisticated political activity going on in libraries. I do not hear anyone backing-off of that discussion. If it is the sense of the Urban Libraries Council that we have a difficulty in librarians talking about political activities, what happens every year in Washington, DC, when we get 700 or 800 librarians and library supporters in for Library Day? I know that COSLA is an organization that is increasingly active in the political arena. I would like to hear more about Joey's concern in the area.

JOEY RODGER: The first disclaimer is that anything I say represents the Urban Libraries Council. I am staff to ULC, and I do not speak their positions because by and large they have not spent a lot of time developing positions on things like this. It is my personal observation that there is a great deal of political skill at the director level. There are still, however, and this also reflects my experience with the Public Library Association (PLA), many people in senior-level positions in public libraries who have a profound sense of discomfort about being asked to be active in the political arena.

I have been present at a building dedication when a library director announced, "I am not going to introduce the State Senators here because the public library is not a political institution." The mayor then stood up for comment and stated, "The day you stop taking public money is the day you are no longer political." I think that viewpoint is more common than we would like to believe. That is piece one.

Piece two: I think it is very difficult because — and I speak in the presence of my ULC directors who may want to correct or modify what I say — the communication down a library hierarchy about the appropriate political work to get the money is very, very difficult to do. For example, fairly recently in a Midwest city the Mayor suddenly out of a sense of good will, as I understand it, gave the library one-half million dollars for automation. He then spoke to one of the library staff people and said, "What do you think about all of the new automation money?" The staff person replied, "Well, I have not seen anything yet," not understanding that her role may be to complain internally but never externally.

I think it is those kinds of political skills that are very important locally. I also think that it is something that I hear directors talk about a lot. But, when I used to try to develop programs on political skill development, most directors would not talk publicly about political strategies. I think that is not about wanting to keep secrets, but about not wanting it to look like we are manipulating the environment on which we depend.

I also think that another piece of that, which is, perhaps, less about directors than it is about the position of the profession, is that what we know is that funders (both private and public) are attracted to successes. The words we seem to be getting out a great deal, as the profession of librarianship, are that we are "threatened" and "endangered." Those are the wrong words. The right word is, "This is where government works. Continue to support it." I do not hear us saying that. I have learned a great deal about political effectiveness from the directors and others I have worked with. They are good; that is why they are still in the business. But, I think we have a professional shyness in terms of talking about it. I am sorry that was a very long answer.

BETTY MARCOUX: I would like to respond about the political sophistication. Certainly from the school arena, I can tell you that there is a confusion between the understanding that political sophistication may also mean library advocacy. They tend to equate politics with taking-up sides, rather than the assumption of trying to put forward a program that encompasses and embraces all sides.

I would also say that in our particular area we find ourselves very reactive to what is either happening or has just happened, instead of being proactive and staying on top of it. We are real anxious for the ALA Washington Office to assist us in the educational arena. We also find that in many states the legislative watchdogs watch library legislation without watching education legislation, which has direct impact on our ability to be viable information sources. Those are some of the constraints we have. In fact, that is probably why — when we were discussing politics in our particular Focus Group — we mentioned that we felt we were quite invisible, we needed to be more visible. and would like to not only wake up ourselves, but to wake up others to be advocates for libraries, in general.

Finally, I would say that while you talk about the 700 plus librarians that come to Washington — that is only 700! I am looking at the multitudes of thousands out there at the local level; that is where we need to be advocating more so than at the federal level because we need to be agents all the way through the system. That is our wake-up call.

MARY ALICE HEDGE: I would like to reflect back to Joey Rodger's statement, "This is how government works best; let's fund the library programs." My concern in the 'pass-the-buck campaign' is that we are not just taking the fifty-seven cents per capita as a given. We should focus more on, "Give us an additional forty-three cents and this is what we can do," instead of putting the fifty-seven cents on the line.

I also heard Betty Marcoux say some interesting words that I have not heard in my twenty-eight years of working in this field. And, that is, that the school librarian information media persons (and that term always confounds me) see themselves now as 'vigilant information integrity-meisters.' I would like an explanation of that phrase, please. I like it — I'm not questioning it; I just want to be able to say it with conviction. And, that they want salary commensurate with expectations of the profession, instead of qualifications, education, and so forth, that we have always heard. I think that is an interesting concept, and it is different for me. I would also like to know what is 'virtual collaboration'.

BETTY MARCOUX: I am going to turn this answer over to a couple of people who made those comments. I was the sharer of the good news, and I, too, was taken by that term. I will answer the one about the salary commensurate with the expectations.

There is state level legislation that has occurred and is ongoing to upgrade the standards certification requirements for the school library media specialist. The baseline, at this point in time, is a full teaching certification, plus. The plus is moving more and more into the arena of a full Master's degree. So, we are required to be teachers first; and then go into library school and become fully-certified librarians. We could easily work within any other arena of librarianship in terms of the Master's certification.

The acknowledgment, in terms of expectation is that the school library media specialist now becomes a trainer of trainers, in addition to being a teacher of the students.

They are going to be held responsible and accountable for the types of technology that are best fitted for their user community. They will be held responsible for being sure that it is integrated well within the curriculum, and that the curriculum reflects the advances that we are all seeing in information access use and synthesis. They are also going to be responsible for managing what will turn into this virtual setting of information. The job expectations are far greater than what used to be perceived as the facilitator of information; the reactive warehouse manager. It has become a much more proactive role, and that is the expected role, at this time.

I am going to defer to Steven Funk because it was his term: "The vigilant information integrity-meister."

STEVEN FUNK: If we accept the concept that the body of knowledge will double in volume about every six years at this point, and if we are going to teach inquiry skills at a very young age across the curriculum (which is what we think will be necessary for life-long learners), then there will need to be people who will be able to point inquirers to valid, reliable, trusted sources of information. The librarian, or the media specialist, becomes critical in that case. They are going to have to know that there are entirely new fields that do not yet even exist, and they are going to have to be able to guide inquirers to that new knowledge. We think the teacher will become a 'learner enabler' and not the source of expert subject content, because that will come from the information infrastructure. Resources will be acquired with the help of the librarian from resources physically present in the "library" and from the "virtual" collection of resources and learning environment. We see the role of the teacher and the librarian in the learning process as somewhat different in the future than it is now. This may not be by the year 2001, but certainly over the next ten years, if we are successful. We think that there will be a significant change in the roles of those players.

