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Lubetzky's Work Principle

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Lubetzky is an immigrant who came to America bearing gifts. One of the most important was the concept that "book" and "work" are coextensive only in the case of a work that has been published only once, and therefore exists in only one edition. While it is possible that the majority of works collected by large research libraries fall into the category of works existing in only one edition, these are probably not the works most sought and used. If these were works of use to many different people over a long period of time, they would probably exist in multiple editions. As soon as a work goes into multiple editions, multiple title pages representing that work exist, title pages that can carry variants in the title of the work, variants in the author or authors' names, different subtitles, different series, different subsidiary authors, such as translators, editors, etc. Lubetzky the immigrant chose a very American example to illustrate this point: Ralph Waldo Emerson's famous essay suggesting that America's days of dependence on European scholarship were over, "The American Scholar"; the earliest editions of this essay were published as "An Oration Delivered before the Phi Beta Kappa Society, at Cambridge, August 31, 1837."[1] Once these kinds of variations begin to occur, human intervention is required to ensure that

a user seeking a work is allowed to choose among all editions of that work held by the library.

The search for a known work is probably the most common type of search conducted in large research libraries. User studies are very difficult to interpret in this regard, because of the propensity for users to do subject searches or include subject terms in their searches when looking for a known work, and because of the tendency of online public access catalogs (OPACs) to force users to search under *either* author *or* title; probably most author searches should be counted as known-work searches for this reason. Contrary to some reports, the Council on Library Resources (CLR) catalog use studies did not demonstrate conclusively that subject searching predominates over other kinds of searching; "author-subject," "title-subject," and "author-title-subject" searches were counted as subject searches, although it seems probable that many such searches were known-work searches done by users who knew the subject of the work sought.[2] Because known-work searching is so commonly done, Lubetzky's contribution to the improvement of service to users of catalogs in this country was immense.

Like all great principles, Lubetzky's principles of cataloging sound simple and self-evident. Also like all great principles, they are not so easy to apply in all cases. At times, it is not so easy to decide whether two items represent two different editions of the same work, or whether they represent two different works that are related to each other. At times, it is not easy to decide on the best way to *name* a work, to facilitate its collocation: when is it best to name a work using both its author and title, and when is it preferable to name a work using its title alone? Or if the work is known in many languages, which language should be preferred? And, finally, for Lubetzky's principles to benefit catalog users everywhere, they must be put into practice in an elaborate system of shared cataloging that has grown up in this country in an extremely federated and decentralized manner. This shared system now consists of multiple national databases and multiple local online catalogs, each with its own nonstandard system design, with bibliographic records and authority records flying back and forth among them, but no single catalog to catalog against, when trying to determine if the name of a work is unique, or if it needs authority work to break conflicts with other works with the same name. Partly because of a lack of resources and partly because of the lack of a single catalog against which to catalog, many libraries have declined to follow Lubetzky's good advice and still refuse to

use uniform titles to collocate the editions of a work. Thus, editions of Emerson's "American Scholar" are still not collocated in ORION, UCLA's online catalog.

The Same Work? Or Two Different Works?

In the following discussion, current practice regarding cases when two items are represented as the same work and when they are different works is deduced from the *Anglo-American Cataloguing Rules,* 2nd ed., 1998 revision (AACR2R) based on main-entry practice. Main entry is an alphabet-dependent device for carrying out the second cataloging objective, i.e., for displaying together all the works of an author and all the editions of a work. Among other things, the main entry is the standard citation form for a work. When two items are given the same main entry, they are represented as being the same work. When two items are given different main entries, they are represented as being different works. Main entry consists of the author (if there is one) and the title (uniform title if there is one, title on item otherwise).

Sometimes Lubetzky's principles are so simple to apply, we do it without thinking about it. If two items represent themselves as being the same work, for example, our practice has always been to consider them the same work if the only differences between them consist of one or more of the following:

- different publisher,
- different publication date,
- different physical format,
- different edition statement but same text (e.g., "microform edition").

In fact, many of us would argue that if those are the *only* changes, the two items even represent the same *edition* of the same work, and can be described on a single bibliographic record. This is the multiple-versions issue. Be that as it may, the work decision is simple and straightforward: same work, i.e., same main entry.

If two items represent themselves as the same work, and the only differences between them consist of one or more of the following:

- different title;
- different series;
- different statement of responsibility, such as variation in the author's name or changes in subsidiary authorship such as inclusion of a different translator or editor;
- different edition statement (connected to change in text, e.g., different extent);
- resetting of type (usually signaled by different paging);
- in nonbook materials, other changes in actual extent, such as playing time;
- difference in presence or absence of illustrations in physical description,

current practice is to consider the two items to be two editions of the same work, i.e., separate bibliographic records, each with the same main entry. Again, this decision is usually simple and straightforward.

Some decisions are not so simple. The following decisions about changes that create a new edition of a work and changes that create a new work have been recorded in AACR2R and constitute current practice. (Neither Lubetzky nor I agree with all of current practice, by the way.) Under current practice, we consider the following changes not to be substantial enough to cause the creation of a new work (signaled by the retention of the same main entry as the original work):

- translation into another language;
- addition of illustrations to a text;
- revision of a text by the same author(s) as the original;
- addition of commentary or biographical/critical material when the original work is emphasized in title-page representation;
- reproduction of an artwork;
- arrangement, transcription, etc., of the work of a composer;
- providing a choreography for an existing musical work, such as a ballet;
- adding an instrumental accompaniment or additional parts to a musical work;
- performing a musical work on a sound recording.

We consider the following changes substantial enough to cause the creation of a new work (signaled by a change in main entry):

- rewriting of a text in another form, e.g., the dramatization of a novel;
- filming of a play;
- adaptation of an artwork from one medium to another (e.g., an engraving of a painting);
- changing of the title of a work entered under title (including both monographs and serials);
- revision of a text accompanied by a change in representation of authorship or change in title;
- addition of commentary or biographical/critical material when the commentary or biographical/critical material is emphasized in title-page representation;
- free transcription of the work of a composer;
- merely basing a musical work on other music, e.g., variations on a theme;
- setting a preexisting text to music.

Some of these decisions were not so easy to make and are a cause of continuing controversy. Much of the controversy may stem from the fact that we have not yet completely come to terms with the phenomenon of mixed responsibility. According to the AACR2R glossary, a work of mixed responsibility is one in which different persons or bodies contribute to its intellectual or artistic content by performing different kinds of activities (e.g., adapting or illustrating a work written by another person). Mixed responsibility is very common in my field (film and television). I see signs that it is likely to be very common in the production of original works for distribution by way of the Web, and it is even possible that it represents a general trend in the creation of works of art, literature, and music. Films are classic cases of mixed responsibility. Major contributions to a film work are made by the writer, the director, the cinematographer, and the editor, and these are often four different people. Film scholars are passionately interested in studying the work of all four, but they tend to identify and cite works by title, rather than selecting one function as predominant over the others, and citing works by, for example, director or writer.

