

A CONTENT ANALYSIS OF THE
PUBYAC DISCUSSION LIST

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Introduction

Today, part of almost every librarian's job involves the use of computer-mediated communication. From answering reference questions over e-mail to creating and updating a library's web page, library professionals are utilizing computer networks in many ways. The focus of this study is on how librarians have used one particular type of computer-mediated communication: discussion lists. These forums for communication are based on the most widely utilized Internet application, e-mail.

The technology behind the discussion list has existed since the early 1980's and began with the development of a program called LISTSERV. This program automatically forwarded e-mail messages to people "subscribed" to a list. All members were able to read and respond to the messages at their convenience (Nickerson, 1992, p. 13). As the popularity of discussion lists grew, however, it became obvious that LISTSERV could not handle all the traffic. In 1986, Eric Thomas developed a new list processor called Revised LISTSERV. The revised program was more user-friendly, maintained a file of available lists, allowed the server (not the human list-owner) to add new members, and provided the ability to archive discussions (Nickerson, 1992, p. 13).

While LISTSERV was the first program to administer lists, several others exist. For example, two other major providers of mailing list server software are Majordomo and LISTPROC. Many electronic discussion lists are inappropriately called "listservs," even if they use another product for the administration of the list. For purposes of this

paper, any automatic mailing list where the subscribers receive messages as email in their personal accounts will be considered a "discussion list."

Librarians have made excellent use of these discussion lists, from specific lists set up for members of the American Library Association, such as the "New Members Round Table Discussion List" (nmrt-l), to the "Librarians Serving Genealogists" list (genealib@nosferatu.cas.usf.edu). A wonderful example is the popular STUMPERS-L, a discussion list created in 1992 to help reference librarians answer the toughest of questions from library users (Olson, 1994). In fact, librarians have used the technology for discussion lists so successfully that there are now at least 293 created specifically for issues involving libraries.¹ Additionally, there are tens of thousands more that could be accessed for even more specialized topics.²

Involvement in the community of discussion lists has been supported and lauded in the literature of library science. A discussion list "helps keep librarians aware of new developments in the field, resolve practical problems, clarify theoretical issues, and minimize professional isolation through communication and collaboration" (Oberg, 1993 p. 632). One study found, "reference librarians turn to the lists in order to reduce their isolation, find out how other libraries do things, keep on top of issues and developments, and review announcements and job ads" (Cromer and Johnson, 1994, p. 154). There are both short-term and long-term benefits to participation on a list, from an answer to a specific reference question to keeping up-to-date with colleagues in the field (Wildemuth, Crenshaw, Jenniches, & Harmes, 1997).

Beyond the beneficial aspects of discussion lists for librarians, the medium also provides another source of data for researchers. As mentioned earlier, librarians are able

to tap into the collective wisdom of a large number of electronic colleagues through discussion lists and ask for help. While the strategy of asking colleagues for assistance is nothing new, electronic communication has made it much easier and faster. Additionally, electronic communication has allowed us to record these discussions. In the past, a librarian might have placed a phone call to a colleague, leaving no record of the communication. Now, once a message is posted to the discussion list, others have access and can make a printed or electronic copy. In some instances, the list owners actually create formal archives of the discussions. In my opinion, the real power of discussion lists centers on the public nature of the communication and the informal and formal archives that are possible. These aspects are also what make discussion lists ideal for analysis. One can learn a great deal about a community by paying close attention to what is said, and discussion lists provide us with such a record.

Using an informal archive of a specific list, this study examined what is being discussed, what the conversations may have to say about a particular group of professionals, and how the discussion has changed over the past five years.

PUBYAC

Because of my interest in library services to children and young adults, I chose to analyze a discussion list that was created specifically for librarians serving these age groups. PUBYAC (**P**ublic libraries, **Y**oung **A**dults, and **C**hildren) was begun at the School of Library and Information Science at the University of Pittsburgh, PA in June 1993 as a moderated discussion list. PUBYAC is:

concerned with the practical aspects of Children and Young Adult Services in Public Libraries, focusing on programming ideas, outreach and literacy programs for children and caregivers, censorship and policy issues, collection development, administrative considerations, puppetry,

job openings, professional development and other pertinent services and issues (<http://www.pallasinc.com/pubyac/>).

As a moderated list, the list owner, Sharon VanHemert, handles administrative tasks and attempts to weed out messages not related to the interests of the list. For instance, job announcements are allowed, but resumes are not (VanHemert, 1995). The list owner has maintained an archival database that, in the past, allowed users to search messages and a collection of original puppet scripts using keywords (VanHemert, 1995). The archives are currently unavailable due to problems with the server and should be searchable again by January 2000 (S. VanHemert, personal communication, November 24, 1999).

PUBYAC is widely known in the field of library services to children. As such, it has been the focus of studies in 1994 and 1997. In the Fall of 1994, students in the School of Information and Library Science at the University of North Carolina at Chapel Hill who were enrolled in the introductory class on Communication studied fourteen discussion lists. PUBYAC was one of the lists selected. In 1997 two Israeli researchers, Judit Bar-Ilan & Betty Assouline, analyzed the contents of the messages from PUBYAC during a one-month period. These preliminary studies provided baseline information about both the list and the participants.

This study re-visits these two projects and compares the results. In addition, I make generalizations about what is currently being discussed by library professionals working with children and young adults in the public library. While not every children's and young adult librarian is subscribed to PUBYAC and not every subscriber participates in the conversation, the discussion list provides a wonderful glimpse into the professional lives and concerns of its participants.

Literature Review

Because the LISTSERV technology did not emerge until the early 1980's, the literature available about the specific topic of mailing list servers and discussion lists is relatively recent and shallow. While there is related information in the larger area of communication, for the sake of brevity, the discussion below is limited to various studies of discussion lists.

