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Abstract

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SUPPLEMENT

CONGRESS INTERNATIONAL d'HISTOIRE d'ART CONFERENCE
VISUAL DOCUMENTATION SESSIONS

SLIDE QUALITY CONTROL

Nancy DeLaurier

The art slide market in 1983 is alive and well despite the recession in academia, and is abounding with good slides on stable film. Furthermore, most suppliers are improving their quality as well as expanding their subject coverage. As most of us are well aware, this quality consciousness is a relatively recent development. How did it happen, and how can we encourage the continuation of such a healthy trend? This is the story of the two-way education process between slide curators and slide producers which was and continues to be a prime factor.

To appreciate the present, let's look back to the post-war years of burgeoning development in art history courses, combined with the new 35mm color film that sparked the rapid growth of the art slide industry. The art slide market of the early and mid-60s, as I remember, was dominated by a few relatively large companies: Sandak for American art, Scala for Italian, Publication Filmees...for French, Blauel for German, and the American Library Color Slide Company for everything. By 1968 I found that two lists of slide sources had been compiled with many entries in addition to the above; one list by Luraine Tansey in California, and the other by Margaret Nolan at the Metropolitan Museum, which added major subject offerings for each source. The following year at the first meeting of slide curators, quality was scarcely mentioned in our discussions, and I do not remember a significant expression of concern for film stability. We wanted only to locate subject matter needed for teaching art history. Building the collection was the prime objective.

We knew, however, that there was something special about the beautiful original slides sold by a handful of suppliers, such as the Adelbergs in New York, and the National Galleries in Washington, London and Edinburgh, but we did not know why. We also knew that another handful of suppliers sold really poor slides, but sometimes we bought them, too, because we needed the subjects they sold. The slide market was wide open and all kinds of suppliers were jumping into it -- good, mediocre, poor, and unscrupulous.

Even this expanding market could not supply the growing need for subjects, so many schools began wholesale copy-photography from books and photos. The University Microfilm program supplied many new departments, including ours, with reels of black and white slides copied from photos in the Fogg and other major photograph collections, and was the basis for these embryonic slide collections. Almost any color slide was an improvement from that. However, by the late 1960's, the once beautiful color slides purchased five to eight years earlier from Sandak, Scala, etc., were already turning pink, and in disgust many schools simply rejected all commercial slides and depended entirely on copy photography. It is surprising with the current market that many still maintain such a program, like ostriches with their heads buried in the sands of time. They either don't realize or don't care that bookplates are often grossly off-color, rarely true color, and almost always color-heightened and high contrast, not to mention poorly printed. The poor quality is then exaggerated many-fold by the enlargement of the slides on the projection screen.

The suppliers of these now pink slides were bewildered at the loss of blue and yellow dyes. Some denied it, some blamed it on "one or two batches" of faulty processing, some blamed it on slide room storage conditions which were too warm. (This was found later indeed to be a contributing factor.) Harold Sandak asserted at a CAA meeting in 1971 that no color slide could be expected to last longer than six years. No supplier seemed to suspect their beloved film, the beautiful and cheap Kodak Eastman Color.

The pink slides had meanwhile forced slide curators to consider the problem of slide quality. At a workshop on commercial slide sources at this same 1971 College Art Association meeting, it was evident that a supplier list should add to a description

of subjects an evaluation of quality. It sounded simple: to survey slide curators for opinions on quality and publish the results for the benefit of neophytes. What I found, though, was that we were all neophytes and that less than half of my colleagues could tell a good slide from a bad one. The resulting first Slide Buyers Guide in 1972 was a step in the right direction, but there was a long and uncharted road ahead. Generally, I could tell a good slide from a bad one, but I didn't know what made the difference. To make intelligent evaluations, I realized that I needed to learn about art photography and slide production. Supervising my student photographers at the nearby Nelson Gallery taught me much about art photography, as did my own experience traveling with a camera. I learned about basic photographic processes from books, and slide producers have been most generous and patient explaining the procedures of duplication and printing slides from negatives, as well as the general mechanics, art and problems of slide production. I observed with intense interest slide production at Rosenthal, Sandak, Miniature Gallery, Woodmansterne, Scala, and Publications Filmees, and have taxed all these kind producers' patience with my questions.