The following problematic categories of works will be briefly discussed: works of photography, works intended for performance (including music, drama, and dance), texts with illustrations, music with words, works produced in stages, revised editions, spatial data, and serials (electronic and otherwise).

Works of Photography

Photography is peculiar. It can: (1) merely record or represent a previously existing work, and serve as a surrogate for it or an embodiment of it; (2) it can be a creative work in its own right, or (3) it can be *both* surrogate/embodiment *and* work in its own right. Ultimately, a judgment must be made whether it is a creative work in its own right, and librarians, who bend over backwards to be objective and nonjudgmental, are reluctant to make such judgments.

Image catalogers need to make a clear decision about what is being described to prevent the creation of a confusing record; the work that is not described must be treated as a related work of some type. AACR2R does not yet provide much guidance for decisions of this kind, although it does call for entering a reproduction, such as a slide of a work of art, under the heading for the original work (21.16B). Because slide collections are created and used as surrogates for art originals, which may be located at remote sites that are expensive or impossible to visit, a reproduction of an art original is treated as if it were the art original itself. This is true even though the slide reproduction is almost always different in scale and different in medium (for any art original other than a photograph).

When a work is represented in another work that *is* of interest, such as a photographic work or the work of another artist, a decision must be made. Michael Kenna's photographs of Le Notre's gardens, recently shown at the Huntington Library, for example, should probably be considered primarily the work of Michael Kenna, but related to the work of Le Notre.[3] The current popularity of performance art is raising similar problems. When the work of a performance artist is documented by another artist, the latter a photographer or cinematographer, the problems are similar. Also, the proliferation of images of Mona Lisa in fine art, on T-shirts, in Wegman photos, reflected on magazine covers, on an apron, over and over by Warhol, etc., forces us to realize that reproduction of

an image cannot always be held to be simply a copy (manifestation) of the original.[4]

Film is a relatively new medium of expression (only 100 years old) that is fundamentally a work of photography, in which meaning is expressed by means of the visual composition of frames, cutting, camera angles, and rhythm and timing of the action before the camera. While film draws on all previous art forms (painting, writing, sculpture, architecture, music, dance), it is fundamentally a new art form. As such, adaptation is necessary to turn any previously existing work into a work in this form.

The problem is, of course, that just as all text is not belles lettres, not all films are films, i.e., cinematic works, such as those previously described. Film can also be used as a "mere recording medium," as in the case of scientific record film, anthropological film, and so forth. In truth, film can be put to as many varied uses as text can.

How can catalogers tell whether they are dealing with a cinematic work or instead with film as a "mere recording medium"? One clue lies in the functions credited on the film: if a cinematographer, an editor, a screenwriter, and a director are involved, it is highly likely that the work is a cinematic work, as these are the kinds of functions that result in the expression of meaning using visual composition of frames, cutting, camera angles, and rhythm and timing of the action before the camera.

Works Intended for Performance

Music

In the music field, the dominant mode of production for hundreds of years has been composition by a single composer. A piece of written or printed music usually has a single composer. It often has a nondistinctive title and is best known by the name of its composer.

Music, however, is written in the anticipation of its performance. For centuries, we have been able to collect only the written music, not the performances. With the advent of recording mechanisms in the latter part of the nineteenth century, it became possible to begin to collect many different performances of the same musical work. Technically, all performances are works of mixed responsibility, for both composer and performer are responsible for a performed work. In practice, however, music scholars have considered the work of the performer a subsidiary type of authorship, similar to that of a translator of a text. Performer and translator both are seen as conduits that allow the work to pass from its creator to its audience, with faithfulness to the original work being one of the hallmarks of an effective and praiseworthy conduit.

To someone like myself who is not an expert music cataloger, it seems that it would be helpful to use a more principled approach toward when improvisation, arrangement, or other similar change to a musical work is extensive enough to justify considering it a new work (i.e., a type of adaptation). What is essential about a musical work that persists through improvisation, arrangement, etc.? Is it melody? Are there musical forms analogous to "play" and "novel" such that movement from one form to the other constitutes adaptation? (See also a following section specifically on improvisation.)

Dramatico-Musical Works

As with music, for centuries the only things libraries could collect were the texts and printed music of works intended for performance, such as plays or operas. The performances themselves could not be recorded and thus could not be collected. There is a possibility that dramatico-musical works, however, when seen as works intended for performance, rather than as textual or musical works, are essentially works of mixed responsibility that cannot exist as performed works without the participation of many different people performing many different functions.

Actually, three layers of creative activity are going on in the creation of a dramatico-musical work that is then filmed: (1) There is composition of the original text or music (we will ignore the problem of opera librettos for now). (2) There are the decisions that go into actually producing the play or opera in a live performance (lighting, sets, costume design, casting, various voicings of the arias, and so forth). (3) Finally, there are the creative decisions that go into making a cinematic work: camera angles, composition of frames, cutting, etc. It is the third layer that I am convinced constitutes a kind of adaptation, such that the play or opera becomes a film, a different work—a photographic work, not a musical work (but one related to the opera on which it is based). I am willing to concede that when film is used as a mere recording medium, it is not a cinematic work. If a screenwriter, an editor, and a

cinematographer are credited, however, I recommend that it be considered a new cinematic work. If this approach were to be taken, it would be crucial to make an added entry for the main entry of any preexisting work that is adapted into a new work in the course of performance.

A more logical (but very radical) approach should be examined at least. If it is desired to consider *all* performances of a particular dramatico-musical work as the same work, no matter what the medium, we could consider all dramatico-musical works to be inherently works of mixed responsibility, unable to exist without the work of many different people carrying out many different functions, and therefore entered under title. Thus, all librettos, scores, performances, and films of *Magic Flute* would be entered under title. We would then doubtless be committing ourselves to elaborate uniform titles to allow versions of versions to be linked up to each other. For example, the various versions of Ingmar Bergman's *Magic Flute* would need to be subcollocated along with its sound track, its scripts, works about it, videodisc versions with additional material, etc. It is interesting to note in this connection that dramatico-musical works tend to have fairly distinctive titles compared to some other types of musical works (e.g., *Don Giovanni* or *Hamlet* versus the Fifth Symphony), and their performances can easily be advertised without using the names of composers or playwrights.

The fundamental question, though, might be: can Mozart or Shakespeare really be the authors of works of photography, given that photography did not exist in their time?

Musical Performances Involving Improvisation

Is there adequate consensus yet about whether jazz improvisation creates editions of previously existing works or whether, on the contrary, it constitutes a kind of composition on the fly, thereby creating new works? For example, the song "All of Me" was written by Gerald Marks (music) and Seymour Simons (lyrics). It has been performed by the following jazz artists: Billie Holiday, Erroll Garner, Frank Sinatra, Sidney Bechet, and Louis Armstrong, among others. If an analytical entry is being made for Erroll Garner's performance, should this be treated as an edition of the song, the music for which was composed by Gerald Marks (Marks, Gerald. All of me)? Or should it be treated as a new related work composed by Erroll Garner in the course of his jazz performance (Garner, Erroll. All of me)? Or is "All of Me" itself fundamentally a work of mixed responsibility (lyrics, music, and performance) that is most appropriately identified and cited by title? These queries involve both the question of what is a musical work and how a musical work should be identified when it is a work of mixed responsibility (i.e., should it be identified by using one predominant author and the title for the main entry, or using the title alone for the main entry)?