Much of the early information written on discussion lists revolved around the questions of what they are and why they are useful. There have been several articles that introduce the idea of discussion lists, the specifics of how to use them, and the benefits of subscribing. An excellent example is an article by Gretchen Whitney (1996) that outlined the advantages of discussion lists and the commands to use them. She argued that the discussion lists are accessible to more people than the World Wide Web and could "elegantly and effectively support not only the transfer of information, but ... storage and retrieval as well" (Whitney, p. 185). Also, Sharyn Ladner (1997) noted that the discussion lists' "archives contain the collective wisdom of our profession" (p. 25).

Next, the most common type of study conducted about discussion lists thus far has been descriptive studies. These studies have analyzed particular lists and determined the primary characteristics of the discussions taking place.

One of the first such studies looked at the types of written communication among music librarians. Deborah Campana (1991) analyzed electronic mail communication on the MLA-L (Music Library Association List), as well as the more traditional print

journals and newsletters. She categorized the first seven months of messages posted and found that the majority (33%) of the postings dealt with reference queries. The other categories were cataloguing, MLA related messages, sound recordings, copyright, technology, and other. This discussion list was analyzed again in April and May of 1994 by Leslie Troutman. After revising the categories used by Campana, Troutman found that the majority of the messages "were classified as reference, research, or information queries" (Bar-Ilan & Assouline, 1997, p. 167).

The next major study looked at three library-oriented discussion lists: PAC-L (Public Access Computer Forum), LIBREF-L (Library Reference), and BI-L (Bibliographic Instruction List) while also surveying reference librarians as to their self-perceived use of discussion lists. Donna Cromer and Mary Johnson (1993) collected and categorized the messages sent over a ten-day period. Messages in each category were counted and calculated as a percentage of the total. Examples of categories that emerged from the data were specific queries, responses, announcements and job postings.

In a more in-depth project, W. Carlton Brown (1994) conducted a comparative study of the BUSLIB and GOVDOCS lists. While both were oriented toward libraries, the stated focus of the lists varied from Business libraries to Government documents. Postings to both lists were captured for time periods from one to two months. The author used content analysis to derive a taxonomy of message types on the two discussion lists. The analysis also included classification of the messages as queries or responses. Beyond the categorization, Brown also counted postings and sorted them by date and day of the week. Both lists were characterized as an effective means of communication within the professional community.

Two recent studies relate directly to this analysis of PUBYAC. Barbara Wildemuth, Lisa Crenshaw, William Jenniches, and Christine Harmes (1997) used qualitative and quantitative data to determine the main topics of discussion of 14 different discussion lists. Messages were captured for one month in the Fall of 1994, then categorized with names from the Thesaurus of ERIC Descriptors of index terms used in Library Literature. The main focus of the study was to determine topics discussed, functions of the messages, and any differences across the lists. Overall, the conclusion drawn was that the frequently discussed topics on the lists were "reasonably consistent with the group's stated purpose" (p. 152).

PUBYAC was one of the lists analyzed. During a five-week period, 155 messages were posted on PUBYAC and subsequently analyzed. The student researchers, Melissa McAbee and Betty Strickland, found that user behavior, literature, and library services were the topics most frequently discussed on this list. The purpose, or function, of most messages was to respond to an inquiry (32%) or to request ideas (18%). While this study provides very useful information about PUBYAC, it must be noted that categories of message topics that emerged from each discussion list were consolidated, to make one list for all students to use. Therefore, the categorization may not completely describe the unique features of PUBYAC.

One study, as mentioned earlier, has focused only on PUBYAC: the 1997 content analysis of the list conducted by Judit Bar-Ilan & Betty Assouline. Not only does this paper present an historical overview of the list; it also provides baseline information about the discussions on PUBYAC. The authors grouped the 309 messages captured over a one-month time period into 6 broad categories (in rank order by percentage of total

messages): reference (35%), library administration and policy (20%), collection management (16%), extension programs (16%), announcements (14%), and other (1%). The reference category was subdivided into "reference and research," "stumpers," and "unsolicited reference sources volunteered by subscribers" (Bar-Ilan & Assouline, 1997, p. 170). Then, they expanded on the types of messages found in each category and the specific topics discussed. For example, working on Sundays was a topic that elicited a good deal of discussion. The researchers also noted how many messages were requests for information and how many were responses. They found that the requests for information outnumbered the answers in the categories of reference and library administration and policy. Bar-Ilan & Assouline also made the observation that the general tone of PUBYAC was friendly. The major limitation to this study, as described by the researchers, was that they could not determine the amount and type of communication going on off the list.

These studies have been very useful for understanding the common themes within discussion lists and the types of methodology used to analyze them. As discussion lists continue to thrive even in the graphics-oriented World Wide Web, it is important to continue to monitor and analyze the conversations taking place on the lists. This study will add to the research that has already been conducted and make appropriate comparisons.

Methodology

This methodology closely follows some aspects of the studies described above. For example, the length and process of data collection and the data analysis are very similar to the Wildemuth et al., Bar-Ilan & Assouline, and Brown studies. Also, using the Bar-Ilan & Assouline and Wildemuth et al. studies as comparison, this study will focus on PUBYAC. I designed the study using only unobtrusive measures in hopes of capturing an authentic sense of the interaction between people on the list.

Data Collection

Messages posted on the PUBYAC discussion list during the one-month period of August 7 to September 7, 1999 were the focus of this study. Messages were captured using a "filter" capability on Siren Mail (an email application). This feature allowed the messages to be filed into an individual folder without being read. After the month of data collection, the messages were transferred into a word processing program where they could be printed out easily and efficiently. Then, each new message was assigned a unique identification number. Any repeated messages were discarded.