In addition to hunting down this basic information, I searched photographic literature on the subject of film stability, but found very little. The pink slide mystery continued to be a puzzle. By 1975 I had tracked the problem quite conclusively to one type of film, Kodak's Eastman Color; but no slide producer or Kodak would admit that the film itself was in any way at fault. The solution came late in 1975 from Isabel Barrett Lowry, who had been corresponding with Kodak as a potential customer to find appropriate film for the Dunlap Society's slide production. Kodak admitted to her that its Eastman Color Motion Picture Print Film (its full name) was known to lose its cyan dye in four to six years, but, as movie projectors would tear it up by that time anyhow, it didn't matter. Kodak did not know it was also being used for art slides and would not bother to improve the film for such a small market.

Now we knew the cause for the pink slides, but persuading producers to change from the offending film was another matter. Derek Carver of the Miniature Gallery was the only one to change film and production methods soon after being informed. Producers with their own processing labs were stuck with a large investment in machinery and could not afford to change. But through our newsletter and conferences the word spread, and most of us minimized our purchases of slides on Eastman Color film. Sandak, who depended heavily on the academic market, within two years changed to another print film, made for slides and much more stable. But the European producers whose major slide sales lay in the tourist trade, were not so pressed, despite our letters and incomplete boycotts.

Meanwhile, movie producers finding their old films turning pink, got through to Kodak, which recently **managed** to develop a stable emulsion with a new chemical processing for their Eastman Color film. Significantly, it is the first film developed primarily for color stability, and has a 50-year life expectancy. It is being made available this summer to replace the old film. We need only to watch now that the compatible new processing is used with it to insure its stability. Several producers, we should note in their praise, changed in 1980-81 to Kodak's trial special order Low Fade Eastman Color film. So we have for two years been able to replace our pink slides from Scala in particular. Our next campaign for the International Bulletin's "Pink Slide Scoreboard", which has followed the activities of Eastman Color Film slide producers, will be to report when producers actually begin using the replacement film and its stability-insuring chemical processing.

But color stability is not the only problem in slide production. Slides have appeared on the academic market out-of-focus, off-color, high contrast, duplicated with dirt, cropped, and badly photographed. We find that most slide producers operate in even more isolation than slide curators, and do not know how their slides compare with others on the market. Experienced slide curators have tried through correspondence to encourage some of these suppliers to upgrade their quality. Some have responded with improved slides.

Less experienced slide curators have also needed help in developing criteria for evaluating the quality of slides purchased or already in their collections. Introductions in the last three Slide Buyers Guides, as well as various articles in the Newsletter/Bulletins have attempted to fill this gap. In addition, almost 200 slide curators have had intensive instruction in slide quality through the Basic Training and the Art Slide Photography workshop courses at the University of Missouri-Kansas City. The most significant action in this area, however, was taken by Carol Terry with her "Statement on Slide Quality Standards," based on the criteria from the 1976 Slide Buyers Guide, then developed and refined with the help of her committee from the CAA and ARLIS Visual Resources groups.

Copies of these Standards were distributed to all slide suppliers listed in the <u>Slide Buyers Guide</u> in order that they would know our expectations. I have been pleased to note that several suppliers include a statement in their advertising or catalogue indicating that they ascribe to these Standards. The Standards were also printed in both the <u>MACAA</u> <u>Slides</u> <u>and</u> <u>Photographs</u> <u>Newsletter</u> (Summer 1978) and in the <u>ARLIS</u> <u>Newsletter</u>, and were distributed at conferences. Slide curators then could use these Standards as their basis for evaluating slides and as a point of reference when complaining to suppliers. Inexperienced slide curators had a specific list of criteria, with a statement of professional organizational support, so they knew they would not have to accept poor quality slides. Here is the statement as published.

STATEMENT ON SLIDE QUALITY STANDARDS
We feel that slide suppliers should be informed of those factors which are most important to us in considering the quality of the slides purchased for our slide collections. The following are our standards for evaluating slides:

COLOR: The color should be as true as possible to the original work of art, neither over- nor under-exposed, nor off-color due to the lighting or the film-type.

FILM: The film should have fine-grained resolution and color should be stable with a minimum shelf-life of ten years. Duplicate slides should be newly-printed as far as possible to maximize their shelf-life. High contrast in duplicate slides should be controlled. The film should be clean with no dirt or scratches on the surface nor duplicated onto the film from the master transparency or negative. The size 24 x 36 mm is preferable; the supplier should indicate other sizes if used.