Dance

The dance field has come to see performances of dance works as works of mixed responsibility to be entered under title, although this is not yet reflected in AACR2.

Texts with Illustrations

Traditionally, texts with illustrations have been entered under the author of the text. It is possible that in fields such as children's literature, however, this is somewhat artificial. As more and more visual and audio segments are added to electronic versions of previously existing texts, it may become harder and harder to argue for the predominance of text. Librarians have a definite bias toward text and music over visual content, perhaps because visual content is associated in our minds with preliterate cultures and we are passionate advocates of literacy, and perhaps because historically our collections have been primarily textual. We must be careful, however, not to slight all of the parts of our cultural heritage that are visual in nature, and we must be careful not to ignore the needs of users of materials held in our collections that are wholly or partially visual.

Music with Words

Currently, music catalogers consider musical works that include words (such as librettos or lyrics) to be primarily musical, rather than works of mixed responsibility. When the words change, but the music stays the same, music catalogers consider it still the same work. I recently had occasion to catalog a newsreel story about the famous Marian Anderson concert in 1939 in front of the Lincoln Memorial. The newsreel includes her complete performance of "America" ("from every mountainside, let freedom ring"). I wanted to make an added entry for the song and was

disconcerted to discover that the main entry for it is "God Save the King," because it uses the melody of the latter. In other words, the change in the lyrics to the song was not considered significant enough to create a new related work. The music catalogers, however, lost their nerve when it came to entering the "Star-Spangled Banner" under "To Anacreon in Heaven"!

Neil Hughes, a music cataloger who has been discussing these issues with me, points out that "to musicians, the words are part of the music, because vowel sounds, sibilants, frontal plosives, etc.—even when part of a meaning-laden text in a modern language and not just vocalizing—are all pure musical elements because they are sound and because they are considered as such by the composer when choosing a text to set, and when creating the instrumental accompaniment, note by note." But surely this is true only for music specialists, and even for them, only some of the time; many users of music respond to the words as much as to the music. Marian Anderson, for one, probably chose the song she sang more for the words than for the sibilants. Is the song Marian Anderson sang really "God Save the King"?

Works Produced in Stages

Creating a work of mixed responsibility, such as a film, is a complex effort. Many pieces must be prepared ahead of time, such as the various drafts of the screenplay, the costume designs, the musical scores, etc. Some can be separately published, such as the sound track and the screenplay. Current practice is to treat each of these pieces as a separate work, each to be entered under its own "author." I wonder whether it might be helpful to users of these materials to consider the creations that result during the course of the preparation of a final work, such as a film, as a part of that final work, to be identified primarily by (i.e., entered under) a uniform title that begins with the title of the film.

Revised Editions

Currently, AACR2R Rules 21.6C1 and 21.12 call for treating revised editions as new works whenever the representation of authorship changes, including simple transposition of the names of two authors on a title page. Such revisions are also treated as new works whenever the title changes. These practices mean that a user can only be assured of finding the latest edition of a text (or other work subject to revision over time) in a library that has cataloging records for every earlier edition, so that the chain-related work-added entries can gradually lead the user from his or her citation to the latest edition. It seems likely that users consider all of these editions to represent the same work, and that they would find it useful to see the editions in one place, so they could be sure of getting the latest, most current edition, and so scientists and historians could more easily survey the library's holdings of earlier editions of a prominent text or other work subject to extensive revision over time. A definition of work that allowed for change in authorship, editorship, or title of a text without the text becoming a new work could help library users in a number of fields that make heavy use of texts (e.g., law and medicine).

Spatial Data

Spatial data includes maps, aerial photographs, remote sensing images, atlases, and globes. How does the concept of work function in the field of spatial data? Can a flat map be made into a globe and still be the same work? Note that any two-dimensional map is trying to represent a three-dimensional reality, so it is probably artificial to forbid a two-dimensional work from having a three-dimensional version that is the same work. When are two items considered two different versions or editions of the same work (i.e., when are they given the same main entry, despite intellectual or artistic differences between them that require making a separate record to express them)? Map catalogers do seem to recognize the concept of edition. The U.S. Geological Survey's 1939 map of Golden, Colorado, for example, has an edition with revisions shown in purple compiled from aerial photographs taken in 1978. At any rate, these two maps are given the same main entry, which would seem to imply that they are considered the same work. It would be useful to ask some map catalogers who were theoretically inclined to investigate whether or not a preexisting map can be changed to such a degree that it should be considered a new work, related to the preexisting work, and if so, whether one can define the nature of such changes in a principled way.

Serials, Electronic and Otherwise

Following another of Lubetzky's principles, that of successive entry for serials, currently change of title of a serial work leads to the creation of a new main entry in AACR2R; in other words, change of title causes the creation of a new, related work. The various related works that make up the history of a given serial can only be assembled by a user who happens to be in a library that holds issues entered under each title the serial has held. If there are any missing links, the run cannot be assembled. Is this really the right way to conceive of a serial work? Does it really correspond to the way users conceptualize serial works? This may be a rare case in which Lubetzky recommended an approach that was practically sound at the time, but not theoretically sound for the long term.

Now that serials are beginning to be distributed electronically, their nature as works is beginning to change in rather profound ways. A serial distributed as issues in text form can now exist simultaneously in electronic form as a continuously updated database consisting of all of the articles ever published in that serial, extending across title changes. In other words, such a database can easily contain articles from a serial that has changed its title several times. Users surely consider both the database and the journal they seek (under any title it has held) as different versions of the same work.

Interactive Multimedia

When preexisting works are reissued with interactive multimedia commentary, biographical/critical information, and so forth, and are still represented as being the original work, it would be best to consider them editions of the preexisting work, for we do the same for noninteractive multimedia editions of a work published with commentary or biographical/critical material, as long as the original work is emphasized in title-page representation. Also, when an existing print work acquires an online multimedia version (e.g., *Encyclopaedia Britannica* and *Britannica Online*), it would be desirable to treat them as editions of the same work.

Pure Categories of Content

I wonder if it would be helpful to consider whether or not there might be a few pure categories of content, with the hypothesis being that a

work in one of the eight categories of content that follow cannot be transformed into a work in another of the eight categories without becoming a new work:

1. text
2. music (defined as a work fundamentally comprised of music, either musical notation (typed, printed, or handwritten) or actual sound, i.e., performed music)
3. still image
4. moving image (defined as a work fundamentally comprised of moving images, which often (but not necessarily) has text and sound integrated to make a single work; includes recorded dance performance as well as dance notation, for dance consists of movement (moving image) plus sound)
5. spatial data
6. three-dimensional objects
7. numeric data
8. computer programs

Of course, this hypothesis would need testing by research. The potential utility of this approach is as follows: if we can delineate the fundamental types of content, it might help in defining the concept of *work*, and it might help us determine when a previously existing work has been modified so much it has become a new work.