To determine the number of people subscribed to the list, I sent a "who" command to the server address. A list of e-mail addresses for "unconcealed" subscribers was returned to me. It is important to note that all users have the ability to "conceal" their e-mail addresses. Therefore, the numbers I received may be lower than the number of actual subscribers. On June 13, 1999, there were 1278 listed subscribers. On November 10, 1999, there were 1396. Since I do not have exact numbers for the time period when

data were collected (August 7-September 7), I have averaged the two numbers. For the purposes of this paper, I estimated that there were 1337 subscribers to PUBYAC.

Data Analysis

Basic information about the individuals posting to the list, such as names, titles, likely gender, and geographical location, was gathered by examining the "from" header, the context of the message, and the information in the closer of the message. Personal quotes and advertisements found at the end of messages were disregarded.

Once this general information was gathered, the actual content of the messages was examined. Content analysis, the methodology used in this study, has been defined by Ole Holsti (1969) as "any technique for making inferences by objectively and systemically identifying specified characteristics of messages" (p. 14). Researchers can choose to use latent or manifest coding of the data. Manifest coding means that only the actual words are analyzed, not the meaning of the words. Latent coding, on the other hand, involves looking for the "underlying, implicit meaning in the content of a text" (Newman, 1994, p. 264). I chose to use latent coding of the text because I believed that it would provide the most complete look at the conversations between PUBYAC subscribers.

Along with the latent coding of the text, I also based my study on Barney Glaser and Anselm Strauss's (1967) idea of grounded theory. Rather than begin the study with a theory about what the librarians might be discussing on the lists, I wanted to generate the theories as I analyzed the data. Therefore, even though the previous studies of PUBYAC had resulted in lists of particular categories for the messages, I did not begin my study with these categories in mind.

Instead, I used a variation of Glaser and Strauss's (1967) constant comparative method for qualitative research. As recurring ideas and issues were found within the messages, they became "categories of focus" (Bogdan and Biklen, 1998, p. 67). As each message was read, it was compared with all the previous messages. Messages that seemed to contain more than one category were separated into multiple units of analysis. Over multiple re-readings of the postings, more distinct categories emerged and a reduction in the actual number of categories occurred. In many cases, I also found sub-categories. Coding of the data took place as the categories emerged. Quotes that exemplified each category were gathered; however, to preserve anonymity, the names of individuals and public institutions were removed from the messages before they were included in this paper.

After the categories and sub-categories were fixed, I attempted to quantify the data by counting the instances of each category. By knowing which categories appeared most often, I was able to make generalizations about which topics were most thoroughly discussed during the month of data collection.

I also tried to determine the general function of the message. For instance, was a message an inquiry or a response? I used a modified version of the functions listed in the Wildemuth et al. study. These possible functions included inquiries, responses, and announcements/ general comments. Within the response category, I also noted how many messages included a compilation of ideas from other PUBYAC subscribers.

Additionally, throughout the analysis I made note of any mention of a World Wide Web address within the messages. I wanted to provide new baseline data about the frequency of references to web resources within a discussion list. This data may give an

indication of the influence that the World Wide Web is having on the work of public librarians.

Once I analyzed the messages, I compiled the data and compared it to the two previous studies of PUBYAC. While the three studies had different data, unique methodology, and separate coders, I felt that some very general comparisons could be made.

Throughout the process of analyzing the data, I had to make a few decisions about how some particular messages would be treated. In most cases, the body of the message included information from one subscriber. However, some subscribers posted compilations of messages that they had received off-list. These internal messages were sometimes listed with the names of the people who had responded to the personal email account. Yet, other internal messages were compiled without listing names. To be consistent, these types of messages were considered to be part of the one message and, as such, were only counted once. For purposes of this paper, the information contained within the internal message was considered to be from the compiler.

Reliability

To increase the reliability of the coding, 5% of the messages (27) were given to a second coder (also a graduate student in Library Science) for analysis. After a very general introduction to the possible categories and after reading the isolated messages, the second coder and I agreed on the broad categorization of 70% of the messages (19).

Limitations

There are several limitations to this study. First, there was no way to monitor conversations that occurred off-list. For instance, I could not know if a librarian answered

a question by responding to the personal email account of another PUBYAC subscriber. Many questions may have been answered privately and would not have been counted. Therefore, some of the results may be skewed.

This sampling of PUBYAC messages was also taken during a specific time of year. Since the messages were taken during the end of the summer, as library's summer reading programs are just ending, there may be an unusual focus on programming questions. This timing of the data collection may also explain differences between this study and the Bar-Ilan one, where data were collected during the months of May and June, and the Wildemuth et al study, where the messages were gathered during September and October.

Results

Background Information

While the conversations that took place on PUBYAC between August 7 and September 7, 1999 are the focus of this study, some general data about message traffic and the subscribers is useful for background information. In the one-month time period there were 533 posts received in Digest form from PUBYAC. The messages varied in length from 1 line to 10 printed pages. Three messages were discarded because they were simply duplicate posts from the same person, with no new information, leaving a remainder of 530 messages to analyze.

Three hundred and fifty different people (26% of the approximate 1337 total subscribers) sent these messages. One hundred and five people posted 2 or more times in the month, and 17 people posted 4 or more times. These subscribers represented 43 of the US states (all but Hawaii, Mississippi, New Mexico, North Dakota, South Dakota, Tennessee, and Wyoming), Australia, New Zealand, and the Canadian Provinces of Alberta, British Columbia, and Ontario. The states of California, Illinois, New York, and Ohio had over 20 people who posted messages during the month. Clearly, most (at least 86%) of the subscribers who posted during this month were women.