BABETTE "BABS" PITT: I want to continue discussion on this political, activism thread because, to me, that is the most neglected part of our role as librarians. It seems to me that library schools are never mentioned. Although I remember statistics showing that people in graduate and library schools were always the brightest students in graduate programs, I think there may be a naivete in that intellectual person. I think that every introductory library school program should include something with a little bit of political astuteness, activism, and responsibility. I think, again, in continuing education, it should be a thread taken up by the states, by the local library organizations, and by ALA, that, along with the computer skills and other skills, we must clone political skills activism and responsibility.

FRANK WITHROW: I would like to comment on both the comments of Steve Funk and Babs Pitt. With the new digital information and the new information networks, we are now dealing with primary knowledge. When we were dealing with published material, we went through an edit system. We had editors and we had selection of the books and materials for the library. On the networks, we do need the 'integrity-meister'; we need to help the children learn how to handle primary information and how to assess

the value of that information. We already see through talk radio an inability to handle anyone who wants to call in to present things as verbatim truth.

In terms of the political issue, I learned about 35 years ago (I actually worked as a teacher during the day and part-time for the Teamsters in their Well-Patient Clinics in St. Louis when Jimmy Hoffa was still alive), when we had an election and I knew one of the new state legislators fairly well. He said, "Frank, I want to tell you how well the Teamsters did with all the new legislators. They had us down for dinner serving nice Kansas City steaks and they said to us, 'We know you do not have a lot of staff, and we know that we can help you. We do not want to pressure or influence you, but when you need help just call upon us and we will do your research for you or help you write things." He said the teachers, on the other hand, had us out on a hot Sunday afternoon with a box lunch and told us how bad all of the other people had been that we defeated, as if we were the problem of the last legislator. I think many of us in the library community and in the teaching community are so convinced that we are the public good, that when we go to our legislators, we always are telling them what we want and what we think that their predecessors did wrong. We have to learn a different message. We could learn from the Teamsters.

GLEN HOLT: I would like to take us back to the original question that was asked, "Why did we want to have the descriptive data on our staff"? My first point is that library work is changing faster than almost any kind of work in the United States. Just start there. The second point is that, in terms of historical and traditional library training, there is the enormous insufficiency in what is available. At the moment, there are about 160,000 people working in libraries throughout the United States. If you count only the people who teach in accredited ALA library schools, only about 300 of them are published regularly. That is the size of the professional training cadre, as opposed to the size and the demand in the marketplace.

We need these kinds of staff training: The first of those is in-service training. We, increasingly, are moving paraprofessionals into professional occupations as we upgrade the work of our professionals.

The second need is in libraries, which are mostly staffed by people who are not librarians. And rural and small libraries are, in point of fact, the fastest growing kind of public library in the Nation.

The third reality is that this profession is one of the least populated by minorities of any profession in the country. You have to go to pure science before you even get close to the small percentage of minority persons who are library professionals. The library schools are turning out less than 5 percent minorities. We have an enormous problem in terms of minorities dealing with minorities in our communities.

I suggest to you that there is much we do not know about staffing and staff work, and that we ought to make an effort to find out about it because there are some really

dramatic kinds of proscriptive changes that we need to make in terms of dealing with the realities of training and staffing needs.

DAVID BOESEL: I want to expand this discussion of data needs, and I think your observation offers a good opportunity to do that. You mentioned the need for information on characteristics of staff and the importance of those characteristics in relating to surrounding communities. This brings in the questions of: Who are the customers of libraries. Who are the potential customers of libraries. What are the potential markets. What kind of information do we need along those lines?

In our session we also discussed the need for information on outcomes. What do we know about what affects libraries? What impacts are they having? How do libraries affect peoples' lives? Their ability to get jobs? Their ability to have information that they would not have otherwise? What are some of the costs and benefits of libraries? Are they delivering a lot of impact for the amount of money that they cost? What can we say about the value-added services of libraries? What can we say about different kinds of libraries in terms of initial investment and their contribution to information dissemination processes, learning processes, and so forth?

I think it would be useful in moving into the final phase of this discussion to talk more about some of these issues and about the data needs that they imply.

MARY ALICE HEDGE: I would like to ask our Moderator a question because indeed we are talking about data needs, but research needs are also definitely on the table as he has just expressed. The Congress, in its wisdom, in the reauthorization of OERI, did establish that libraries would be included in the Research Institute for Postsecondary Education, **Libraries**, and Lifelong Learning (PELLL). There are currently several Research Centers, none of which appear to be focused on libraries. Librarians and library supporters, in addition to Congressional supporters, feel strongly that one of those centers must be dedicated to library research, information service issues, and related concerns. Do you see your Institute becoming involved in answering any of these questions that have come up today and that you, as Acting Director, have raised? If so, do you have a time-frame or can you give us any clues about when these library and information research issues will be addressed and how?"

DAVID BOESEL: First of all, the five institutes put out proposed priorities for seven research centers. Among those proposed research centers, there is not a center on libraries. A lot of this has to do with a lot of discussion that went on internally over priorities and over the need to aggregate issues in big bundles for research centers. We are going from currently 16 and 19 research centers (depending on how you count them) down to 7 research centers. The subject matter of those seven research centers is highly focused, and that is part of the Congressional intent.

In the Postsecondary Education, *Libraries,* and Lifelong Learning Institute, we have a team that focuses on library research issues (that is the team headed by Barbara

Humes). That team held a conference in Washington about a month ago to get input on research issues that we, as an Institute, ought to address. We have a number of means of addressing those issues. The first is contract research; what we call 'directed research.' We will have to make some assumptions about Congressional funding and the budget — you have to make those assumptions before you can say anything about what you expect next year. Based on the Administration's budget, there will be funds for directed research projects on the subject of libraries. We also have an in-house research staff. I think we have about six Ph.d's in the Institute, some of whom will be devoting their efforts to library research topics.