Mixed Works

Works that do not fall wholly into the eight categories are mixed. In some cases, one type of content predominates; in others, no type predominates. Works for which one type of content predominates include: texts with illustrations (which can now include musical and audiovisual illustrations) and music with words (opera, lieder, etc.). However, refer to the earlier discussion concerning the advisability of considering music to be predominant. In these cases, judgment will be required to determine primacy. The other category of mixed works is those that are fundamentally mixed with no type of content predominant. Examples include: dance (choreography and music; but, again refer to the early discussion); interactive multimedia and other electronic resources that mix text, sound, and image; and kits.

Once different types of content are combined in a single work, the pure content approach is no longer useful. We must either assign predominance to one of two types of content, or we must decline to assign predominance and treat the work as a work of mixed responsibility identified by title alone (unless, of course, all functions were carried out by one person).

How to Name a Work—the Main Entry

In case anyone does not understand what the main entry does, I will quickly try to point out at least some of its functions. First, as noted previously, main entry is an alphabet-dependent device for carrying out the second cataloging objective, i.e., for displaying together all the works of an author and all the editions of a work. Among other things, the main entry is the standard citation form for a work. In its role, the main entry can be used as a collocation point for editions of that work, works about that work, analytic added entries made when another work contains that work, works related to that work, such as adaptations, or serials with changed titles, or revised editions with changed titles, and so forth. Many of these will collocate *only* at the main entry. When making an analytic, for example, a cataloger must choose one standard citation form for the work, and only if the user searches using that standard citation will he or she learn about the existence of the analytic.

Once a standard citation form for a work has been established, it can also be used to display that work in summary displays of the hundreds of works that may easily be retrieved on many kinds of searches, such as subject searches, genre searches, title keyword searches, etc. A well-designed main entry will allow users to scan quickly through a large retrieval set, accepting or rejecting works based on their authorship characteristics. Without main entries, it would not be possible to allow users the option of a display by author (see Figure 1).

Main-entry displays are particularly useful under subject headings, as the titles of works on a subject frequently begin with the same or similar words to those used in the heading. In contrast, an author display provides more differentiation among the works retrieved, allowing identification of (and either acceptance or rejection of) conference publications, works emanating from corporate bodies, works of single personal

FIGURE 1 Works Given the LC Subject Heading SMOKING in Main-Entry Order

1. Ashton, Heather. Smoking : psychology and pharmacology. 1982.
2. Brown, Clyde Perry. Cigarette smoking and blood lead levels in occupationally exposed workers. 1982.
3. California. Office of the Attorney General. Smoking by minors; a report on the present state of the law. [1969]
4. Cigarette smoking : a clinical guide to assessment and treatment. c1992.
5. Council for Tobacco Research. Report of the scientific director.
6. Doyle, Nancy. Smoking, a habit that should be broken. 1979.
7. Dunn, William L. Smoking behavior : motives and incentives. 1973.
8. Gottsegen, Jack Jacob, 1907- Tobacco, a study of its consumption in the United States. 1940.
9. Howson, Christopher Paul. Cigarette smoking and the use of health services. 1983.
10. Krogh, David. Smoking : the artificial passion. c1991.
11. Kujala, Pekka. Smoking, respiratory symptoms and ventilatory capacity in young men : with a note on physical fitness and acute respiratory infections. 1981.
12. Levy, Robert A. Tobacco Medicaid litigation : snuffing out the rule of law. [1997]
13. Mausner, Bernard, 1920- Smoking: a behavioral analysis. [1971]
14. National Cancer Institute (U.S.) Smoking, tobacco, and cancer program, 1985 report. 1986.
15. National Cancer Institute (U.S.) Smoking, tobacco, and cancer program, annual report, 1983. [1984]
16. National Cancer Institute (U.S.). Office of Cancer Communications. The smoking digest : progress report on a nation kicking the habit. [1977]
17. National Research Conference on Smoking Behavior (2nd : 1966 : University of Arizona) Studies and issues in smoking behavior. [1967]
18. Neuberger, Maurine B. Smoke screen : tobacco and the public welfare. [1963]
19. Smoking and aging. c1984.
20. Smoking and arterial disease. 1981.
21. Smoking and health : a report of the Surgeon General. [1979]
22. Smoking and health bulletin.
23. Smoking in the workplace : a review of arbitration decisions. 1988.
24. Tobacco smoke and the nonsmoker. 1988.
25. United States. Division of Dental Public Health and Resources. Smoking and oral cancer. [1964]
26. United States. Surgeon General's Advisory Committee on Smoking and Health. Smoking and health; report of the advisory committee to the Surgeon General of the Public Health Service. 1964.

authorship, works by experts in the field (or at least authors who have written on this subject more than once), etc. (see Figure 2). The fact that library catalogs can produce main-entry displays (or alphabetical author listings) is one of the many ways in which they are superior to the Internet (see Figure 3).

Main entry based on authorship is an absolute necessity when it comes to displaying works of prolific authors that have nondistinctive titles—such as most musical works. Contrast the display by author in Figure 4 with the display of the same works by title in Figure 5.

Creating a standard citation form for a work (the main entry) allows the compression of displays of many editions of a particular work, as well as works about it and works related to it, so users can better scan through the large retrieval sets that are giving them so much difficulty in online public access catalogs. Consider, for example, displays that could be offered to a user interested in browsing through the works of Shakespeare, with a specific interest in *Macbeth* (see Figure 6).

It is possible that a change in the MARC 21 format to specifically identify related work-added entries as performance-added entries could lead to online catalog displays that might prevent undue confusion for users who consider a performance (even one adapted into a cinematic work) and a work intended for performance to be the same work. Currently, the second indicator of a MARC 21 7XX added-entry field for a work can be set to 2 when the work is actually contained within the work cataloged. If the same second indicator were given another value for performance, it would potentially allow for the type of display shown in Figure 7 to the user who has chosen line 10 in order to look at the library's editions of *Macbeth*.

Of course, this still dodges the question of which films are mere recordings of a performance (same work) and which are adaptations (new works), and whether this distinction should be made visible to users in displays. The following illustrates what such a distinction could look like, if we decided to make it.

Shakespeare, William, 1564–1616. Macbeth.

1. Editions of Macbeth.
2. Performances of Macbeth.
3. Films based on Macbeth.
4. Other works related to Macbeth.
5. Works about Macbeth.