For the 31 days, there was an average of 17 posts per day. Thursday, August 12 was the busiest day, with 33 posts. Sundays were the least busy by far, with only 3 posts on 8/8, 8/22, and 9/5.

Categories of Topics Discussed

Eleven categories emerged after multiple readings of the 530 messages. Twenty-two of the messages included more than one category, so that the total number of units of analysis was 559. Table 1 gives a general overview of the distribution of topic categories.

The six major categories are (in rank order):

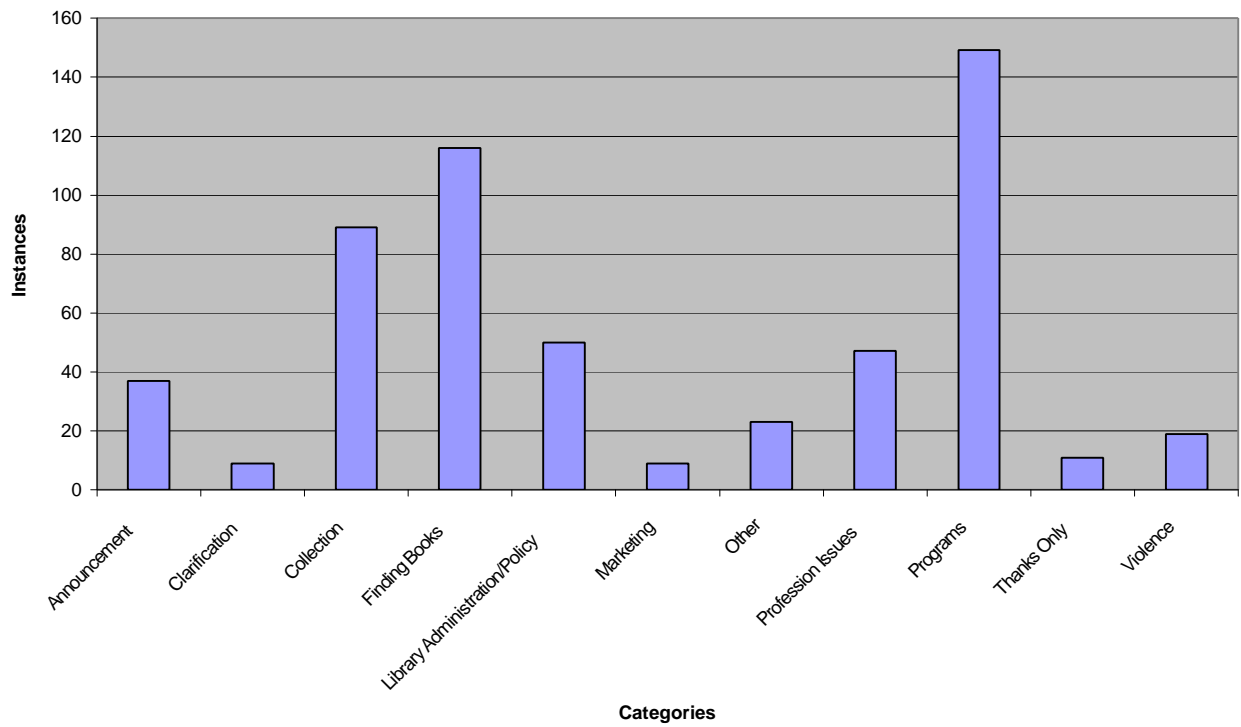
Table 1

Major Topic Categories

Category	# of Instances	% of Total
Programs	149	26.7
Finding Books	116	20.8
Collection	89	15.9
Library Administration and Policy	50	8.9
Professional Issues	47	8.4
Announcements	37	6.6

Many of these categories were sub-divided. **Programs** included the sub-categories of *Program Administration*, *Program Evaluation*, and *Program Ideas/Materials*. The **Finding Books** category included *Bibliography Lists*, *Reader's Advisory*, and *Stumpers*. **Collection** was broken down into *Collection Development* and *Collection Management*. **Library Administration and Policy** was the only category without any sub-categories. **Professional Issues** included the sub-categories of *Professional Development* and the *Role of the Librarian/ Library*. The **Announcements** category was sub-divided into *Job Announcements* and *Other*.

Figure 1
Topic Categories



Definitions and Examples

In the field of library services to children and young adults, a part of the librarian's job is to plan and present programs for this age group. These programs may include everything from story times for preschoolers, outreach for home school students, and library carnivals for all ages. For the purposes of this paper, "program" will refer to these types of events. The **Program** category was broken down into three sub-categories: *Program Administration*, *Program Evaluation*, and *Program Ideas and Materials*.

Administrative messages were about the overall running of a program, including beginning and ending dates, times, etc. Within this category, the following message elicited a good deal of discussion:

i am experiencing a lot of frustration with the ending of our summer reading. The program ended aug. 7. This fact was well posted and frequently mentioned from the start over two months ago, but of course, we still have a plethora of patrons who 'were never told,' or who missed the end due to vacation, camp, etc, etc. and are begging (demanding) to be allowed to finish.

The *Evaluation* sub-category dealt with how librarians could collect data about their programs. The main topic of discussion for this category was the type of statistics generated from the summer reading programs.

The *Ideas and Materials* sub-category included messages about themes for programs, materials needed, and general descriptions of programs that had been implemented. The large majority of messages within the **Program** category, dealt with *Ideas and Materials* (108 of 149). Two quotes that exemplify this category are listed below:

I'm looking for the three billy goat puppets for an upcoming puppet show. I've looked in several catalogs to no avail. Can anyone suggest a good source to find these?

Hi everyone! At the end of our preschool story hour last night, a little 4 year old came up to me and asked if we could do a Rainbow story time. I thought that would be a great idea and wondered if you could suggest any crafts and/or books that would go along with this theme.