I found this conference very interesting and very stimulating in a number of ways: (1) In terms of the research issues that have been brought up; (2) In terms of the people that I have met and talked with; and (3) In terms of the potential for collaboration. One of the things that we want to do as an Institute in the area of libraries and in our other subject matter areas is to reach out to develop some collaborative research efforts. I was talking with Carrol Kindel earlier about this. We have represented here the Department of Education, the PELLL Institute, NCES, the Census, the Bureau of Labor Statistics. I am thinking about — and we have to think a good deal more about it — the possibility of expanding this network to include non-governmental researchers. There are a lot of questions that are involved that will need careful consideration, but there is a lot of information, knowledge, and skill that could be focused on these issues in that way.

One thing, in particular, occurred to me after listening to Joey Rodger's comments on economic modeling. This is something that we can do. Breaking out the resources for it, however, will not be easy. But, in my own thinking, that is the kind of issue that I would like to try to start with. I want to go to NCES and find out what kind of data are available. We know about the Household Survey and the Library Survey, and there may be some other data sources. I do not know to what extent these data sources can be brought together to form variables for some kind of model, but that is the first thing that we want to explore. By participating in this conference, my thinking has been stimulated, focused, and directed, and I am very grateful for that opportunity.

MARY ALICE HEDGE: Thank you. You have done a wonderful job, and we appreciate what you are doing as the Acting Director. We heard the words, "Research Institute," in the very beginning, but now they are just being called "Institutes." What is correct?

DAVID BOESEL: They are all titled, "National Institute for . . ."

MARY ALICE HEDGE: But, "research" is not in the title. Correct?

DAVID BOESEL: No. But their mission is research and development.

MARY ALICE HEDGE: One of the things you mentioned reflects back on the White House Conference on Library and Information Services' recommendations. I would urge everyone here to go back and review those recommendations because much of what you are talking about is contained in the recommendations. I would like to read one particular recommendation which comes under "*Services for Diverse Needs, Evaluating Program Effectiveness:* Establish a statistical model for determining impact needs. That the Department of Education establish a statistical model using existing data to evaluate the economic, social, educational, cultural, and linguistic impact of libraries and information services on their communities and that they assess community needs. This model should be developed to permit use at state and local levels." So, you are right on target!

DAVID BOESEL: Very, very interesting. The developing model, while very difficult, will and would be easier than doing assessment, which is very costly. I would like to think in terms of how the Department of Education, in collaboration with other federal agencies and, perhaps, other groups, could work toward the development of such a model. I think that is an excellent point.

We have talked a good deal about some of our research and data needs. What about things like user demographics, customers identifying the markets, different kinds of outcome variables that we may want to look at. Are there any other observations or comments?

NEAL KASKE: When we talk about studying outcomes within libraries, it was pointed out by a couple of people in the academic group that really libraries support other organizations. And, as such, if libraries are held accountable for the output of the classroom, that is a little tricky because the assessment is not on the student or the library as one of several sources; significant, but probably not as significant as Mom and Dad, and some of the others factors. That, then, becomes a very difficult experimental problem because of the confounding of variables. But, that is not to take away from the fact that it needs to be done, and that it needs to be worked on.

We look at library data, and this was discussed in our group, from the type of agency that produces it and gives it out. It was observed that users of libraries use multiple types of libraries, and it might be useful to take some sort of reading from the **user's** point of view. It is kind of hard to put a diary notebook on top of the Nielson Box, as someone put it, but there are ways to log what some folks do across the network.

JOEY RODGER: We had a fairly substantial list of social science kinds-of-research that we would like to have done. The Anne Arundel County, a neighboring county library, has as a part of its long-range plan a provision that each and every child in Anne Arundel County will have a 'story-a-day'. The library's role is this, this, and this. It is not to tell a story-a-day to every child in Anne Arundel County at the knee of a librarian. The piece of research I want is the <u>effect</u> of having a story a day in the growth of language and thinking skills in children. What I am trying to get at is if there are some kinds of behaviors that we know have economic benefits, educational benefits, and so

forth, let's do them. We know the library has a role in producing those behaviors. To me that is a much better angle to go at than to try to say the library caused this business to have this level of grant funding. We all know that there are far too many variables; there are too many in the schools; there are zillions in the public library environment. I do not think that kind of data is credible.

DAVID BOESEL: It is very difficult to measure developmental outcomes and, especially, to make those kinds of attributions. Focusing on users and the kind of benefits that they report; the amount of money that they save by using books from the public library rather than buying them; and so forth, are measurable.

JOHN LORENZ: I would like to illustrate my political training by turning the topic over to my boss, Presidential appointee, Chairperson of the U.S. National Commission on Libraries and Information Science, Jeanne Hurley Simon.

(Applause)

Closing Remarks

JEANNE HURLEY SIMON: No one can say you are not political, John Lorenz.

Before we go any further, I think we owe David Boesel a wonderful vote of thanks. David, you have done a wonderful job, and we all appreciate it and have learned from it. If I carry away anything from this conference, it is that my granddaughter, who is one-year old, is moving into Anne Arundel County next month, and I can tell her parents about one story-a-day. I am sure she gets more than one story a day.

This has been a fascinating two days. This Forum has been grand, and that is because many people have worked on it. Paul Planchon; Bob Klassen; John Lorenz; Mary Alice Hedge; Jane Williams; Carrol Kindel; Barbara Whiteleather, and Kim Miller — the people who always make things run so smoothly. We owe everyone of you a debt of thanks. (Applause)

What do we do next year? It will be the fourth annual Forum, and maybe we should call it the Emerson Elliott Forum? This fellow is going, but he is the one who started it. Perhaps we should have Emerson Elliott Awards; I am thinking of all sorts of ideas. Every Forum has been special. However, we are all on a cusp. We look forward to next year's Forum, and we want recommendations for topics. Please think about them and send them on to John Lorenz or Mary Alice. We will be talking throughout the year about our ideas. We will also be publishing a report on this Forum as soon as possible.

