## An Open Reply to Thomas Mann's report "On the Record" but Off the Track

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This concerns Thomas Mann's report "On the Record" but Off the Track available at: <a href="http://www.guild2910.org/WorkingGrpResponse2008.pdf">http://www.guild2910.org/WorkingGrpResponse2008.pdf</a>

While I agree with many of the points raised in Mr. Mann's report, there are important differences that I feel need to be discussed and debated. Before I continue, I wish to emphasize that we are both in agreement concerning the overarching point that high-quality, human-created cataloging (or metadata) are absolutely necessary and will continue to be necessary into the foreseeable future.

- 1) I agree with the importance of browsing subject headings. Mr. Mann's example that someone can get an overview of all relevant sources on a topic through a subject browse is misleading however, and his example of the subjects found under Afghanistan would be a nice idea--that is, if it worked, but I'm afraid it doesn't. When you examine the list thoughtfully, it turns out that it is missing quite a few subjects: where is art? Architecture? Education? Agriculture? Law? For that matter, where is Kabul and Kandahar? In fact, the subjects that do not appear under the browse of **Afghanistan** can be expanded indefinitely. Unfortunately, getting an overview through a browse search such as this has never worked in the catalog, because a user cannot know the entry element or the arrangement of the precoordinated subjects. Is it Art--Afghanistan or Afghanistan--Art? Even for those savvy enough to know that it is Art--Afghanistan, it still isn't enough, because there is Art, Ancient--Afghanistan, Art, Buddhist--Afghanistan, Art, Hellenistic--Afghanistan. etc. etc. catalogers need specialized tools to construct these headings. It is practically impossible for a non-specialist to know such subject heading intricacies, especially when using the browse function. For these and other reasons, it is often better for non-specialists to search by keyword.
- 2) There are *subject arrays* for single concepts that can't be found through browse searches, e.g. the array for a book about "the reference interview" is "Reference services (Libraries)" and "Interviewing". There are foreign concepts such as "Weltanschauung." There are no cross-references in the authority files for these instances, but there are a few such references, e.g. when people search for:

World War, 1939-1945 Battles, sieges, etc.

they will see the very useful cross-reference:

See: World War, 1939-1945 Aerial operations

See: World War, 1939-1945 Campaigns

See: World War, 1939-1945 Naval operations

As we see, some of these types of references exist in the authority file now, but I would guess that somewhere around 99.99% do not. Unfortunately, even in the few cases where these cross-references do exist, it is very difficult to imagine that a user would ever search anything resembling the string search **World War, 1939-1945 Battles, sieges, etc.** but will search something more like "wwii battles" when this reference will not be found. What worked well in the print environment does not necessarily translate into the online environment. I would like to mention another

point: in the Afghanistan list, there are some other areas of interest for an experienced cataloger. For example, the subdivision --Antiquities (Afghanistan--**Antiquities**) often implies (but not always) a rather large array of other headings for archaeological excavations. Finding and assigning such subject heading arrays in a consistent fashion has always been one of the tasks of an experienced cataloger.

3) The display Mr. Mann provides for the **Afghanistan** headings does not exist online. The display in the printed catalog was excellent but is something that practically no one uses anymore since people use the online version. The displays in today's online catalogs are semi-useless: there are multiple headings for each geographic subdivision instead of the nice direction [May Subd Geog]; and the arrangement of "history" headings can only be described as demented. Here is the arrangement of headings for **Afghanistan-History**, where all of the history of the Soviet invasion from 1979-1989 comes after Afghanistan--History--1989-2001 and Afghanistan--History--2001-.