The **Finding Books** category included any message in which a librarian was searching either for a particular title or a particular type of book. This category was subdivided into *Bibliography Lists*, *Reader's Advisory*, and *Stumpers*.

There were several subscribers who had asked for assistance in creating a bibliography of a particular type of book. These lists include title and author information for such topics as challenged picture books, novels about sex, and "picture books that explain or deal with the relationship of a new sibling(s) coming into the family."

For the sub-category Reader's Advisory, librarians were asking for several unknown books based on a particular topic of interest to a patron. In one case, someone was looking for books that dealt with the topic of interracial families. In another, a patron asked for "a series of books that are easy readers for adults."

"Stumpers" is an often-used term to describe a reference question that is extremely difficult to answer with the resources a librarian has available to him or her. Therefore, these stumpers are posted so that others who may have better resources or background knowledge of the subject area can provide assistance. In the case of PUBYAC, stumpers were generally about a particular title. Usually, the patron knew something about the book, such as the color of the cover or the main character's names, but needed the exact title. For this study, *Stumpers* will be used to describe questions like this one, posted on behalf of a patron "looking for a book of short stories that is at least

40-50 years old and features an East Indian boy named Gongaron and an elephant name(d) Tila."

Messages included in the **Collection** category included any discussion of the print and electronic resources of the library. This category was broken down into *Collection Development* and *Collection Management*. *Collection Development* messages were those that dealt with selection tools and policies, debates over new materials, and recommended lists for purchasing. One of the most heated discussions of the month dealt with possibility of adding an NRA (National Rifle Association) magazine to a collection of young adult magazines. This topic generated a great deal of debate and included some of the more theoretical conversations, as illustrated by the following quote:

Hang in there! While I personally share your views on hunting, there are two strong reasons to support including this periodical in your collection (I rely on your judgement of its quality and reasonableness).

1. All of our profession's statements on intellectual freedom clearly point us to inclusion of unpopular views whether or not we personally support them. 2. Even those who oppose those views need to hear them so as to form more balanced, effective arguments of their own. Hope this helps!

The sub-category of *Collection Management* included messages about shelving and weeding of materials. One subscriber wanted to know where others shelved graphic novels, and another asked for advice in how to weed a collection of fairy tales.

Library Administration and Policy included messages about the overall operation of a library. These included everything from the Internet Use Policy to planning a new, two-level library, to increasing library card registration.

Professional Issues included two main sub-categories: *Professional Development* and the *Role of the Library and Librarian*.

Professional Development postings included inquiries or responses about conferences, graduate courses, and other discussion lists.

The *Role of the Library/Librarian* sub-category included any conversations about what a librarian should be expected to do as a professional. Also, it included discussions about the general role of a library in the society. These discussions ranged from advice for one person to more global recommendations for all librarians serving children and young adults. On one extreme was the discussion about whether a librarian should offer private, paid performances, such as stories for a birthday party, in her free time. At the other extreme was a more emotional conversation about what the role of the children's librarian should be with respect to violence. As one subscriber wrote:

This is clearly one of those issues on which reasonable and well-intentioned persons can disagree. Clearly I view my job a little differently than you view yours. FOR THE MOST PART I tend to try to do things the way I think the parents of my patrons would want me to; if they know that I am their ally/resource person/ friend I will see a lot of them and the library will become an important part of their family's life.

Announcements included job postings, as well as any other general, unsolicited information provided to the group. These messages did not contribute to any of the conversations. This category was subdivided into *Job Announcements* and *Other*.

The jobs advertised ranged from part-time positions as a Children's Librarian to an Assistant Managing Librarian. Four of the 14 positions were supervisory in nature. Six were explicitly Children's Librarian positions and two were Young Adult Librarian positions.

The following is an example of an announcement that was coded as *Other*:

Nominations sought for PEN/Newman's Own First Amendment Award
The PEN/Newman's Own First Amendment Awards, consisting of \$25,000 and a limited-edition artwork, is presented each Spring to a U.S. resident who has fought courageously, despite adversity, to safeguard the First Amendment right to freedom of expression as it applies to the written word. <http://www.pen.org/freedom/nomination.html>

Table 2 provides a summary of the distribution of sub-categories within each of the six major categories.

Table 2

Distribution of Sub-Categories

Category	Sub-Category	# of Instances	% of Total
Programs			
	Program Ideas/ Materials	108	19.3
	Program Administration	35	6.3
	Program Evaluation	6	1.1
Finding Books			
	Stumpers	71	12.8
	Reader's Advisory	30	5.4
	Bibliography Lists	9	1.6
	General	6	1.1
Collection			
	Collection Development	63	11.3
	Collection Management	26	4.7
Profession Issues			
	Role of the Librarian/ Library	37	6.6
	Professional Development	10	1.8
Announcements			
	Other Announcements	21	3.8
	Job Announcements	16	2.9

The remaining categories, as shown in Table 3, are relatively minor (less than 25 occurrences):

Table 3

Minor Topic Categories

Category	# of Instances	% of Total
Other	23	4.1
Violence in the Media	19	3.4
Thanks Only	11	2.0
Clarification	9	1.6
Marketing	9	1.6

The **Other** category included messages that could not be considered part of any of the existing categories. For instance, one subscriber re-sent a job announcement and made note of a humorous typographical error. This message was coded as Other.

Violence in the Media was a category that included messages about the effect of violence in books, television, and movies on children and young adults. Many subscribers included their thoughts about violence in their discussions of a librarian's potential role as protector of children.

While many of the messages included words of thanks, there were several that only contained a thank you to the list subscribers. These messages made up the **Thanks Only** category and seemed significant in that the subscribers sent out a message with the only and explicit reason of thanking others.