Does anyone have any further comments to make? If not, we are going to declare this Forum concluded with hearty thanks to the National Center for Education Statistics, the Office of Library Programs, and the U.S. National Commission on Libraries and Information Science.

(Applause)

APPENDICES

Appendix 1

Focus Group Report

National Level

Changes by 2001 for Library and Information Services:

1. Better telecommunications.

2. Increased support for technology in libraries and for national policy directed at federal funding for information.

3. Increased flow of federal information to libraries electronically (for example, information on health and social services).

4. Libraries become information brokers.

5. Decisions made to maintain balance between intellectual property and fair use.

6. Public space defined on national information infrastructure.

7. Universal library service redefined in an electronic age.

8. Reduced support for government grants and services, in general.

9. For libraries, the continuing role of federal government as a catalyst is essential.

10. Mixed media/formats still important.

Premises for Expected Changes:

1. *Economic premises*
   --May have to look for other funding sources
   --Public/private sector partnerships are shown to be beneficial
   --Improved access to rapidly increasing amounts of information
   --Information provided by timely access rather than storage

2. *Demographic/social premises*
   --Users are diverse — have/have nots; want/want nots; multicultural users increased
   --Intersecting needs of population -- for example, children and parent-related needs
   --Market-based decisions versus equity — need to understand market potential, *and* acknowledge need to serve others, as well

3. *Technical premises*
   --Technology is key — easier access
   --User interest in print continues
   --Library building as community center
   --Librarians provide information services, "navigator" function in electronic age

4. *Educational premises*
   --Future of libraries and education tied together

5. *Political premises*
   --Depends on next election — drastic or gradual change
   --Conservative outcome in next election may mean more block grants increased competition, increased advocacy and mobilization for libraries
   --Need to engage public in debate

Public Policy and Professional Influences:

1, Functions of federal government in libraries: dissemination, diffusion, Research and development, equity, and innovation

2. Library budget decisions more difficult —collections versus technology, just in time vs. just in case, and so forth

3. More advocacy needed in order to compete for funding — public pressure

Change in Library Relationships:

1. Resource sharing will increase gradually — depends somewhat on local conditions

2. Opportunities for market expansion increase; should be targeted

Beneficial Public and Professional Policies to be Advocated:

1. *Professional policies:*
   --Retooling people in the field to increase familiarity with technology
   --Develop courses for library workers as well as librarians
   --Review need for certification renewal

2. *Public policies:*
   --Establish guidelines for relationships and roles between public and private sectors
   --Attention to copyright and proprietary rights
   --Role in technology established - universal service, public space issues
   --Maintaining public service function — not strictly market approach

National Data Needed:

1. *Demographics*
   --Get user/non user demographics
   --Relate to usage

2. *Usage*
   Current usage
   --Who are users; who would like to be users?
   --Types of use (for example, for educational purposes, independent learning, life-long learning, school projects, job searchers, and so forth)
   --Time of usage: noontime, after work, and so forth

3. *Interlibrary Cooperation*
   --Relations between and among libraries
   --Interactions, electronic or otherwise
   --Use of funding for cooperatives and networks
   --Types and reasons for interaction; for example, service coordination between public and school

4. *Technology*
   --Presence of Internet and related issues
   --Cost model for Internet connection (Dr. Charles McClure's model)
   --Types of media libraries use and/or need

Measuring Value of Library and Information Services:

1. *Outcomes*
   --Stop asking about institutions, start asking about people
   --Impacts of programs — evaluation data
   --Conduct funding to outcomes
   --Attitudes — how service affected user; open-ended questions with future follow up

2. *Value Added*
   --Value to people, quality of service
   --Value added by type of library
   --Costs and savings

Data Strategies Discussed:

--Focus groups of users and non-users
--Need for federal government data to be representative, objective
--Market strategy needs to be developed, but by library community, not federal government
--Pull together existing sources of data to see what can be said; where there are gaps

Appendix 2

Focus Group Report

State and Library Systems

Changes by 2001 for Library and Information Services:

- Federal funds to support State Library leadership will be a continuing need.
- Issue of equity in library service will grow in importance.
- Schools need to be proactive. There will be a growing emergence of community schools, and one-stop service centers; the role of libraries will have to change to relate to these changes.
- There will be more shared library facilities.
- Federal role has shaped state library programs. If federal dollars are cut, state roles will be redefined and there will be much greater differences among state library programs.
- Majority of libraries of a medium size will connect with the Internet. State funding will be essential to accomplish this.
- Information kiosks under the U.S. Postal Service initiative will probably become widespread.
- Three types of library organizations/systems will continue into the future: Those that are parts of state structures; regional networks, such as OCLC; and various other consortia.
- There was discussion of the following data-related topics: Johns Hopkins University economics/study on the values libraries add to information; economic models; review of individual, household, and other non-library surveys.

Other discussion included:

- How government information is provided. What are the access points? How do government agencies promote access points? What is their responsibility to do so? There is a need for information on users of government information, their experiences, and how information is used.
- There is a need for studies of access to shared library facilities.

Appendix 3

Focus Group Report

Public Libraries

Changes by 2001 for Library and Information Services:

- The Public Library Focus Group noted the following economic and social trends: Resurgence of small business development; an anti-tax feeling in the country; demand for accountability in expenditure of public funds; shrinking of the middle class, more poor people, more in upper income brackets; white collar unemployment; explosion of growth among Hispanic population (presently less successful in schools); and, higher income groups tend to have and use technology.

- The following specific observations were made: The Cleveland Public Library provides dial up access from user's homes, but library visits did not drop, they went up; those who thought the public library did not have anything for them, now feel it does, and they are using more of all services, not just electronic resources, once they get to the library.

- In Queens Borough Public Library, a small business man in the import/export trade reported he is more competitive because he uses the library's electronic resources, and he is also discovering new markets.

- Nationally, 40 million people are now working at home, and many rely on public libraries for information, home-schoolers turn to the public library, too — in person and electronically; there is a squeeze on local tax dollars and big competition for local/state dollars.

- Another issue is the cost of computers; costs are coming down, but computers are still too expensive for many people to have one in their home. Besides the computer, there are monthly connect charges, and so forth, and this becomes an equity issue. To many people, fees are preferable to taxes. People feel more in control when they are charged a fee.