FIGURE 2 Works Given the LC Subject Heading SMOKING Listed by Title

1. Cigarette smoking : a clinical guide to assessment and treatment. c1992.
2. Cigarette smoking and blood lead levels in occupationally exposed workers. 1982.
3. Cigarette smoking and the use of health services. 1983.
4. Report of the scientific director.
5. Smoke screen : tobacco and the public welfare. [1963]
6. Smoking : a behavioral analysis. [1971]
7. Smoking : psychology and pharmacology. 1982.
8. Smoking : the artificial passion. c1991.
9. Smoking, a habit that should be broken. 1979.
10. Smoking and aging. c1984.
11. Smoking and arterial disease. 1981.
12. Smoking and health : a report of the Surgeon General. [1979]
13. Smoking and health; report of the advisory committee to the Surgeon General of the Public Health Service. 1964.
14. Smoking and health bulletin.
15. Smoking and oral cancer. 1964.
16. Smoking behavior : motives and incentives. 1973.
17. Smoking by minors; a report on the present state of the law. 1969.
18. The smoking digest : progress report on a nation kicking the habit. [1977]
19. Smoking in the workplace : a review of arbitration decisions. 1988.
20. Smoking, respiratory symptoms and ventilatory capacity in young men : with a note on physical fitness and acute respiratory infections. 1981.
21. Smoking, tobacco, and cancer program, 1985 report. 1986.
22. Smoking, tobacco, and cancer program, annual report, 1983. [1984]
23. Studies and issues in smoking behavior. [1967]
24. Tobacco, a study of its consumption in the United States. 1940.
25. Tobacco Medicaid litigation : snuffing out the rule of law. [1997]
26. Tobacco smoke and the nonsmoker. 1988.

FIGURE 3 The First Ten Entries Displayed after an Internet Search on the Keyword SMOKING Using the Alta Vista Search Engine (68,911 "Documents" Retrieved)

1. Why Smoking Is Good For You
   The Web's only comedy site. From the people who brought you poverty, inflation, and the common cold. Updated weekly!
2. Phyllis Schlafly Column 1/22/97 — The Smoking Gun in the Medicaid Mystery
   Phyllis Schlafly January 8, 1997 column.

(continued)

FIGURE 3 (continued)

3. AIRSPACE Action on Smoking and Health
   AIRSPACE Action on Smoking and Health. Anti-tobacco billboard in California. On December 18, a set of documents subpoenaed for Minnesota's suit against . . .
4. The Association Between Smoking and Periodontitis
   The Association Between Smoking and Periodontitis. Dr. Steven Offenbacher. UNC-CH Dental Research Center. The Association Between Smoking and . . .
5. Moon Cloud Cigar Rests & Pipe Smoking Accessories
   HOME FURNISHINGS * GIFTS * ART * CLASSES. House of Swing Inc. began as a series of successful functional art shows designed to . . .
6. Re: quitting smoking—well trying anyway
   Re: quitting smoking—well trying anyway. [Follow Ups] [Post Followup] [The Stop Smoking Center Message Board] [FAQ] Posted by Carrie on August . . .
7. MSNBC — Test your smoking Quotient
   MSNBC—Test your smoking Quotient. [Follow Ups] [Post Followup] [The Stop Smoking Center Message Board] [FAQ] Posted by Matthew Kinney on . . .
8. All Natural Smoking Blends
   OPTICAL DILLUSIONS. SMOKING BLENDS. HERBA GHANI. High potency smoking herb consisting of a unique blend of imported organics cured with rare essential . . .
9. CoverIt All Weather Shelters, Smoking Shelters for the workplace, garages, gre
   CoverIt & GrowIt All Weather Shelters, Greenhouses, Carports, Instant Buildings, Instant Garages, Instant Hangars, Instant Greenhouses, Instant Workshops,
10. No Smoke Software to Quit and Prevent Smoking
    NO SMOKE for Windows is a unique computer-aided method to quit smoking using many video game elements. Effective for the adult who wants to quit or the

Word count: smoking: 875978

FIGURE 4 Display of Musical Works under a Subject Heading with Main Entry Based on Authorship (i.e., Composer)

1. Beethoven, Ludwig van, 1770-1827.
   Symphonies, no. 1, op. 21, C major
2. Symphonies, no. 2, op. 36, D major
3. Symphonies, no. 3, op. 55, E flat major

FIGURE 4 (continued)

4. Symphonies, no. 4, op. 60, B flat major
5. Symphonies, no. 5, op. 67, C minor
6. Bizet, Georges, 1838-1875.
   Symphonies, C major
7. Borodin, Aleksandr Porfir'evich, 1833-1887.
   Symphonies, no. 2, B minor
8. Dvorak, Antonin, 1841-1904.
   Symphonies, no. 1, C minor
9. Symphonies, no. 2, op. 4, B flat major
10. Haydn, Joseph, 1732-1809.
    Symphonies, H. I, 6, D major
11. Ives, Charles, 1874-1954.
    Symphonies, no. 1
12. Mahler, Gustav, 1860-1911.
    Symphonies, no. 5, C# minor
13. Mozart, Wolfgang Amadeus, 1756-1791.
    Symphonies, K. 22, B flat major
14. Prokofiev, Sergey, 1891-1953.
    Symphonies, no. 1, op. 25, D major
15. Schubert, Franz, 1797-1828.
    Symphonies, D. 417, C minor
16. Tchaikovsky, Peter Ilich, 1840-1893.
    Symphonies, no. 1, op. 13, G minor

FIGURE 5 Display of Musical Works under a Subject Heading with Title Main Entry

1. Symphonie no. 1 op. 21 ; Symphonie no. 7 op. 92 [sound recording] / Ludwig van Beethoven
2. Symphony no. 1 / Charles Ives ; Three essays for orchestra / Samuel Barber [sound recording]
3. Symphony no. 1, in C major [sound recording] / Georges Bizet
4. Symphony no. 1, in C minor : The bells of Zlonice ; The hero's song : op. 111 [sound recording] / Dvorak
5. Symphony no. 2, in B flat major, op. 4 [sound recording] / Dvorak
6. Symphony no. 1, in D, op. 25 : Classical ; Symphony no. 4, op. 47/112 : revised 1947 version [sound recording] / Sergey Prokofiev
7. Symphony no. 1, in G minor, op. 13 (Winter dreams) [sound recording] / Tchaikovsky

(continued)

FIGURE 5 (continued)

8. Symphony no. 2, in B minor [sound recording] / Borodin
9. Symphony no. 2, in D major, op. 36 ; Overture Coriolan, op. 62 ; Overture Prometheus, op. 43 [sound recording] / Ludwig van Beethoven
10. Symphony no. 3, in E flat major, op. 55 (Eroica) [sound recording] / Ludwig van Beethoven
11. Symphony no. 4, in B flat, op. 60 ; Symphony no. 8, in F major, op. 93 [sound recording] / Ludwig van Beethoven
12. Symphony no. 4, in C minor, D. 417 (Tragic) ; Symphony no. 5, in B flat major, D. 485 [sound recording] / Franz Schubert
13. Symphony no. 5, in B flat major, K. 22 / Mozart
14. Symphony no. 5, in C minor, op. 67 [sound recording] / Ludwig van Beethoven
15. Symphony no. 5, in C sharp minor ; Symphony no. 10, in F sharp major [i.e., minor] [sound recording] / Gustav Mahler
16. Symphony no. 6, in D (1761) "Le matin" [sound recording] / Joseph Haydn

FIGURE 6 Potential Compressed Displays for Selected Works of Shakespeare and for Many Editions of a Particular Work (Macbeth)

Shakespeare, William, 1564-1616.