PHOTOGRAPHY: The slides must be in focus and full-frame as far as possible without being cropped. Lighting should be adequate and even throughout, and without glare or reflections. In photographing paintings and buildings, distortion should be avoided.

INFORMATION: Accurate and complete information is necessary: Artist's full name, nationality and dates, title of the work, medium, date and dimensions if known, and location. Cropped slides should be identified as such, and details should be

described. An indication of the orientation is important, especially on details and abstract works of art. It should be clear which is the front of the slide. It is important to indicate whether the slide will be an original or a duplicate; specific information on the source of the slide, film type and processing would be appreciated. Return and replacement policies should be spelled out. PRICE: The price of the slide should fairly reflect the costs of production and distribution.

The Statement was a mutually productive development for slide producers and slide curators. It codified the curators' increased level of sophistication on slide production, which helped establish the producers' respect for the curators' ability to communicate with them on the quality of their product. Producers began to listen to the curators, many of whom could now converse knowledgeably on the subject of slide production. More and more curators now take an active interest in photography, through instruction, reading and practice, to learn about film and the mechanics and art of photography.

Our correspondence with European slide suppliers who are all professional has been almost solely on the subject of film stability; but many American suppliers, being "avocational," have needed advice from knowledgeable slide curators to upgrade the quality of their slides. Many, especially new ones, have sought our advice, while others have been subjected to constructive criticism in the course of soliciting our business. Slide curators often send me copies of letters they have written to slide suppliers, and I am impressed by the professional quality and thoroughness of their comments. Many of these smaller suppliers offer slides in less common subject areas, usually resulting from their travels, which fill gaps in our collections, so it is worth our while to guide them into improving their quality. New suppliers find that the art slide business is really very complex, considering all the problematical factors of subject matter selection, photographing the subject, film selection, duplication technique, processing, documenting and listing, organizing and packaging, pricing, marketing, and shipping. Some new suppliers decided early on that it is not worth the trouble.

The art slide market is simply not large nor lucrative enough to support more than a handful of suppliers, and those by a

relativley small margin of profit. The cutbacks in academic funding from the recent recession have clearly affected slide suppliers, but not evenly. I have observed with interest the financial health of various slide suppliers, and am pleased to note that, in general, those who produce high quality slides are faring as well or better than ever, and those who don't care or choose to remain deluded about their quality are in trouble or are actually going out of business. This was dramatized a few years ago when a slide producer formally threatened to sue me for "ruining" his business. I believe that his orders had indeed diminished, and I am sure he looked on my actions toward him as sadistic. The truth is, of course, that my goals are to raise the suppliers' consciousness to produce better quality slides, not to ruin their business; and simultaneously to inform my colleagues as to the quality level they can expect from various suppliers. If this process has been destructive to certain suppliers, I am sorry, but so be it. What pleases me is not their demise, but the educated discrimination demonstrated by the buyers of slides in the last several years. It means that fewer slide collections continue to grow indiscriminantly larger to fill cabinets and to project onto classroom screens faded or dirt-splotched or off-color or poorly photographed slides which falsify or distract from the work of art, or render it lifeless. More slide curators are purchasing now for quality rather than quantity, and are supplying professors with slides that truly illustrate the visual concepts of their lectures. How can "The Blue Window" be illustrated with a pink slide? Or how can El Greco's composition be illustrated by a slide that destroys it?

THE PROBLEMS OF HANDLING HISTORICAL PHOTOGRAPH NEGATIVES ON CELLULOSE NITRATE FILM - PETER A. JULEY AND SON COLLECTION

Eleanor E. Fink

On the occasion of this international gathering of historians of art, it is most appropriate to address the role of the photographic reproduction in art documentation and the need to properly care and preserve our research photographic collections. Despite the criticism of nineteenth century opponents of photography, William Ivin's statement that "the photograph in

its way did as much for the study of art as the microscope had done for the study of biology"[1] is still valid. Since works of art are susceptible to damage, loss, or destruction, the photographic record can become an essential document. The history of Caravaggio's I Bari is an example of the indispensable value of photographs in research and scholarship.