- In Queens, there is an expectation that the free public library will continue to exist. Fees are not expected or desired. Businesses expect public library service as a return on their taxes. Many people understand that it does not make sense to "pay for water by the sip".

- It may be that the public library is the only service for which many feel they are getting a return on for the tax dollar.

- Glen Holt reviewed the budgets of the 80 largest public libraries over several years and confirmed a pattern that a rising tide does not benefit all these public libraries and a receding tide does not hurt all of them.

- Marilyn Mason observed that in cities where public libraries can go directly to voters, they are more successful in increasing funding than are public libraries that must go to local government officials. Most people feel that they get their money's worth out of public libraries. A study was recommended of library law, state-by-state, in terms of the power of governmental units to vote on library support, with findings then related to levels of library support.

- Other suggested studies related to better measures of library services. Circulation statistics may no longer be a key measure since electronic access to information need not generate circulation transactions. Data on helping children with homework, teaching literacy to adults, and services to latchkey children and senior citizens may be more significant measures.

- Social and demographic observations included: Middle class are continuing to move out of cities; rural populations are changing; working women read for survival, not escape; many people have declining expectations but there are still examples of upward mobility; some library users from poor families are now elected officials and library supporters.

- Technology can be a major plus for public libraries. Electronic services can be readily measured and be responsive to user needs. Digitization of information materials may attract added library support, particularly for libraries such as the Library of Congress. It will be important to involve public libraries in any national digitization program. Will public library service be expandable enough to encompass such varied services as electronic information and story hours?

- The future of federal grants and state grant programs are important to public libraries. A study of the support of various funding formulas on local public library support was recommended. Data about public library branches are needed. The group would trade annual national public library data for biennial data and special studies of urgent policy questions in off-years.

- What will characterize thriving public libraries in 2001? They will be customer-centered, will know what users want, and the public will know what these libraries can provide. They will be partners with other organizations and will provide information gateway technology. People want education, especially in minority communities but not necessarily in every community. Public libraries, to date, have generally failed to translate community good will toward them into better funding.

- On collaboration between and among libraries, a study describing the best models for collaboration was recommended. What will be the trade-off between the physical location of the library and increasing access to the library from individual homes via dial-up technology? Studies are needed to develop measures of the value of library service, especially on community and state economic development. There is a need for data on the purposes of individual and group library use, use of library facilities and electronic services, staff contact with users, services to handicapped, new Americans, those seeking jobs. It will be important for each public library to develop its own core values and services. Funding will continue to be difficult and local library entrepreneurial efforts will be crucial.

Appendix 4

Focus Group Report

School Library Media Centers

Changes by 2001 for Library and Information Services:

The concept of the school library media center as it is presently understood is not one that will be incorporated into new learning communities. Unfortunately, many school libraries will disappear before they can become recreated as information centers that include resources in formats such as digitized and interconnected source centers. Librarians, including school library media specialists, must be prepared differently to match the new roles and requirements of them in the information universe. This role of the library media specialist must focus on teaching and working as an "information integrity meister". It consists of a less technical (cataloging, indexing, computer technology maintenance) role with more focus on the teaching of teachers, administrators, and students about intellectual as well as physical access to information, its use and applications.

In many schools there are not enough people with technological expertise. The roles to support the technological explosion will be divided into the arena of technical support for the hardware/software, and the arena of intellectual support for access and utilization as well as selection. While the school library media specialist will need expansive understanding of the workings of software and hardware, the primary role of this professional will be that of intellectual focus, curriculum needs, and developmental requirements of the clientele.

K through 12 libraries must become information centers, providing access to all formats of materials with collections that are based upon user needs and developmental levels. The concept of the learning community must be addressed, with confederations of information centers created based upon user needs and uses. While digital libraries are critical to the successful access of all types of information, they will not replace print, nor the need to specialize holdings in distinct locations. They will, however, offer opportunities to share interactively that information most needed by users regardless of physical location. The ability to store interactive learning models (tutorials, intelligent agents that help identify user needs, and so forth) will allow for the use of this information by many kinds of users and groups of users. There will be great differences in the concepts of work space versus study space, and while the classroom is likely to not disappear as it is traditionally perceived, the walls of the school library and the access points to information will. Digital libraries will encourage both virtual and actual collaboration, dialogue and writing. Multimedia computers and information sources allow communication to increase exponentially. The library becomes a "value added" source that facilitates this communication and learning.

Funding for all libraries is critical and essential to their ability to undergird the learning community. Lack of funds will directly impact the speed of change for school libraries. Lack of professional development opportunities will directly impact the ability of school library media specialists to move into the new roles essential to the future information forums. In all of this, the question of equity is a major issue. Obsolescence is a real problem with technology and information. Cost becomes relative to what is really valued. A clearer understanding of costs and impact is needed throughout the country. Schools that are always innovative will continue to be innovative are most likely to continue to be supported. The others will fall farther behind. Greater diversity is also an issue, for different communities will value different things. Format will fall behind learning style, and there will be a need to create a body of 'learners' rather than 'knowers' due to the overwhelming amounts of information in everyone's future.

Some of the specific premises discussed included:

- The socio-economic changes in our population will affect both the needs and demands for information uses. The cultural heritage of our students will also change. Connecting students from different geopolitical areas offers the hope of creating fewer barriers to global understanding. Distance learning can bring opportunities and equity, and assist in encouraging technological and information literacy. Schools can be tremendous equalizers in this arena. To do this, they must be broadly accessible and politically active.

- Collaboration is essential for school libraries. The move toward partnerships has begun, but it must be accelerated and increased. There is critical need for the school library media specialist to offer leadership in establishing and developing new collaborative ventures. The research recommends relationships between university communities and K through 12 schools. Given the funding realities over the next several years, schools will need to work closely with public libraries, and consider the responsibility to serve more than just the school's students. While curriculum is the school's primary focus, there is a need to be responsive to community needs, especially in rural areas. How this can best occur remains the question.