## Subject headings in the LCNAF online for Afghanistan History.

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Afghanistan Historiography.
Afghanistan History
Afghanistan History.
Afghanistan History 1898-2001.
Afghanistan History 18th century.
Afghanistan History 1989-
Afghanistan History 1989-2001
Afghanistan History 1989-2001 Biography.
Afghanistan History 1989-2001 Chronology.
Afghanistan History 1989-2001 Fiction.
Afghanistan History 1989-2001 Humor.
Afghanistan History 1989-2001 Juvenile literature.
Afghanistan History 1989-2001 Pictorial works.
Afghanistan History 1989- Periodicals.
Afghanistan History 1989- Pictorial works.
Afghanistan History 20th century Sources.
Afghanistan History Anti-terrorist operations, 2001-
Afghanistan History Autonomy and independence movements.
Afghanistan History Bibliography.
Afghanistan History Chronology.
Afghanistan History Dictionaries.
Afghanistan History Encyclopedias.
Afghanistan History. [from old catalog]
Afghanistan History Great Saur Revolution, 1978
Afghanistan History Juvenile literature.
Afghanistan History Maps for children.
Afghanistan History Marxist Coup, 1978
Afghanistan History, Military.
Afghanistan History, Military 19th century.
Afghanistan History, Military 20th century.
Afghanistan History, Military 21st century.
Afghanistan History, Military 21st century Congresses.
Afghanistan History, Military Dictionaries.
Afghanistan History, Military. [from old catalog]
Afghanistan History Periodicals.
Afghanistan History Pictorial works.
Afghanistan History Poetry.
Afghanistan History Saur Revolution, 1978
Afghanistan History Saur Revolution, 1978 Fiction.
Afghanistan History Saur Revolution, 1978 Juvenile fiction.
Afghanistan History Sources.
Afghanistan History Sources. [from old catalog]
Afghanistan History Soviet occupation, 1979-1989
Afghanistan History Soviet occupation, 1979-1989.
Afghanistan History Soviet occupation, 1979-1989 Aerial operations.
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Afghanistan History Soviet occupation, 1979-1989 Aerial operations, Soviet.
Afghanistan History Soviet Occupation, 1979-1989 Bibliography.
Afghanistan History Soviet occupation, 1979-1989 Biography.
Afghanistan History Soviet occupation, 1979-1989 Campaigns.
Afghanistan History Soviet occupation, 1979-1989 Caricatures and cartoons.
Afghanistan History Soviet occupation, 1979-1989 Casualities.
Afghanistan History Soviet occupation, 1979-1989 Casualties Statistics.
Afghanistan History Soviet occupation, 1979-1989 Causes.
Afghanistan History Soviet occupation, 1979-1989 Children Congresses.
Afghanistan History Soviet occupation, 1979-1989 Chronology.
Afghanistan History Soviet occupation, 1979-1989 Comic books, strips, etc.
Afghanistan History Soviet occupation, 1979-1989 Commando operations.
Afghanistan History Soviet occupation, 1979-1989 Congresses.
Afghanistan History Soviet occupation, 1979-1989 Environmental aspects.
Afghanistan History Soviet occupation, 1979-1989 Fiction.
Afghanistan History Soviet occupation, 1979-1989 Fiction.
Afghanistan History Soviet occupation, 1979-1989 Genealogy.
Afghanistan History Soviet occupation, 1979-1989 Influence Exhibitions.
Afghanistan History Soviet Occupation, 1979-1989 Journalists.
Afghanistan History Soviet occupation, 1979-1989 Juvenile fiction.
Afghanistan History Soviet occupation, 1979-1989 Juvenile literature.
Afghanistan History Soviet occupation, 1979-1989 Literary collections.
Afghanistan History Soviet occupation, 1979-1989 Literature and the war.
Afghanistan History Soviet occupation, 1979-1989 Mass media and the war.
Afghanistan History Soviet occupation, 1979-1989 Medical care.
Afghanistan History Soviet occupation, 1979-1989 Medical care Congresses.
Afghanistan History Soviet occupation, 1979-1989 Missing in action.
Afghanistan History Soviet occupation, 1979-1989 Participation, Yakut.
Afghanistan History Soviet occupation, 1979-1989 Periodicals.
Afghanistan History Soviet occupation, 1979-1989 Periodicals Bibliography.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Afghan.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, American.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Azerbaijani.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, British.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Bulgarian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, French.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Greek.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Italian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Pakistani.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Persian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Polish.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Russian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Saudi Arabian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Soviet.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Soviet Congresses.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Ukrainian.
Afghanistan History Soviet occupation, 1979-1989 Personal narratives, Yakut.
Afghanistan History Soviet occupation, 1979-1989 Pictorial works.
Afghanistan History Soviet occupation, 1979-1989 Poetry.
Afghanistan History Soviet occupation, 1979-1989 Prisoners and prisons.
Afghanistan History Soviet occupation, 1979-1989 Prisoners and prisons, Soviet.
Afghanistan History Soviet occupation, 1979-1989 Protest movements.
Afghanistan History Soviet occupation, 1979-1989 Psychological aspects.
Afghanistan History Soviet occupation, 1979-1989 Public opinion.
Afghanistan History Soviet occupation, 1979-1989 Registers of dead.
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Kyrgyzstan.
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Belgorodskai?a?
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Lipet?s?kai?a?
oblast'.
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Novosibirskai?a?
oblast'.
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Omskai?a? oblast
Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Saratov Region.
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Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Sverdlovskai?a? oblast'.

Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Tambovskai?a? oblast'.

Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Tatarstan. Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Tverskai?a? oblast'.

Afghanistan History Soviet occupation, 1979-1989 Registers of dead Russia (Federation) Volgogradskai?a? oblast'.

Afghanistan History Soviet occupation, 1979-1989 Registers of dead Ukraine.

Afghanistan History Soviet occupation, 1979-1989 Registers of dead Ukraine Ternopil's'ka oblast'.

Afghanistan History Soviet occupation, 1979-1989 Secret service.

Afghanistan History Soviet occupation, 1979-1989 Secret service Drama.

Afghanistan History Soviet occupation, 1979-1989 Social aspects.

Afghanistan History Soviet occupation, 1979-1989 Sources.

Afghanistan History Soviet occupation, 1979-1989 Sources Indexes.

Afghanistan History Soviet occupation, 1979-1989 Veterans.

Afghanistan History Soviet occupation, 1979-1989 Veterans Congresses.

Afghanistan History Soviet occupation, 1979-1989 Veterans Ukraine Simferopol's'kyi? rai?on.

Afghanistan History Soviet occupation, 1979- Periodicals.

I especially like the similar online arrangement for United States history, where Queen Anne's War comes after **United States--History**, **Military--20th century--Sources**. and miles of scrolling *after* the US Civil War, but *before* the Revolution!

- 4) Subject subdivision practice is confusing as well: US subdivision goes through the state, while others go through country and nothing lower, e.g. **Art--Texas--Austin** (ignoring United States) but **Art--Italy--Rome** (ignoring Lazio, the equivalent of the state). Obviously, this is an example of a practice that would not be suitable for other countries.
- 5) Flipping through the cards and looking at the printed LCSH volumes was easier and more understandable than scrolling through hundreds of screens online. To explain my views, I think it would be best to excerpt a message I wrote to AUTOCAT, which discussed this in some detail. It was in reply to a post that mentioned how keyword and subject headings work together. I disagreed.

**Date:** Thu, 26 Jul 2007 04:55:32 -0400

**Reply-To:** AUTOCAT <AUTOCAT@LISTSERV.SYR.EDU>,

James Weinheimer < j.weinheimer@AUR.EDU>

**Sender:** AUTOCAT <AUTOCAT@LISTSERV.SYR.EDU> **From:** James Weinheimer <j.weinheimer@AUR.EDU>

**Subject:** Re: Martha Yee's Comments

Comments: To: Michael.Mitchell@BRAZOSPORT.EDU

>Making these headings findable is easily enough done now and one of the perfect uses of keywords as preliminary search tools.

>Once one finds a cataloged work by searching with the keywords of say "WWII and Africa" >then one should be presented with

>tha bib record or twelve which will have

>tha controlled subject heading like "World War, >1939-1945--Campaigns--Africa, North" or something similar which one can

>click and be sent to a browse list of LCSH used in the library. This

>will open up the users horizons to the easily understood LCSH "World

>War, 1939-1945--Campaigns--Africa, North--Personal narratives, French"

>and MORE! Opening the user's horizons (via the resultant LCSH browse

>list) is why the user should not be sent straight to a list of bibs with

>only the specific heading clicked in the original bib.