Clarifications were those messages that asked a subscriber to provide more information and any responses to such requests. An example is a subscriber who was asked to include more information about a program.

Those messages in the **Marketing** category dealt specifically with library-created displays that would be used to promote the use of a collection or services. Any discussion of web pages and traditional bulletin boards created by library staff was included in this category.

Function of Messages

After all categories and sub-categories were determined and the data were coded, I attempted to determine the function of each message. I was able to describe the function of almost every message using the following three categories: inquiries, responses, and announcements/ general comments. One purpose of this analysis was to determine the categories where inquiries elicited the most responses. With few exceptions, there were more responses than inquiries in the sub-categories. As shown in Table 4, there were more inquiries than responses in the areas of stumpers, reader's advisory, and clarification. Interestingly, in the sub-categories of professional development and program ideas and materials, there were equal numbers of inquiries and responses.

Table 4
Function of Messages

Topic Area	Announcements/ General Comments	Inquiries	Responses
Program Ideas/ Materials	2	53	53
Program Administration	0	4	31
Program Evaluation	0	2	4
Stumpers	0	58	13
Reader's Advisory	0	19	11
Bibliography	0	2	7
Finding Books- Other	0	2	4
Collection Development	0	18	45
Collection Management	0	7	19
Library Administration and Policy	1	19	30
Role of the Librarian/ Library	0	2	35
Professional Development	0	5	5
Other Announcements	21	0	0
Job Announcements	16	0	0
Violence in the Media	19	0	0
Thanks Only	11	0	0
Clarification	2	5	2
Marketing	0	4	5

As mentioned earlier, there is a strong possibility that more responses were offered off-list, with people sending answers to stumpers or advice to a personal e-mail account. While it is impossible to know how much off-list conversation happened, I noted how many of the responses were compilations of answers. These compilations included information that was not posted to the entire list and, therefore, is likely an indication of off-list conversation. There were 32 compilations of responses sent to the entire list. These included anywhere from 2 –22 messages from other subscribers.

Influence of the World Wide Web

Throughout the analysis, I counted any mention within the body of the message of an address for a web site. The purpose was to gather baseline data about the possible

influence of the World Wide Web on an older Internet application, the discussion list. As far as I know, this type of information has not been gathered in previous studies.

There were 33 messages that mentioned an address for a web site. Within these, there were a total of 57 references to web sites. These references occurred across most categories (Programs, Finding Books, Collection, Professional Issues, Announcements, Other, and Marketing). The subscribers seemed to include a URL in order to provide others with a source for more information. Examples of the types of sites mentioned are: library sites created for young adults, review sources, publisher home pages, subscribers' personal pages,

Tone of the Messages

Overall, the tone of the conversations was positive. The subscribers seemed to show a great deal of respect to each other. "Thank you" was often a part of a message, and, sometimes, the only message. Messages were often addressed with words like, "Great collective mind," and "Hello, O Wise Ones." As the opening of a message, subscribers sometimes recalled past positive experiences with the list. One person began, "You always give me such good ideas..." Another wrote, "Since PUBYAC has been rather helpful in the past, I thought I would try tapping its resources again." When posting a compilation of answers, subscribers occasionally expressed great appreciation and a sense of awe. "This was my first question to PUBYAC and I was overwhelmed by the wonderful responses." The participants in PUBYAC seemed to recognize the unique and supportive nature of the list. "I have just taken my first 'professional' position, and I throw myself on the mercy of this wonderful group." "Isn't it great to have such a terrific resource right at our fingertips?!"

The overall positive tone of the discussion list, however, does not mean that there were not negative statements. During the discussion about the role of librarians in protecting children from violence, strong opinions were stated. Also, the debate centered on only one or two participants who directed their attacks to each other. In the following message, addressed to one person, a subscriber wrote,

You can laugh and bang your head, but my reaction is inevitable going to be negative to your wanting to protect children by limiting their choices. While I think you motives are admirable and I sincerely accept that you believe that what you are doing is for their own good, the consequences of the “paternalistic self righteousness” of the process is unacceptable...

Yet, even during this conversation, subscribers remained civil and professional. There were no personal attacks and some subscribers expressed appreciation for the debates.

That’s why voices such as yours... are so valuable. Even though my principles don’t synch with yours at all points, you keep on challenging them politely and reasonably – making me think about why I believe what I believe....

I also tried to ascertain the tone of the conversation regarding people outside of the discussion list. Patrons were often discussed, with a wide range of emotions. Clearly, librarians posting stumpers to PUBYAC were attempting to help their patrons. Messages often included notes about how pleased a library user was with a response. On the other hand, patrons were often the unknowing impetus for a message. During the discussion of the ending date for summer reading programs, subscribers vented their frustrations with some patrons. “I refuse to dig out late prizes for pushy parents...because they feel it is their right to have it.” “There are some people who believe that the rules should be bent not just a little, but in half, for them.” Yet, outside of this one discussion thread, there were few negative comments about patrons.

Discussion

PUBYAC is a resource available to librarians around the world. It is an active and responsive discussion list that is moderated very well. The focus is on the discussion, not the administration of the list. By examining the conversations, much can be learned about this community of librarians serving children and young adults.

As described in the previous chapter, library programs dominate much of the discussion. The administration, planning, and evaluation of programs is, for the most part, a job limited to youth services librarians. While librarians in all fields deal with cataloguing, collections, reference, and policy questions, the librarians serving children and young adults have the unique and creative task of creating programs regularly. Since PUBYAC is one of the few discussion lists intended for children's and young adult librarians, it makes sense that programming would be an important topic. Also, the World Wide Web has opened up new possible resources for answering stumper and reader's advisory questions (such as Amazon.com and web-accessible catalogs). There is less of a need to reach those with larger collections or specialized knowledge. On the other hand, in my experience, there are not as many sites available that include ideas for library programs. PUBYAC seems an obvious and friendly resource for tapping into the collective knowledge of experienced colleagues.