It was fortunate for generations of scholars that around the 1890's Caravaggio's I Bari was among the works of art in the Sciarra Collection photographed by the pioneer photographic firm of Braun, Clement and Cie. After the sale of the Sciarra Collection around 1896, Caravaggio's painting was lost. No trace of the painting has been found to this day.

On several occasions, including recent times, paintings have turned up which dealers and collectors have attempted to authenticate as the lost I Bari. The Braun photograph has been useful to prove, on a scientific and aesthetic basis, that these other paintings have all been copies after the lost original.

Similar in value to the records of the French photographic firm of Braun, Clement and Cie, the Smithsonian Institution acquired a collection of the life work of an American pioneer photographic firm, Peter A. Juley and Son. Well-known scholars in the field of art history have written letters verifying the unique and irreplaceable examples contained in the Juley Collection. Among almost every artist represented in the Juley Collection, examples have been found of works of art now lost, destroyed, or altered in appearance.

The problem, unfortunately, is that the Juley Collection consists entirely of photographic negatives, 127,000 of them. This figure is both impressive in terms of the Collection's value as a resource and at the same time problematic in terms of the Collection's preservation. These one-of-a-kind documents were rapidly deteriorating. Through fund raising efforts, a project has been established to preserve the collection.

My presentation today is aimed at sharing with you what I have learned through direct experience in handling the Collection. The procedures I will be outlining include an overview of methods and a word of caution regarding the reliability of modern photographic materials.

But first I would like to give you some background on the Juley firm and the research value of the Collection.

Background History of the Firm

The firm was started in 1896 in New York by Peter A. Juley, a German immigrant who, according to the New York Times obituary notice of January 31, 1937, came to the United States in 1884. By tracing members of the Juley family, it was discovered that Peter Juley, formerly "July," was born in Alf, Germany, a small town on the Mosel.

Specializing first in portrait photography, Peter A. Juley began in 1896 a small photographic business in Cold Springs, New York, where he lived. During the years 1901-1906 he became a staff photographer for Harper's Weekly. While with Harper's his assignments included photographing the funeral of President William McKinley and accompanying President Theodore Roosevelt on national tours. In 1906, Peter A. Juley re-entered the private business of photography. In 1917, his son, Paul P. Juley, joined him as a partner. The firm specialized in photography of works of art and in portraits of artists. Some of the only photographs of artists who flourished at the turn of the century have been credited to Peter A. Juley.

Throughout the existence of the firm from 1896-1975, Peter A. Juley and Son was well patronized by artists, private collectors, museums, and dealers. The firm became the most reputable New York photographic studio for fine art photography. In fact, they held the title "Official Photographers for the National Academy of Design."

Some time after Peter A. Juley died in 1937, his son, Paul P. Juley, moved the studio to 255 West 57th Street, next to the Art Students League. If the firm had already been actively patronized by the art community, the new location produced an ever increasing flow of artists seeking to have their works of art photographed.

In addition to photographing artists and their works of art in his studio on 57th Street, Paul Juley spent many summers traveling to such art colonies as Woodstock, Old Lyme, Mystic, and Gloucester, where he photographed artists in their studios. In the late 1930's Paul Juley even traveled as far as California and Mexico to photograph works by Diego Rivera.

Paul P. Juley continued photographing art until his unexpected death in 1975. Together the Juleys have produced an unparalleled collection of 127,000 photographic negatives, which document centuries of art history.

Research Value of the Collection

The Collection is a valuable resource from several important aspects. Although the Juley firm was in existence from 1896 to 1975, many of the works that they photographed in private collections and gallery exhibitions pre-date the existence of the firm. The Juley Collection also contains thousands of negatives of earlier well-known fine arts photographers, who left their collections to the Juleys to carry on the trade. These negatives of earlier photographers include DeWitt Ward, Bogart, and Colten. Thus, the Smithsonian's Peter A. Juley and Son Collection actually documents centuries of art history.

Because of the firm's reputation and ideal location next to the Art Students League, the coverage of artists' works who patronized the Juley studio is extensive. The collection provides a comprehensive overview of American art for the past 80 years. There is indepth coverage of the well-known artists' works, as well as coverage of some lesser-known artists. Both of these factors are important for the scholarly study of American art.