1. All's well that ends well.
2. Antony and Cleopatra.
3. As you like it.
4. Comedy of errors.
5. Coriolanus.
6. Cymbeline.
7. Hamlet.
8. Henry V.
9. Henry VI.
10. Macbeth.

When the user chooses line 10, for *Macbeth*, the following display could result:

Shakespeare, William, 1564-1616. Macbeth.

1. Editions of Macbeth.[7]
2. Other works related to Macbeth.[8]
3. Works about Macbeth.[9]

FIGURE 7 Potential Displays for Many Editions of a Particular Work (Macbeth), Created by Defining a Value for Performance in the Second Indicator Position of the MARC 21 7XX Fields

Shakespeare, William, 1564-1616. Macbeth.

1. Editions of Macbeth.[10]
2. Performances of Macbeth.
3. Other works related to Macbeth.[11]
4. Works about Macbeth.[12]

When the user chooses line 2, for performances of *Macbeth*, the following display could result:

1. Classic theatre. Macbeth. 1977.
2. Hallmark hall of fame. Macbeth (1954)
3. Hallmark hall of fame. Macbeth (1960)
4. Macbeth (1948)
5. Macbeth (1971)
6. Studio one. Macbeth. 1951.
7. Throne of blood. Akira Kurosawa's throne of blood. 1957.

Performances of would be for same main-entry sound and video-recordings (mere recordings); *films based on* would be for films (i.e., motion pictures and videorecordings) with related work-added entries for the preexisting works from which they were adapted.

If we take a musical example, it might look like this:

Mozart, Wolfgang Amadeus, 1756–1791. Zauberflöte.

1. Music scores[5]
2. Performances on sound recording[6]
3. Performances on videorecording
4. Films based on
5. Other related works
6. Works about

The main entry could also be used to develop compressed displays of the subparts of a work (see Figure 8).

Now that we have established the value of the main entry and demonstrated many of the useful things it does, we should consider the issue of how best to name works (using the main entry). It is very important to separate issues concerning the *form of name* we use for a work from issues concerning the *definition of work* (including *same work* and *related work,* covered previously). The film *Seven Samurai* has been released under three different titles: (1) *Seven Samurai,* (2) *Shichinin no samurai* (a transliteration of the Japanese script), and (3) *Magnificent Seven.* The question of whether to use a uniform title to bring together all of the editions of a work is different from the question of what that uniform title should be (e.g., whether it should be in the language of the library users, English in most of the United States, for example, or in the language of the country of origin of the work in question, Japanese, for example, for a Japanese film). A number of commentators have pointed out the possibility of developing international authority records that identify the language of each heading contained in them, allowing libraries to designate their own language forms as the preferred forms for display in their online public access catalogs (OPACs). This could potentially free us from the tyranny of language that led commentators like Eva Verona to oppose the use of uniform titles because her users didn't like having to deal with foreign languages. Allowing an English language–speaking population to search for works under their English-language titles, regardless of their titles in their countries of origin, would allow us to come closer to our principle of trying to enter authors and works under the names by which they are commonly known.

In cases in which two functions are performed to create a work of mixed responsibility, when is one of those functions predominant, such that the name of the person carrying out that function should be used to identify the work? And when are works of mixed authorship more appropriately identified and cited by title than by one of several authors of the work? Is Gerald Marks's name really essential for identifying and citing the song "All of Me"?

What about a work with two authors that is commonly known by both their names (such as Masters and Johnson)? Is there any way to use

FIGURE 8 Compressed Display of the Subparts of a Musical Work

Verdi, Giuseppe, 1813-1901.

1. Aida
2. Aroldo
3. Attila
4. Ballo in maschera
5. Don Carlos
6. Ernani
7. Falstaff
8. Forza del destino
9. Giorno di regno
10. Lombardi alla prima crociata
11. Luisa Miller
12. Macbeth
13. Messa da Requiem
14. Pezzi sacri
15. Rigoletto
16. Simon Boccanegra
17. Traviata
18. Trovatore

When line 18 is selected, the next display could appear as:

Verdi, Giuseppe, 1813-1901. Trovatore

1. Music scores
2. Performances on sound recording
3. Performances on videorecording
4. Films based on
5. Other related works
6. Works about
7. Parts:
   Ah! che la morte ognora
   Ah, si ben mio
   D'amor sull'ali rosee
   Deserto sulla terra
   Di quella pira
   Mal reggendo allaspro assalto
   Tacca la notte placida

system design solutions to ensure that a user search using two author names to identify a work can be assured of success? Will that user be able to recognize the work sought if it is identified using only the name of one of the authors (e.g., Masters, but not Johnson), if the search leads to the display of hundreds of records?

Why Haven't Lubetzky's Principles Been Carried Out in Our Catalogs?

There are actually three answers to this question. One is that cataloging budgets have been slashed, and few librarians are taught to catalog anymore (including at UCLA, which has dismantled the cataloging program founded by Lubetzky), because of an expectation on the part of library administrators and library school educators that any day now Bill Gates is going to come up with an intelligent assistant that will be able to catalog everything for us, without human intervention. Another answer to this question is that system design to support known-work searching in our OPACs has been so poor that catalogers have despaired of getting their carefully collocated work records displayed to users. And the third answer to this question is that our shared cataloging environment actually works *against* the sharing of the kind of authority work that is necessary to collocate works for our users.

Contrary to what the leaders of the profession seem to think, artificial intelligence is not the answer;[13] as one computer scientist puts it, "After fifty years of effort . . . it is now clear to all but a few diehards that [the] attempt to produce general intelligence [on the part of a computer] has failed. . . . The know-how that made up the background of common sense could not itself be represented by data structures made up of facts and rules."[14] Machines have had a particularly hard time *learning* natural language and *learning* how to do recognition tasks, such as recognizing the nature of the relationship between two entities. Not unexpectedly, efforts in our field to build expert systems have not been very successful. Hjerppe and Olander report on a project that built two expert systems for cataloging; they note that "much of the present cataloging process consists of 'instinctive' interpretation, based essentially on experiential learning from examples in an apprenticeship manner."[15] Among the number of interpretive acts they identify that are difficult for computers to carry out is "the

recognition of an item as possibly being related to other item(s) and identifying such item(s)."[16] Humans can perform such recognition tasks nearly effortlessly, e.g.:

> This different name probably represents the same person.
>
> This different title probably represents the same work.
>
> This same name probably represents a different person.
>
> This same title probably represents a different work.