- Technology is an enabler, but it must have an infrastructure. All learners need equal access. The leadership that the school library media specialist can bring to this infrastructure development is crucial. The ability to define user needs and developmental requirements that then should be reflected in decisions about technology and collection can only be addressed by those with professional expertise in both education and information use.

- There is a tremendous movement to standardize education. This movement is dynamic, yet never leaves the local level of decision making unless people abdicate responsibility. There is a great need to develop this local sense of responsibility. New guidelines for school libraries are being developed that focus upon the student rather than the professional; however, the need to support this focus on the student will require a greater understanding of the professionalism of the school library media specialist. Approaches to student assessment are changing; new measures must be developed that reflect the learning process rather than the product. Although parents understand current assessments, they often do not understand that these assessments do not provide a real reflection of students' progress.

- The lack of data collection and dissemination about school libraries is handicapping the ability to move forward. Stakeholders must be clearly aware of this fact, and be involved in the decision making process. There are several local and state models of dissemination and data collection that could be done at the national level.

Data should be collected to address the following issues:

1. How the library supports the curriculum
2. The correlation of holdings to student outcomes
3. Relationship of personnel to student outcomes
4. Student outcomes correlated to library use
5. Teacher use of the library as correlated to student performance
6. Community resources used by schools and student outcomes
7. Expenditures related to student performance
8. Relationship between use of technology and student performance
9. The change in library usage when technology is available
10. Correlation of holdings to growth of knowledge (books published)
11. Relationship between professional development and the use of sources
12. Relationship of test scores to library use
13. Accessibility of information available only in digital formats
14. How to capture data about information use that is electronically available

Global measures for student success are also important. Old models of success may not measure what is necessary. Older models involve measuring students, teachers, and buildings; newer models should consider measuring learners, teachers, and libraries.

Additionally, there is a need for more research, such as the following:

- Documentation of current reductions in school library funding
- Currency of collections
- Relationship between reading scores and library use
- Relationship between use of technology and student achievement
- Costs of using databases as compared to traditional resources in the development of term papers
- Relationship between student achievement and resources
- Correlation of all scores to resources and services
- Increases/decreases in use and services due to funding/professional cuts

Long term changes need measuring, but longitudinal studies are not realistic solutions for the present funding crisis.

Continuing education to bring the trained professional up to the expectations of future role responsibilities is essential. Teachers and school library media specialists need renewal. Options such as distance education, virtual classrooms, and networking need to offered. Opportunities to learn must be facilitated — even required for certification renewal — to assure the collaborative infrastructure important to these changes.

Presently, there is no way to examine library services across a community. Currently such services are looked at by type of institution. A more integrated approach to these services should be the focus for the future. The danger of this approach could be the possibility of a reduction of funding. While most communities support the library they use, if this level of collaboration occurs, funding issues will need addressing. Of greatest importance will be the continued focus upon equal opportunity of access for all users.

School libraries are most often loved because of the librarian; other libraries are loved because of their collections. This difference must be acknowledged and encouraged. The function of school libraries can be compared to that of many special libraries, and many are just as market driven. The new context of the school library may be a center without the walls, but the human factor will be at least as important, if not more so. The availability of so many new formats and sources of information will make human facilitation even more important as students are taught how to navigate in the world of information. Unless the 'job' is done right at this level, all libraries may potentially suffer the lack of support and clientele.

Conclusions

As education is reformed and teaching becomes more of a profession, information intermediaries must be more professionalized and more differentiated. The role of the school library media specialist must change. New opportunities for continuing education and more courses for continuing certification are needed to professionalize and update the role of school library media specialist.

Libraries are essential to all forms of educational reform.

Data collection about libraries should focus on or be correlated with student outcomes and educational change. The information always should reflect the impact of the library program on the broader educational program of the school.

School libraries must provide both physical and virtual access to resources. This access must be professionally facilitated, directed, and nurtured.

The role and responsibilities of the school library media specialist must change to take on more professional development (in house trainers) duties. The concept of the "information integrity meister" defines the role of determining access to trusted, reliable sources of information for school library users. Further roles that need to be encouraged and enhanced include curriculum collaborators and trainers as well as assurers of equity.

Partnerships among libraries — increased collaboration within and without schools — are important. Collection development, programming, access, on-line networking, space sharing (virtual and physical) are all concepts to embrace and encourage. K through 12 librarians seem to be virtually invisible. They must become politically active within the educational community and within the world of stakeholders. They must become more integral to educational change by being on the cutting edge of educational progress and future vision.

Appendix 5

Focus Group Report

Academic Libraries

Changes by 2001 for Library and Information Services:

Academic libraries will remain in constant change in the foreseeable future for a number reasons. Some of the reasons for constant change are listed below:

- There is a great need to evaluate and measure the impact of academic library programs on users. With fewer real dollars to utilize and more materials to obtain and/or access, the search must continue for ways to evaluate and to publicize the value of libraries to patrons and parent organizations. There is a need to develop measures to justify expenditures on libraries. Understanding the value added by library and information services is very critical.

- Funding of academic libraries is affected by the flux in the U.S. dollar in addition to the generally lower budgets. Many material budgets are not keeping pace with the need to maintain and expand monograph and serial collections and at the same time increase funds for electronic resources. The current and changing mix of funds spent for print and electronic resources is not known and future reporting systems should reflect the real mix between information materials and access to information. This is needed so the costs for information and information services is understood by all.

- Electronic property rights protection is in need of a technological solution though once a solution is found, property rights management will remain an issue for libraries.

- Distance education will expand greatly and the changing nature of the academy will affect the role of the library and librarians as information resource providers. It is one thing to provide patrons in a library with needed printed and online information. It is another environment with different constraints and advantages to provide reference services and information to a patron or faculty member who are remote to the library.

- There is a clear understanding of the problems associated with the organization of information in a print world but the emerging online world is clearly a frontier under development.

- The increased cooperation between all types of libraries changes and expands the patron-mix for academic libraries from enrolled students and teaching/research faculty to include the general public. Online systems are increasingly open to all, which adds to the patron-mix.