While I will grant that going into the list of headings used in other records may be better than just seeing the other records with the same heading, I can't agree that it is any kind of a solution. Here is an example.

For someone who doesn't understand these things, this is what happens: they find through keyword "Fascism--Italy--Bologna." They click on this heading and get thrown into the browse list: (from NAF)

Fascism Italy Bibliography Exhibitions.

Fascism Italy Bibliography. [from old catalog]

Fascism Italy Bologna.

Fascism Italy Bologna History.

Fascism Italy Bologna History Congresses.

Fascism Italy Bologna Pictorial works.

Fascism Italy Bologna (Province) History 20th century.

Fascism Italy Bologna region.

Fascism Italy Bologna Region History 20th century Dictionaries.

Fascism Italy Bolzano (Province)

Fascism Italy Bolzano (Province) History.

Fascism Italy Brescia.

Fascism Italy Brescia Congresses.

Fascism Italy Brescia History 20th century.

Fascism Italy Brescia (Province) History 20th century.

Fascism Italy Brescia (Province) History Sources.

Fascism Italy Bressanone History.

Fascism Italy Cagli.

Fascism Italy Cagliari History 20th century.

Fascism Italy Calabria.

Fascism Italy Calabria History.

Fascism Italy Calderara di Reno Addresses, essays, lectures.

Fascism Italy Caltanissetta History.

Fascism Italy Campania.

Fascism Italy Capri Island.

I won't argue that people will sense some kind of structure in this arrangement, but when I have asked my users about this, not one person understands what is going on. They cannot predict anything in here, except maybe something similar to "Fascism Italy Rome." They can go forward and backward, but it is still incomprehensible to them. And they will \*never\* find in this way (other than going through 100 screens, which they will not do) that "Fascism" has a narrower term of "Corporate State," which may be exactly what they want. And the list certainly does not give a sense of the richness of the subdivision structure that is available under "Fascism," along with the headings "Fascism and ..." This is what users need."

The overwhelmingly popular search is keyword, which currently avoids all of the authority modules in the current catalogs. While I can declare that this is unfair to everyone and still necessary (I am sure that Mr. Mann would agree on this point), others can say with some justification that since there has been no outcry--including from librarians and catalogers--it shows that this "authority work" that has gone unused is therefore unneeded. I vehemently disagree with this point of view, but I admit that it is a powerful argument.