Recognition of the likelihood of a relationship can then trigger research to confirm or deny the existence of one.

What we need is not artificial intelligence, but rather human intelligence applied toward developing human-machine partnerships that maximize human intellectual input and minimize human drudgery. If catalogers did nothing but identify relationships all day long, they could accomplish much more work in a day than they do now on largely antiquated editing software in many different systems, few of which have been effectively designed to support cataloging work per se.

Another reason Lubetzky's work principle has not been carried out in our catalogs is that we have done a very bad job of both record design and system design for OPACs. Record design is embodied in the MARC 21 formats. In a sense, there is a format for author names and subject headings (authority format) and a format for particular editions of works (bibliographic format), but no specific format for works. Instead, authority records are occasionally adapted to represent works as well as authors and subjects, as in the case of name-title authority records for works entered under author and uniform title authority records for works entered under title. The most common situation is for a work to be represented *only* by the main entry on a bibliographic record, with no corresponding work authority record. Thus, when systems force users to choose between a search of authority records and a search of bibliographic records, as they always do, representation of the work, carried out as it is by both authority records and bibliographic records in conjunction, is imperfectly done no matter which choice the user makes.

System design failures are at work here, too. In general, OPACs are at their worst when it comes to helping a user find a work of which both author and title are known, probably still the most common search conducted in research libraries. Systems cannot seem to handle

an identifier that sometimes occurs in two fields (e.g., 100 and 245) and sometimes in one field broken into subfields (e.g., 700 with a ǂt subfield) (see Figure 9).

FIGURE 9 Example of a Work Sometimes Identified by Two Fields and Sometimes by One

Work identified using two fields:

100 1_ ǂa Shakespeare, William, ǂd 1564-1616.
245 00 ǂa Macbeth.

Work identified using one field:

700 12 ǂa Shakespeare, William, ǂd 1564-1616. ǂt Macbeth.

Systems also cannot handle an identifier that sometimes consists of a uniform heading (that can be dynamically updated, e.g., 130) and sometimes consists of a transcribed field (that must be protected from dynamic updating, e.g., 245). I know of no existing OPACs that display all of these together effectively. They never offer users a search for a known work, and they often force the user to choose either author *or* title. For example, MELVYL (the University of California Web catalog site) offers the options of *Title, Author, Subject,* or *Power* searches on the initial search screen; DRA's Web catalog offers the search options of *Any word or words, Search by subject, Search by author, Search by title.*

Even when a combined author-title search is available, it tends to be treated as an expert or power search, and it tends to be done as a keyword within bibliographic record search, such that the authority file is not searched for name and title variants, and the only possible display is a display of bibliographic records in main-entry order. Thus, any work *added entries* that may have been retrieved will not be apparent in the display, and many false drops are produced, which can be difficult to differentiate on summary displays from works that contain the work sought, works about it, etc. For example, if a user performs a known-item name-title search for Arthur Miller's work entitled *Death of a Salesman,* the following are correctly retrieved:

Harshbarger, Karl.

The burning jungle : an analysis of Arthur Miller's Death of a salesman / Karl Harshbarger. — Washington : University Press of America, c1979.

SUBJECTS: 1. Miller, Arthur, 1915– Death of a salesman.

Miller, Arthur, 1915–

Death of a salesman : certain private conversations in two acts and a requiem / by Arthur Miller. — Harmondsworth, Eng. ; New York : Penguin, 1976.

Miller, Arthur, 1915–

The portable Arthur Miller / edited, and with an introduction by Harold Clurman. — New York : Viking Press, 1973, c1971.

CONTENTS: Death of a salesman — The crucible — Incident at Vichy — The price.

OTHER ENTRIES: 1. Miller, Arthur, 1915– Death of a salesman. 2. Miller, Arthur, 1915– Crucible ... [etc.]

The following false drop, however, might also be retrieved:

Berger, Brian.

Thomas Wolfe : the final journey / by Brian F. Berger ; with a remembrance by Edward M. Miller. — West Linn, Or. : Willamette River Press, 1984.

SUBJECTS: 1. Wolfe, Thomas, 1900-1938—Journeys—West (U.S.) 2. Wolfe, Thomas, 1900-1938—Last years and death. . . . [etc.]

Most OPAC summary displays for this search would look like this:

Search done: FIND NAME TITLE miller death

1. Berger, Brian. Thomas Wolfe : the final journey. 1984
2. Harshbarger, Karl. The burning jungle. c1979.
3. Miller, Arthur, 1915– Death of a salesman. 1976.
4. Miller, Arthur, 1915– The portable Arthur Miller. c1971.

Note also how retrieved records are not summarized as to whether they are editions of the work itself, related works, or works about the work, thus producing the unmanageably large results sets that plague

OPAC users. On the UCLA Libraries' OPAC, this search produces sixty-two results, many of which are false drops.

Bad record design and bad catalog design have dulled us to our mission to carry out the cataloging objectives. It is no wonder that even many catalogers have forgotten the potential value of main entries using uniform titles when necessary for carrying out the objectives of the catalog. Perhaps catalogs of the future will be able to demonstrate relationships in a more effective way. In the card catalog, the user could look in only a few predictable places. In the online catalog, the users have many more kinds of searching available, which makes it that much harder to ensure that they will, in fact, look at the main entry.

Another reason Lubetzky's work principle has not been carried out in our catalogs lies in the nature of our system of shared cataloging. To keep the costs of cataloging down, shared cataloging programs have been developed extensively in this country. Shared cataloging, however, can have the effect of working against the functions of the catalog. The products of shared cataloging are individual records, an atomized catalog, if you will; these atoms link to each other only when two records contain the same character strings in a normalized heading field.[17] Certainly, we share the creation of authority records, as well as bibliographic records. Yet, the creation of an authority record for a particular author or work does not automatically cause the form of that author's name or the uniform title for that work to be updated in every bibliographic record in which it appears in every catalog in the country. In fact, our national databases and many of our local systems are under very poor authority control. In subscribing to the shared cataloging effort, it could be argued that a cataloging department is taking on the responsibility for maintaining not just its local catalog, but a national database, and the Library of Congress's catalog as well. Maintaining three catalogs is more work than maintaining one. And even if those three are perfectly maintained, that does not take care of the problem of all the other local systems that are not updated when a heading is changed. If the term *information superhighway* can be translated to mean ubiquitous and cheap telecommunication, it could enable us to create a virtual single catalog that would be more like a coral reef built up by catalogers over time, rather than the current catalog model that resembles a cloud of atoms buzzing about, sometimes linking up when they should and sometimes not. Surely maintaining one catalog would be less expensive than maintaining thousands of catalogs, as we do now. We just need to work out a clever economic solution to the problem of how

to pool our current resources and spend them on one shared catalog.