- Libraries have become providers of electronic products and services through the use of online integrated library systems, electronic database searching and document delivery. Some of the projects have been cooperative efforts with campus computing centers. Cooperative projects will continue with computer centers and university presses.

Appendix 6

Library and Information Services Policy Forum*

Changes in Library and Information Services: 1996-2001

Monday, May 15, and Tuesday, May 16, 1995

Washington Vista Hotel
1400 M Street, NW
Washington, DC 20005
Tele. (202) 429-1700; Fax (202) 785-0786

Monday, May 15

8:00 - 8:30 a.m. Continental Breakfast -
Meeting of Focus Group Moderators and Recorders with Forum Staff

8:30 - 9:00 a.m. Registration and Coffee

9:00 - 9:30 a.m. Introduction to Forum by Co-Chairs - General Session
Hon. Emerson J. Elliott, Commissioner,
National Center for Education Statistics
Hon. Jeanne Hurley Simon, Chairperson, U.S. National Commission on Libraries and Information Science

9:30 - 11:00 a.m. General Session - Moderator: David Boesel, Acting Director, National Institute on Postsecondary Education, Libraries, and Lifelong Learning

Forecasts for Next Five Years, 1996-2001

Economic	- Gail Makinen, Specialist, Economic Policy, Congressional Research Service, Library of Congress
Social	- P. Royal Shipp, Acting Director, Education and Public Welfare, Congressional Research Service, Library of Congress
Technology	- Jane Bortnick Griffith, Specialist, Science and Technology, Congressional Research Service, Library of Congress

* Cooperatively sponsored by the National Center for Education Statistics (NCES) and the U.S. National Commission on Libraries and Information Science (NCLIS) and the Office of Library Programs (OLP) of the U.S. Department of Education

11:00 - 11:30 a.m. Discussion

Monday, May 15 continued

11:45 - 1:15 p.m. Luncheon - **Changes in Education: 1996-2001** - Ramsay Selden, Director, State Education Assessment Center, Council of Chief State School Officers

1:30 - 3:30 p.m. First Focus Group Sessions -

National Level Changes
Robert Willard- Moderator
Carrol Kindel - Recorder

State and Library System Changes
Joseph Shubert - Moderator
Mary Treacy - Recorder

Public Library Changes
Eleanor Jo Rodger - Moderator
Keith Curry Lance - Recorder

School Library Media Center Changes
Betty Marcoux - Moderator
Ann Weeks - Recorder

Academic Library Changes
Neal Kaske - Moderator
Mary Jo Lynch - Recorder

3:30 - 3:45 p.m. Break

3:45 - 5:45 p.m. Second Focus Group Sessions
Same as above
During this and the Third Session, Focus Groups may select a representative to sit in on the other Focus Groups

6:30 p.m. Dinner - optional

Tuesday, May 16

8:00 - 9:00 a.m. Continental breakfast -
Meeting of Moderators and Recorders with Forum staff to review progress, answer questions, resolve issues, etc.

9:00 - 11:00 a.m. Third Focus Group Sessions

11:00 - 11:15 a.m. Break

11:15 - 12:45 p.m. General Session - David Boesel, Moderator
Focus Groups Reporting
Discussion and Conclusion

Appendix 7

Library and Information Services Policy Forum
May 15-16, 1995
List of Participants

Shirley Gray Adamovich
NCLIS Commissioner
14 Thompson Lane
Durham, N.H. 03824
Internet: sa_nclis@inet.ed.gov

Richard Akeroyd, Jr.
State Librarian
Connecticut State Library
231 Capitol Avenue
Hartford, CT 06106
Internet: rakeroyd@csunet.ctstateu.edu

John Carlo Bertot
Syracuse University
School of Information Studies
4-206 Center for Science and Technology
Syracuse, NY 13244-2340
Internet: jcbertot@mailbox.syr.edu

Julia Blixrud, Program Officer
Council on Library Resources
1400 16th Street, NW
Suite 510
Washington, DC 20036

David P. Boesel, Acting Director
National Institute for Postsecondary
Education, Libraries, and Lifelong
Learning, OERI
555 New Jersey Avenue, NW
Washington, DC 20208-5571

Lynn Bradley
Deputy Executive Director
American Library Association
Washington Office
110 Maryland Avenue, SW
Washington, DC 20002

Laura Breeden, Director
Infrastructure Division
Department of Commerce, NTIA
Herbert Clark Hoover Building
14th and Constitution Ave., NW
RM 6043
Washington, DC 20230
Internet: lbreeden@ntia.doc.gov

Adrienne Chute
Library Statistics Unit
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 311A
Washington, DC 20208-5652
Internet: adrienne_chute@ed.gov

Sandra Cooper, State Librarian
North Carolina State Library
Department of Cultural Resources
109 East Jones Street
Raleigh, N.C. 27601-2807
Internet: cooper@hal.dcr.state.nc.us

Evelyn H. Daniel, Professor
School of Information and Library Science
University of North Carolina
Chapel Hill, N.C. 27599
Internet: daniel@ils.unc.edu

Blane Dessy, Acting Director
National Library of Education
555 New Jersey Avenue, NW
Washington, DC 20208

Carol DiPrete,
(NCLIS Commissioner)
Dean for Academic Services
Roger Williams University
Old Ferry Road
Bristol, RI 02809
Internet: carold@acc.rwu.edu

Christina J. Dunn, Acting Director
Discretionary Programs Division
Library Programs
Office of Educational Research and Improvement
555 New Jersey Avenue, NW
Room 300
Washington, DC 20208
Internet: cdunn@inet.ed.gov

Emerson Elliott, Commissioner
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 400
Washington, DC 20208-5652
Internet: eelliott@inet.ed.gov

Steven L. Funk
National Science Foundation
4201 Wilson Boulevard
Suite 855
Arlington, VA 22203

Gordon Green, Chief
Governments Division
U.S. Bureau of the Census
407; WP2
Washington, DC 20233

Jane Bortnick Griffith
Assistant Chief
Science Policy Research Division
Congressional Research Service
Library of Congress
Washington, DC 20540

Mary Alice Hedge
Associate Executive Director
U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW
Suite 820
Washington, DC 20005-3522
Internet: ma_nclis@inet.ed.gov