Because the coverage of artists' works is comprehensive and works of art are especially susceptible to damage, loss, or destruction, it is not surprising that among almost every artist represented in the Juley Collection examples have been found of works of art now lost, destroyed, or altered in appearance. One cannot overestimate the value of these records to scholars, particularly since the Juley record is often the only extant visual document.

The unique portrait photographs the firm took of artists from life (approximately 45,000) are rare documents, especially those taken in artists' studios. Scholars have remarked how helpful these studio records are in dating works of art. The fact that the firm photographed many private collections, as well as gallery collections, has already proven useful to some scholars for information regarding the provenance of works of art, particularly for those works of art now unlocated. As the distinguished historian of American Art, Lloyd Goodrich, has pointed out, the early documentation of works of art which since have been damaged or have been "retouched" by inexpert restorers will be of indispensable value to conservators.

Even the notes that were inscribed on the margins of the negatives in the Juley studio have proven to be valuable to

researchers -- not to mention the fact that those paintings which were photographed in their original frames are of value to curators.

In addition to these many research factors, the Juley Collection chronicles art activity in New York, including coverage of major exhibitions and smaller galleries, many of which no longer exist, as well as historic photographs of Juries at the National Academy of Design and the Society of American Artists, which merged with the Academy in 1906.

In summary, the Juley Collection can be said to serve a multitude of research purposes. It is an invaluable collection, consisting of one-of-a-kind records. None of the values inherent in the collection would have served scholarship had a preservation project not been established.

Juley Preservation Project History and Description

In spite of their expertise as fine arts photographers, the Juleys were indifferent recordskeepers and conservationists. When the collection was acquired by the Smithsonian Institution in late 1975, it was known that all 127,000 negatives needed cataloguing and printing; and some conversion of fragile glass plates and unstable film was expected; but no one anticipated the urgent need to convert to safety film negatives on cellulose nitrate stock which had reached or were reaching the end of their limited life span when they would begin to self-destruct. Several thousand had been found in various stages of decomposition; and several hundred had to be discarded. Loss of these negatives constituted the loss of an irreplaceable visual record -- often the only existing record of a work of art. Once nitrate film begins to disintegrate, it will even destroy adjacent film with its ongoing chemical action. The damage is nonreversible.

The hazardous properties of nitrate film include:
--Ease of ignition (including spontaneous ignition)
--High rate of combustion
--Toxicity of combustion products

The ignition temperature of stable nitrate film is only about 300°F compared with 600°F to 700°F for paper, and 800°F to 1000°F for safety film. Nitrate film which is unstable as a result of partial decomposition with age may ignite spontaneously at temperatures as low as 120°F. Once ignition occurs nitrate film burns so rapidly that it is difficult to extinguish except

by concentrated jets of water. Cellulose nitrate contains enough oxygen in the molecule that a fire cannot be stopped by the exclusion of air. The nitrogen oxides and carbon monoxide given off by burning nitrate film are very dangerous if the quantity of film is sufficient to produce toxic or explosive concentrations of gas.

Some of the negative in the Peter A. Juley and Son Collection were characterized by the following stages of decomposition:

First Stage - Amber discoloration with fading of the picture image.

Second Stage - The emulsion becomes adhesive and the film tends to stick together.

Third Stage - The film contains gas bubbles and emits a noxious odor.

Fourth Stage - The film is soft, welded to adjacent film.

Fifth Stage - The film mass degenerates partially or entirely into a brownish powder.

Due to the condition of the negatives, several experts in the field of photographic conservation were consulted. It became apparent that a full-time, concentrated effort involving additional staff would be required if the collection was to be saved.

Essentially, the procedure would involve the archival processing of each negative to produce a master print and the conversion of all nitrate negatives to a stable film base. Those negatives damaged beyond use would have to be immediately separated and destroyed.

The first step taken was to determine which negatives in the collection were nitrate base. Nitrate negatives were not always marked. Generally speaking, any negatives that were made before 1950 are suspect, although many negatives were made on film with an acetate base long before that time. Most likely sheet film pictures taken between 1913 and about 1939 are nitrate base. One indication of the presence of cellulose nitrate is a characteristic odor. This odor is usually present when a quantity of of nitrate film has been packaged in a closed container.