Of course, the idea of a single catalog is not a new one; each bibliographic database such as that of the Online Computer Library Center (OCLC) and the Research Libraries Information Network (RLIN) was meant to create a single catalog for many libraries (for that matter, from the time of Charles Jewett, various attempts have been made to create a single national catalog). It is certainly true that in some sense each national database was meant to form a single national catalog; the problem is that the emphasis was on creating atomized records, not on creating a catalog in which records were bound together by the demonstration of relationships between them; also, system design assumed as the primary purpose the creation of a warehouse of records from which "stock" could be ordered up using LCCNs, ISBNs, and the like as "stock numbers." The systems were never well designed to support direct user access. On OCLC, for example, it is still difficult to do searches that result in large retrievals; there are no effective displays of multiple headings (e.g., displays that link together the editions of a particular work), and displays of multiple bibliographic records are cumbersome, badly arranged (e.g., editions don't come together), and difficult to scan through.

I would like to suggest the following specifications for the ideal catalog system that would link editions together for users, no matter what their initial search might be. Please remember that the real problem is not the need for mechanical linking devices per se. They are readily available now through hypertext linking. The problem is to devise a method for creating one-to-many links that can be shared, that are immediately ubiquitous, and permanent.

1. The system would recognize the following six hierarchical levels: (1) superwork,[18] (2) work, (3) version, (4) edition, (5) near-equivalent,[19] and (6) copy.
2. A human operator would be able to point to two records and click on a type of relationship (e.g., same work, same version, different edition; or same work, same version, same edition, different near-equivalent).
   a. This action of recording a relationship need only be done once (that is, it would not need to be replicated in multiple databases).
   b. The recording of the relationship would be permanent (but editable).
   c. The recording of the relationship would be immediately ubiq-

uitous, i.e., visible to all users, shared.

d. At each level of the tier that has levels below it, a textual label or citation form would be devised to identify or name the one entity, e.g., the superwork, work, version, edition, or near-equivalent, to which many subrecords can be linked. This label can be derived from the description of the entity, e.g., main entry (author and title, or title) for the work.

3. As long as local physical collections exist, users should be allowed to limit or prioritize their searches to items that are either locally held or readily available online and that are in particular formats, and they should have ready access to any call number, location, holdings, and circulation information needed to obtain the item or a particular volume or part of it.

Summary

One of Lubetzky's gifts to library users who seek particular works was his explication of the work principle, which has the potential to allow us to design OPACs that meet the cataloging objectives better than any catalogs we have ever seen before. The generations of library leaders that followed Lubetzky dropped the ball, however, and allowed the development of OPACs that impede the user who seeks particular works much more than the card catalog ever did. Perhaps it is time for a Renaissance of the work principle to lead the library catalog out of the Dark Ages that current library leadership have allowed to descend over it.

NOTES

1. Seymour Lubetzky, *Principles of Cataloging: Final Report, Phase I: Descriptive Cataloging* (Los Angeles: University of California Institute of Library Research, 1969), p. 52–53.
2. Joseph R. Matthews, Gary S. Lawrence, and Douglas K. Ferguson, eds., *Using Online Catalogs: A Nationwide Survey: A Report of a Study Sponsored by the Council on Library Resources* (New York: Neal-Shuman, 1983), 146.
3. The relationship is rather a special one, in which one work *depicts* another.

Our practice has probably not been consistent between considering this a subject relationship (6XX fields in the MARC 21 format) or a descriptive relationship (7XX fields in the MARC 21 format). Perhaps it needs definition as a separate type of relationship in its own right. For a much fuller discussion of this problem, see Sara Shatford, "Describing a Picture," *Cataloging & Classification Quarterly* 4, no. 4 (Summer 1984): 13–30.

4. Sherman Clarke and Jenni Rodda moderated a discussion on the Mona Lisa phenomenon at the 1997 conference of the Visual Resources Association.
5. Included here are records for scores with added entries for the work with second indicator 2 (meaning the work is contained within the work described by the retrieved record). One could break down the display by language, or include selections, vocal scores, librettos, etc. Another option would be to list these in the initial display.
6. Included here are records for sound recordings with added entries for the work with second indicator 2 (meaning the work is contained within the work described by the retrieved record).
7. Include here added entries for the work with second indicator 2 (MARC 21 format), indicating that they are contained in the work cataloged.
8. In the MARC 21 format, added entries for the work with second indicator 1 or blank.
9. In the MARC 21 format, 6XX fields contain subject-added entries for the work.
10. Include here added entries for the work with second indicator 2 (MARC 21 format), indicating that they are contained in the work cataloged.
11. In the MARC 21 format, added entries for the work with second indicator 1 or blank.
12. In the MARC 21 format, 6XX fields contain subject-added entries for the work.
13. See, for example, Hubert L. Dreyfus, *What Computers Still Can't Do: A Critique of Artificial Reason* (Cambridge, Mass.: MIT Press, 1992); James H. Fetzer, *Artificial Intelligence: Its Scope and Limits*, Studies in Cognitive Systems, vol. 4 (Dordrecht, Netherlands: Kluwer Academic Publishers, 1990); John Kelly, *Artificial Intelligence: A Modern Myth*, Ellis Horwood Series in Artificial Intelligence (New York: Ellis Horwood, 1993); Eric Sven Ristad, *The Language Complexity Game*, Artificial Intelligence (Cambridge, Mass.: MIT Press, 1993); Joseph F. Rychlak, *Artificial Intelligence*

and Human Reason: A Teleological Critique (New York: Columbia University Press, 1991).

14. Dreyfus, *What Computers Still Can't Do,* p. ix, xii.
15. Roland Hjerppe and Birgitta Olander, "Cataloging and Expert Systems: AACR2 as a Knowledge Base," *Journal of the American Society for Information Science* 40, no. 1 (Jan. 1989): 34.
16. Ibid., p. 35.
17. Character strings that are identical but not normalized can also link; problems arise, however, when the same character strings represent different entities, e.g., two different works that happen to have the same title. Here normalization can have the potential to differentiate two entities with the same character string, e.g., using qualifiers such as date of original publication or release, form (textbook versus play), publisher, etc.
18. *Superwork* is a concept that could be applied to works such as *Macbeth* that generate many spin-off works, such as various adaptations and film versions.
19. *Near-equivalent* is a concept that could be applied to copies in different physical formats, such as a microform copy of a particular edition of a particular work, and the text copied, or copies that differ only in distribution information, e.g., an edition (particular setting of the type) that has been issued by two different publishers or distributors in two different years with no change in the text.

8

Applying th
of the W
New Envir

GREGORY H

Seymour Lubetzky stands out as
century. His work on cataloging
process and the way he shaped the d
practices continues to be felt today. A
pact on his students and colleagues,
tial figure in the curriculum. I rem
Columbia University, how Lubetzky'
weight to an activity I hadn't fully co
beyond the flurry of detail that is t
struction in cataloging, and gave me
And it wasn't just me; my students t
cite them freely in their term papers i
ganization of information. In many ca
understanding happening to them in
with Lubetzky's writings as the catal

If I were to acknowledge Lubetzk
concept of the work. Lubetzky outlin
Cataloging Rules and Principles in