Glen E. Holt, Executive Director
Saint Louis Public Library
1301 Olive Street
Saint Louis, MO 63103

Barbara Humes
National Institute for Postsecondary Education, Libraries, and Lifelong Learning
Office of Educational Research and Improvement
555 New Jersey Avenue, NW
Washington, DC 20208
Internet: bhumes@inet.ed.gov

Naomi Karp
National Institute on Early Childhood Development
Office of Educational Research and Improvement
555 New Jersey Avenue, NW
Washington, DC 20208
Internet: nkarp@inet.ed.gov

Neal Kaske
Library Programs
Office of Educational Research and Improvement
555 New Jersey Avenue, NW
Room 300
Washington, DC 20208
Internet: nkaske@inet.ed.gov

Carrol Kindel, Chief
Library Statistics Unit
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 311
Washington, DC 20208-5652
Internet: ckindel@inet.ed.gov

Robert Klassen, Acting Director
Library Programs
Office of Educational Research and Improvement
555 New Jersey Avenue, NW
Room 300
Washington, DC 20208
Internet: bklassen@inet.ed.gov

Roslyn Korb
Library Statistics Unit
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 311B
Washington, DC 20208-5652
Internet: rkorb@inet.ed.gov

Elaine Kroe
Library Statistics Unit
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 315A
Washington, DC 20208-5652
Internet: pkroe@inet.ed.gov

Keith Curry Lance, Director
Library Research Service
Colorado Department of Education
201 E. Colfax Avenue, Room 309
Denver, CO 80203-1799
Internet: klance@csn.org

Mary Levering, Assoc. Register for National Copyright Programs
U.S. Copyright Office
Library of Congress
Washington, DC 20540-6001

John G. Lorenz, Coordinator
Library Statistics Program
U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW
Suite 820
Washington, DC 20005-3522
Internet: jl_nclis@inet.ed.gov

Mary Jo Lynch, Director
Office for Research and Statistics
American Library Association
50 East Huron Street
Chicago, IL 60611-2795
Internet: mary.jo.lynch@ala.org

Gail Makinen
Economics Division, M.S. 7430
Congressional Research Service
Library of Congress
Washington, DC 20540

Elizabeth L. Marcoux
Head Librarian
Rincon High School Library
Tucson, AZ 85711

Susan Martin, University Librarian
Georgetown University
Lauinger Library
37th & O Street, NW
Washington, DC 20057

Marilyn Gell Mason, Director
Cleveland Public Library
325 Superior Avenue
Cleveland, OH 44114-1271

Joan Michie
Westat
1650 Research Boulevard
Rockville, MD 20850

Meb Norton, Director of Libraries
Metairie Park Country Day School
300 Park Road
Metairie, LA 70005-4199

Paul Evan Peters
Executive Director
Coalition for Networked Information
21 Dupont Circle, NW
Washington, DC 20036
Internet: paul@cni.org

Babette "Babs" Pitt
Richard Montgomery High School
250 Richard Montgomery Drive
Rockville, MD 20852

Paul Planchon
Associate Commissioner
Education Survey Division
NCES
555 New Jersey Ave, NW
Washington, DC 20208-5652
Internet: pplancho@inet.ed.gov

Dennis Reynolds
Executive Director
CAPCON
1320 19th Street, NW
Suite 400
Washington, DC 20036
Internet: dreynold@auvm.american.edu

Bobby Roberts
(NCLIS Commissioner)
Director
Central Arkansas Library System
700 Louisiana Street
Little Rock, AR 72201-4698
Internet: br_nclis@inet.ed.gov

Eleanor Jo Rodger, President
Urban Libraries Council
1603 Orrington Avenue
Suite 1080
Evanston, IL 60201
Internet: ejr@gpl.glenview.lib.il.us

Ramsay Selden, Director
State Education Assessment Center
Council of Chief State School Officers
One Massachusetts Avenue, NW
Suite 700
Washington, DC 20001

P. Royal Shipp, Acting Director
Education and Public Welfare Division
Congressional Research Service
Library of Congress, LM-208
Washington, DC 20540

Joseph Shubert, State Librarian and
Assistant Commissioner
New York State Library
Empire State Plaza
Albany, N.Y. 12230
Internet: jshubert@transit.nyser.net

Jeanne Hurley Simon, Chairperson
U.S. National Commission on Libraries and
Information Science
1110 Vermont Avenue, NW
Suite 820
Washington, DC 20005-3522
Internet: js_nclis@inet.ed.gov

Gary Strong, Director
Queens Borough Public Library
89-11 Merrick Boulevard
Jamaica, NY 11432
Internet: gstrong@queens.lib.ny.us

J. Maurice Travillian
(Chair, COSLA)
Assistant State Superintendent for Libraries
Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201
Internet: mj54@umail.umd.edu

Mary Treacy
American Library Association
Washington Office
1301 Pennsylvania Avenue, NW
Washington, DC 20004

Betty Turock
(ALA President -elect)
Chair and Director
School of Communication, Information and Library Studies
Rutgers University
New Brunswick, NJ 08903

Ann Weeks, Executive Director
American Association of School Librarians/Young Adult Library Services Association
American Library Association
50 E. Huron Street
Chicago, IL 60611-2729

Robert Willard
(NCLIS Commissioner)
Vice President Government Relations
Lawyers Cooperative Publishing
9250 Clyo Road
Spring Valley, OH 45370
Internet: rw_nclis@inet.ed.gov

Jane Williams, Research Associate
U.S. National Commission on Libraries and Information Science
1110 Vermont Avenue, NW
Suite 820
Washington, DC 20005-3522
Internet: jw_nclis@inet.ed.gov

Jeff Williams
Library Statistics Unit
National Center for Education Statistics
555 New Jersey Avenue, NW
Room 320A
Washington, DC 20208-5652
Internet: jwilliam@inet.ed.gov

Frank Withrow
Council of Chief State School Officers
One Massachusetts Avenue, NW
Suite 700
Washington, DC 20001

*U.S. GOVERNMENT PRINTING OFFICE: 1995-399-689/40205