The best test to distinguish nitrate is to take a 1/4-inch square piece of dry film and place it in a test tube containing trichloroethylene. Shake the tube. If the sample sinks, it is cellulose nitrate. If

it floats, it is acetate or polyester. If nitrate is discovered, the next step is to separate the negatives. It should not be assumed that all negatives on nitrate base are on the verge of total loss. If they are properly cared for, they can be expected to last for a considerable number of years.

Since nitrate was dispersed throughout the entire collection, it was necessary to examine each of the 127,000 negatives. During this process, each negative was assigned an identification number and placed in an individual acid free paper envelope. The assigned number, in our case a computer serial number, was written on the border of the nonemulsion or shiny side of the negative, so that any prints made from the negative would automatically be identified. All envelopes containing nitrate negatives were flagged with a red marker.

The next procedure was the conversion of the nitrate negatives to a stable film base. There are several options for converting nitrate negatives. Budget, urgency, and quality standards are all major factors in selecting a method. The three most common methods used today are:[2]

1. Producing a copy negative from a high quality 8 x 10 print which is made directly from the nitrate negative. Since the copy negative is made by a camera, the new negative is usually less accurate with more loss of resolution.

2. Using a two-step interposition method. An intermediate positive is made on film from the original negative. A duplicate negative is then made from the intermediate positive. All steps are performed on a contact basis. This method can reproduce the original image more accurately but the procedure is expensive, and since it involves two technical steps, it also requires more time to complete.

3. Using direct duplicating film SO-015, which is a simple one-step process produced on a contact basis with the original negative. SO-015 is a black and white film with a special type of emulsion that enables it to produce a negative image from a negative original using a single developer and normal processing. Since it works on a contact basis, the results are more accurate. Because only one piece of film is used, it is less expensive than the interposition method and involves less time to complete.

Due to the large size of the Juley Collection, the deteriorating state of the negatives, and the need to produce high quality results, the direct duplicating method was chosen. The conversion process began in the late seventies, and to date the process has been effective. However, modern technology often substitutes one preservation problem with another. Recent investigations into the long-term stability of SO-015 now indicate that this method may not be desirable. The film is sensitive to light and, if exposed for a prolonged period, may resut in serious deterioration of the image.[3] To cope with this problem, photographic preservationists recommend that archives using SO-015 treat the processed films with selenium or gold image protecting solutions. The effect could increase the stability of SO-015 images to a satisfactory level.

What advice then can be given to archives embarking on the problem of handling historic collections of photographic negatives on cellulose film? Depending on the state of deterioration, it is best to place each negative in a paper envelope and keep the negative in a cool storage facility. The Juley Collection is being kept in cool storage with no intention of destroying the original nitrate negatives until the stability of SO-015 can be assured. Temperatures in the facility range from 40-50°F with a relative humidity of 45%. To prevent deterioration, some preservationists recommend the negatives be stored in freezing temperatures as low as 0°F with a relative humidity factor of 45%. However, this method requires special environmental controls including that the negatives be placed in sealed pouches. Unfortunately, the cost to store negatives in ideal conditions may be prohibitive. In addition to preserving the original nitrate negatives, a master quality, archivally processed print is being made from each negative in the Juley Collection.

If the negatives are deteriorating and must be duplicated, the two-step interpositive process, although expensive and time consuming, should be seriously considered as opposed to the SO-015 direct duplicating method. Unfortunately, there are no simple answers in handling nitrate negatives. Solutions to problems, as stated earlier, will have to depend on budget, time and quality standards.

FOOTNOTES

[1] William M. Ivins, Jr., PRINTS AND VISUAL COMMUNICATIONS, Da Capo Press, New York 1969. p. 136

2   Larry and Jane Booth, "Duplication of Cellulose Nitrate Negatives," PICTURESCOPE, Spring 1982. An excellent article which outlines and evaluates the three basic methods used today, including cost.

3   Henry Wilhelm, "Problems with Long-Term Stability of Kodak Professional Direct Duplicating Film," PICTURESCOPE, Spring 1982.