Beyond the simple categorization of the messages, it is important to note what topics were discussed and what was not. While I realize that the focus of this study is a

limited period of one month, perhaps some generalizations can be made about what topics are discussed by the librarians serving children and young adults.

Subscribers had in-depth discussions about some of the major issues facing most librarians: censorship, collaboration with other organizations, collections, outreach, World Wide Web resources, and dealing with unhappy patrons. They also shared information of particular interest to librarians serving young people. Examples included bibliotherapy, relationships with schools and teachers, and programs for toddlers, pre-schoolers, school-age children, and young adults. A fair number of controversial issues were also raised, such as gun control, violence in the mass media, and teenage sex.

It is also crucial to note what topics received less attention on the list. These are issues that may have been brought up during the course of the month, but did not prompt much discussion. These included some of the day-to-day aspects of a public library, such as circulation, managing of budgets, cataloguing, and relationships with co-workers and Library Directors. Perhaps these topics were considered too mundane for the list. It could be that the subscribers have relatively little control over budget, circulation, or cataloguing and, therefore, spend little time considering these issues. It seems likely that the public nature of the discussion list (anyone can subscribe) discouraged open discussion of communication with supervisors or co-workers. Other topics that received little attention were conferences, bibliographic instruction for children, and filtering of Internet sites.

Finally, I wanted to try and determine the topics that no one discussed over the month. While many aspects of programming for children and young adults came up in the conversations, there were some things that were never discussed. No one talked about

how to market these programs (i.e. through newspaper ads), the kinds of space they used for the programs, or activities for parents and their infants. Even though there were discussions of how to evaluate programs, no one mentioned in-depth analysis (beyond basic statistics) of their programs. Also, there was no mention of grant writing and no call for papers.

In conclusion, it is clear that the subscribers to PUBYAC are not only concerned with practical day-to-day details of their jobs, they are also interested in exploring the more theoretical aspects. They are prepared to discuss controversial issues in a professional manner, without personal attacks and other childish behaviors. While some subscribers use the forum to vent frustrations, the overall tone is positive. People seem comfortable in asking for help and appreciative of any advice they receive.

Comparison with 1994 and 1997 Studies

By examining the results of this study with the 1994 and 1997 analyses of PUBYAC, some general conclusions about the changing world of discussion lists, specifically PUBYAC, can be drawn. Table 5 compares the results from this study and the two previous ones. The six to seven categories occurring most often as reported in each study are listed in the table. The data have been arranged so that similarities between the categories can be seen easily. The categories are not listed in rank order. Instead, they are listed so that, reading across the table, similar categories are grouped together. While the process of determining categories and the coders were unique in each case, there are some striking similarities.

Table 5

Comparison of 1994, 1997, and 1999 Studies

Researcher	Wildemuth et al.	Bar-Ilan & Assouline	Edwards
Time Period of Data Collection	9/94-10/94	5/97-6/97	8/99-9/99
# of Messages Analyzed	155	309	530
Major Categories	Collection Development	Collection Management	Collection
	Literature	Reference	Finding Books
	Library Services		
	List Information	Announcements and PUBYAC matters	Announcements
		Extension Program	Programs
		Library Administration and Policy	Library Administration and Policy
			Professional Issues
		Other	
	User Behavior		
	Equipment and Supplies		
	Courtesy		

The most obvious change over time is the significant increase in the number of messages posted to PUBYAC during one month's time. There is an increase of 242% (375 messages) between the time periods of September – October 1994 and the August – September 1999. This remarkable change is due, more than likely, to an increase in the number of subscribers, as well as in increase in the amount of discussion between subscribers.

By looking at the categories, it is clear that collections are a continuing concern for PUBYAC subscribers. A category about collections (“Collection Development,” “Collection Management,” and *Collection*) appears in the top four of each study. Also, it seems that Wildemuth's “Library Services” (which included reference interviews) and “Literature” are similar to Bar-Ilan & Assouline's “Reference” category and the **Finding Books** from this study. “Library Administration and Policy” appears in both the Bar-Ilan categories and in this study and seems to be a continuing concern for librarians serving children and young adults.

It is important to note that there is no “Programs” category in the Wildemuth et al. study. The Bar-Ilan & Assouline study includes an “Extension Programs” category that represented only 16% of the messages. **Programs**, however, are clearly one of the topics discussed most often during the August-September 1999 time period. As mentioned earlier, this change could be attributed to the time of year in which the data were collected (end of the busy summer programming). Also, it could have to do with the relative lack of World Wide Web resources for questions about programs and the increase in resources for answering stumpers and reader's advisory questions.

Finally, looking at the results of this study, it is interesting to see a category emerge that was not a major part of the previous studies. The **Professional Issues** category that includes the discussions about the role of the librarian and professional development opportunities was not mentioned as a significant category in 1994 or 1997. Only 3% of the messages in the Wildemuth et al. study were about “Meetings/Conferences.” Bar-Ilan & Assouline included messages about workshops and conferences in their “Announcements and PUBYAC matters” category (14% of the total). Both of these seem to focus only on professional development. Therefore, it seems that the conversations about the more theoretical aspects of the role of the library and librarian may be a relatively new part of the PUBYAC discussion.

A notable difference is that this study does not include any category for “List Information” or “PUBYAC Matters.” In fact, there was only one message about the administration of the list in the entire month. I would suggest that as more and more people have become familiar with discussion lists in the past five years, messages about the protocols of the list become almost unnecessary.