- 6) Mr. Mann's report presents the idea that LC subjects are best, but not everybody in the world would agree with this since they have their own systems of subjects. He suggests that everybody should just translate LCSH, but this undoubtedly would be seen as an example of cultural imperialism by many. They could ask, why doesn't the US translate and use the Chinese or French subjects? I prefer other ideas that are more constructive and would lead to genuine cooperation: to build tools that will link related and similar concepts and authorized forms used by the different bibliographic organizations. Instead of expecting everyone to change everything they do (except in the English-speaking countries, of course!) and wait for translations of LCSH, there are other ideas to build tools so that all these systems will interoperate, e.g. so that someone who searches Tolstoy in the US can find the authorized form in Italian, German, French, and so on. This can work with subjects as well. It would be lots of work, but I believe it is more possible than thinking everyone will simply do as the US and other English speaking countries propose.
- 7) Classification is useful, I agree, but it should not be seen as too important either. Any book that is even halfway complex can get at least 3 different classification numbers--there are many reasons for this and classification is not a process that is cut and dried. This fact has been known for a long time, at least since at least the days of the Library of Alexandria when they had problems arranging scrolls that contained works by both Ovid and Seneca. In any case, there are thousands of ways to arrange the subjects themselves, and these methods betray both personal and cultural biases. For example, medieval classifications were quite different from modern ones. Of the major classifications today, LC classes commumism/socialism after criminals and the mafia, while the Soviet classification begins with Marxism-Leninism. The Colon classification starts with library science and ends with law while LC starts with philosophy and ends with military science and librarianship. Dewey starts with computer science and ends with history. The arrangement of each classification is in equal measures both internally coherent and totally capricious. It should also not be overlooked that as the number of online materials grows (whether we like it or not), browsing the shelves will miss more and more important materials.
- 8) Copyright. Although I agree that copyright will not go away, the current way in which it is implemented is undergoing change. Copyright was not intended to prevent people from getting the information they wanted, it was designed to ensure just the opposite, but today, copyright is stopping people from getting the information they want. Currently, it is increasingly being seen as a way of enriching publishers (who do less and less) at the expense of scholars, who receive nothing at all or are charged high rates themselves, or for those who do get some money, receive a pittance for their work, while they are forced to sign away their copyright to the publishers, and the publishers in turn charge libraries exorbitant rates for their journals. So long as scholars were able to share their work and get cited, the situation was more or less tolerable. Now scholars have an option in the "Open Access Movement" and it looks as if scholars are cited more widely when they let their work out for free (something that only makes sense). We are looking at the growth of a new business model (or perhaps more accurately, a rediscovery of the medieval business model of the "Commons"), which says that the private ownership/profit-making model may not be the only one possible, especially on the web. This will have profound implications in the future and the recent decision of the Harvard faculty to add a copy of their work to the Open Archive managed by the library (please note that important detail!) is most probably a sign of future developments. [See the Chronicle's Harvard Faculty Adopts Open-

Access Requirement <a href="http://chronicle.com/news/article/3943/harvard-faculty-adopts-open-access-requirement">http://chronicle.com/news/article/3943/harvard-faculty-adopts-open-access-requirement</a>

It is difficult to foresee how this will develop, but the impact is potentially huge. There are already some highly valuable materials available through the open access movement and soon there could be a flood. Libraries must position themselves for it.

The conundrum our field faces is that we should not strive to perfect the irrelevant, I do not believe that what we are doing is irrelevant, but it is others who will make that decision. The best cataloger in the world could work him or herself into an early grave cataloging materials they consider to be important, but if they do all of this alone, their work is wasted. Cataloging is a truly cooperative task, especially today, and there must be some agreement as to the future. Some parts of the traditional catalog are certainly irrelevant today. Many parts of the cataloging workflow are remnants of the 19th century. Pretending that our catalogs exist in a vacuum is no longer correct. They exist alongside other catalogs, databases and search engines that can and will be searched by our users just as easily, or more easily than our own. Pretending that users do not prefer using these new tools is also ignoring the obvious. These are facts of the world, and we must find our ways in it. Our catalogs the our authority files must, must, must be made easier to use, and it is fruitless to hope and wish for better bibliographic instruction so that people are forced to use tools that they consider to be obsolete. Librarians have been waiting for better bibliographic instruction for a long, long time, and they are still waiting. When I teach information literacy to my students, I talk a lot about the web. I must discuss the web at length, because it is an intimate part of their existence and very, very few understand it. They need to see and understand the problems of searching Google, which they have never really questioned before. Nothing I have seen makes me believe that the web is going away or will be less important in the future. We have a huge and important place in people's lives.

The current situation in librarianship reminds me one of those small town dramas when the state threatens to build a bypass. Many townspeople go up in arms since it will mean a complete change in the economic and social relationships of their town. Some try to stop the bypass, but normally without success. Before the bypass, travelers had to go through town; they would have to slow down, stop at the stop light, and maybe they would get a cup of coffee or a meal, buy a newspaper, maybe even stay overnight in the motel. If the visitors find a great bakery or a particularly beautiful spot to rest, they may even make it a point to stop in town every time they pass by. Very occasionally, someone might even fall in love with the town and relocate their entire lives and family there.