Conclusion

If discussion lists are to remain viable, they must be reliable sources of information. In my own experience, several discussion lists have ceased communication for periods of time without explanation. While PUBYAC has been consistently active in its seven years of existence, it is not without problems.

As mentioned earlier, there is currently no access to the archives. Nine times during the month of study, subscribers mentioned that the archives were down. They were asking questions that probably could have been answered using these archives, thus

bothering long-term subscribers with repeated and possibly frustrating conversations. While this paper was in its final stages, PUBYAC migrated to a different server (S. VanHemert, personal communication, November 28, 1999). Hopefully, this transition will allow the list owner to re-instate access to the archives and to continue the successful moderation of the list. As other discussion lists begin to include more interactive features, it is important that technical support of the conversations be maintained and improved.³

PUBYAC has been, and continues to be, a valuable and friendly resource for library professionals working with children and young adults. With continued support from its list owner and subscribers, PUBYAC should remain an open and welcoming forum for discussion.

Further Research

It seems certain that computer-mediated communication, in some form, will continue to play a role in people's personal and professional lives. Therefore, there will continue to be a need for research in how people communicate electronically and what they discuss. Many of these possible projects could involve discussion lists.

To continue the study of PUBYAC and to answer some lingering questions from this paper, I would recommend several possible endeavors. First, a researcher could collect a sample of messages over the course of a year and determine if the focus of discussion changes over time. Also, a direct questionnaire concerning the impact of World Wide Web resources on subscribers' use of discussion lists would help us understand the different uses of the two types of information sources. Finally, I believe that it would be interesting and valuable to analyze the list of subscribers to PUBYAC

over time. Is there a core group of long-term users, with occasional additions and deletions, or is it a constantly changing group of individuals who subscribe for a short time, then leave? Data collected from such a study would help researchers understand the kind of community that may or may not form within an electronic environment over a period of time.

There are also many possibilities for research using lists other than PUBYAC. The use of electronic mailing lists for discussion that began in the mid-1980's has survived the evolution of the more graphics-oriented World Wide Web. In fact, the sheer number of lists is impressive, with multiple lists available on the same topic. Also, the high volume of messages on some of these lists makes it time-consuming and possibly frustrating to subscribe to multiple lists. Therefore, it seems obvious that research should be conducted to determine the most appropriate list for certain types of questions and certain types of users. Potential subscribers would be able to decide which discussion list will be the most efficient use of their time on the basis of responsiveness and specificity of responses to queries. On a related note, some interesting work has already been conducted on the concept of automatic classification of messages (May, 1997) and should be continued. There is much more to be learned about discussion lists so that professionals in library science and other fields may utilize discussion lists in the most effective and efficient manner.

Notes

¹ As determined by a count of lists available from the "Library-Oriented Lists and Electronic Serials" page (<http://info.lib.uh.edu/liblists/liblists.htm>). Last updated May 10, 1999.

² The official catalog of "Listserv" alone lists over 24,601 public discussion lists.
(<http://www.lsoft.com/lists/listref.html>)

³ For example, LM-NET (Library Media Net), a list for school media specialist, has "LM-NET Live," which includes the capability to host conferences and chat rooms for subscribers (http://ericir.syr.edu/lm_net/lmlive.htm).

Works Cited

- Bar-Ilan, J., & Assouline, B. (1997). A content analysis of PUBYAC- A preliminary study. *Information Technology and Libraries*, 16(4), 165-174.
- Bogdan, R. & Biklen, S. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Boston: Allyn & Bacon.
- Brown, W. (1994). *Message traffic analysis of GOVDOC-L and BUSLIB-L: Two library-oriented listservs*. Master's Paper, School of Information and Library Science, University of North Carolina at Chapel Hill.
- Campana, D. (1991). Information flow: Written communication among music librarians. *Notes: Quarterly journal of the MLA*, 47(3), 686-707.
- Cromer, D. & Johnson, M. (1994). The impact of the Internet on communication among reference librarians. *The Reference Librarian*, 41/42, 139-157.
- Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Holsti, O. (1969). *Content analysis for the social sciences and humanities*. Reading, MA: Addison-Wesley.
- L-Soft International, Inc. (1999). CataList: the official catalog of LISTSERV® lists [Online.] Available: <http://www.lsoft.com/lists/listref.html>.
- Lader, S. (1997). SLA discussion lists. *Information Outlook*, 1(1), 25.
- May, A. (1997). Automatic classification of e-mail messages by message type. *Journal of the American Society for Information Science*, 48 (1), 32-39.
- Neuman, W.L. (1994). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Boston: Allyn & Bacon.
- Nickerson, G. (1992). Networked resources. *Computers in Libraries*, 12(3), 13-18.
- Oberg, L. (1993). COLLIB-L: Listservs in library communications. *College and Research Library News*, 54(11), 632-634.

- Olson, R. (1994, October). Stumped reference librarians find help on the Internet. *American Libraries*, 25, 830-831.
- PUBYAC (1999). [On-line.] Available: <http://www.pallasinc.com/pubyac>.
- VanHemert, S. (1995). PUBYAC: Yacking it up on the internet. *Journal of Youth Services in Libraries*, 9(1), 79-85.
- Whitney, G. (1996). Listservs and related technology: Simple and elegant solutions for information exchange. *FID News Bulletin*, 46(5), 185-188.
- Wildemuth, B., Crenshaw, L., Jenniches, W., & Harmes, C. (1997). What's everybody talking about? Message functions and topics on electronic lists and newsgroups in information and library science. *Journal of Education for Library and Information Science*, 38(2), 137-156.
- Wu, Wei. (1999). Library-Oriented lists and electronic serials. [On-line.] Available: <http://www.wrlc.org/liblists/liblists.htm>.