But when the bypass is built, all of this changes. People driving on the highway no longer have to stop and they can continue on their way without a second thought. The town slowly dies and the local young people look wistfully at the cars flying by to what seems to them to be more exciting places. Whether the people in the town like it or not, the bypass has changed their world--their everyday life--and if they don't change something in reply, they and their town will simply disappear and be forgotten. Perhaps it will be fated that their town will disappear no matter what they do, but if they don't at least try, their town doesn't stand a chance.

I have read several people point out that library tasks are hopelessly obsolete in today's environment, and no matter what efforts we make, we are bound to fail and become extinct. I don't want to believe this and I don't want it to happen with

libraries. While I believe librarians are adaptable enough to find other careers, such a turn of events would not be good for our users or for society in general, but we must confess that the world has changed irrevocably. Hoping and insisting that users search materials as they did 30 years ago in the card catalog is simply unrealistic. Certainly there were capabilities that were lost in the transition to computers, but people had lots of troubles with card catalogs, as I tried to demonstrate in the examples above, and most of our users rushed toward the computers when they arrived. People prefer keyword. and with the difficulties of browsing, it is often the correct decision.

Once this fact is accepted, we can map out the future. When users find an interesting record through keyword, they need (somehow!) to use the controlled vocabulary within that record to find other related records. They need to be aware of related concepts (at the least names, titles, and subjects, but potentially much more that the library catalog cannot currently provide). I think there is a place for browsing name, title, and subject headings somewhere in this scenario. There should also be a way for users--and catalogers!--to see the "subject arrays" mentioned above.

It is my personal conviction that the function of finding related records must go outside the bounds of the local collection, which has much less meaning to our users today than before. This is another one of those regrettable facts, but nevertheless is true. When someone can click on a scan of a book in Google Books, and download it in less time than it takes to write down the number and retrieve it from the stacks, nobody can tell me it should not be included in my "collection". Our users want these materials; I am a user and I want them. These materials online are good, but it is hard to find things in the internet. This is a job for librarians and catalogers, and it seems as if Google is amenable to cooperation. The recent Google Book Search API is a case in point. [See: The Chronicle of Higher Education article at: <a href="http://chronicle.com/wiredcampus/article/2819/google-unveils-tools-to-integrate-its-digitized-books-into-campus-library-catalogs">http://chronicle.com/wiredcampus/article/2819/google-unveils-tools-to-integrate-its-digitized-books-into-campus-library-catalogs</a>] I have already implemented it in my catalog. See the record for *The Cambridge companion to Roman satire* at: <a href="http://www.galileo.aur.it/cgi-bin/koha/opac-detail.pl?bib=19906">http://www.galileo.aur.it/cgi-bin/koha/opac-detail.pl?bib=19906</a>

So, what is the first step? I personally applaud the Working Group's efforts to try to fit us into the larger world. I also want every single point made in Mr. Mann's report to work correctly. All of those capabilities certainly should be available to him and other users, but in the current library systems, they do not exist. The bibliographic and authority files must be used better than they are now, but the problem is: no one can get at them. So we must wait until LC or OCLC or one of the proprietary databases decides to develop them. A German colleague has created a version of the Authority Files that already works much better than the official version [see "Browse LCSH" at http://www.biblio.tu-bs.de/db/lcsh/index.htm] but his work has been more or less ignored. There are many other very intelligent and highly motivated people with whom I correspond and they would love to get their hands on the authority and bibliographic data to experiment with, but it all remains locked away. I have no doubt that if there had been 10 years of open development of the authority files, they would be used far more widely than they are now. For example, most or all of the points in Mr. Mann's report would probably work today, and they would be there not just for the scholars, but for everyone in the world: real subject overviews, correct filing order, plus there could be all kinds of new and exciting tools could be made: wikis, concept browsers, linked systems, and who knows what else?

In the new environment, I do not see that we will necessarily have to "lose control," but so long as we build the correct systems and with some cooperation, we can gain control that we've never had before. Appropriate systems need to be developed and the best way to achieve this is to give people the data and turn them loose. Perhaps 80% of everything they make will be failures, but during the stages of development, this is normal. The final success gives meaning to it all.