ART HISTORY AND VISUAL DOCUMENTATION: THE INTERPLAY OF TWO EVOLUTIONS

Helene E. Roberts

The visual document has been much misunderstood and maligned. Critics have summarily dismissed art historians whose research was based on photographs and not the works of art themselves. Articles, written with great erudition, have proved that the photograph is not an exact duplicate of the work of art itself, therefore quite inferior, even suspect, and of little use for serious research. If a good photographic print cannot measure up to this high standard of exact duplication, then certainly the 35mm slide, reproductive engraving and sketch are even less esteemed. That the photograph is not equivalent to the work of art is, of course, true, but it is a harsh judgment based on a single standard of precise verisimiltude and one not very relevant to the practical world. Photographs, slides and other visual documents have proved themselves extremely helpful, even necessary, research materials for art historians.

If one takes a different perspective, and looks upon the photograph, slide or engraving, not as an exact duplicate of the work of art, but as a document containing information about the work of art, the function of the visual representations takes on a far different meaning. Rather like a policeman taking down various accounts of an accident, the visual librarian might think of acquiring, not only the best, but several documents that contribute towards an accumulation of visual information about the work of art. Some accounts will have different lighting, varying angles or a change of emphasis; some observers will be known to be more reliable, but no one account may be able to report all of the information.

Black and white photographic prints communicate the general appearance of the work, the composition and the relationships within it, the iconographic program and details, the texture and finish, and perhaps most importantly, the configurations as set down by the artist's hand. Color film adds another important dimension. X-ray and infra-red photographs reveal information that cannot be seen by the unaided eye. Older photographs may reveal the condition of the work before deterioration and restoration. Sketches and engravings may be the only existing representation of works now lost, altered or destroyed. Furthermore, as schematic representations, they reveal the underlying structure of a work. The intrusion of another hand, that of the copyist or engraver, may make the reliability as a copy suspect, but a sensitive interpreter may read the sketch or engraving as an historical interpretation or commentary on the work. Two different engravings of a work of art may reveal very different perceptions of it and help to ascertain historical changes in aesthetic concerns. Even photographs may emphasize different aspects of a work, depending on lighting conditions, camera angle, exposure time and film.

It thus becomes necessary when acquiring the visual records that document works of art to think, not only of discovering representations that are most like the original work, but representations which impart particular kinds of information about it. Each record may transmit some information about the work, or reveal a different aspect of it, but taken as a whole, the accumulation of information will be more valuable than any single record.

A visual document may be judged on the amount and kind of information it imparts, and also on its accessibility, a quality usually equated with the ease and cheapness of reproduction and distribution. Copies and facsimiles may transmit the truest picture of the original, but they are usually the most expensive, the most cumbersome and the most difficult to acquire of any visual document. The impressive collections of replicas that form the hall of casts of the Victoria and Albert Museum in London is an intriguing place to visit, but visit it one must if one wishes to experience the tangible sense of scale, color, three dimensionality to be found there. If one is willing to forego this experience, one could purchase photographic reproductions of the same works of art that fit neatly into several file cabinets. One might also reduce these images, with some

loss in quality, to a set of microfiche that could be held in one hand.

The usefulness of a large collection of documents, visual as well as written, depends largely on how well they are organized. Several libraries of images now number their collections in the millions, yet because of their classification, cataloguing and organization, it is possible to locate a representation of any single work of art as well as compare it with works of a similar kind. The institutional acquisitions of a very large collection of visual material and the identifying and ordering of those materials have allowed art historians research opportunities not possible through private means.

The effectiveness of visual documentation in the study of art depends upon the amount and kind of information that can be transmitted by the documents, their accessibility, and the effectiveness of their organization. In the long history of visual documentation, improvements in one or another of these three factors have greatly affected the discipline of art history. Visual documentation and art history have, in fact, evolved along paralel lines. As the means of recording visual information progressed from written descriptions of objects to copies, drawings and engravings of them, and then, in the nineteenth century, to photographs, the art historians could analyze, compare and judge the great works of the past with an increasing intelligence and certainty, and could do so because his available evidence was more copious, more accurate, fuller and more varied, due to the increasing accuracy and accessibility of visual documents. Before the invention of engraving in the fifteenth century, an art historian would have to see a work of art himself, or rely on written descriptions or drawings. After the invention of engraving, recognized masterpieces of ancient and western art, as well as of more foreign and exotic cultures, could be disseminated throughout the civilized world.

Connoisseurship, as practised by Bernard Berenson, could not have been possible before the invention of photography, nor could the comprehensive scholarship of the present day have been possible before the collection and organization of photographs photographs in visual libraries. William Ivins in Prints and Visual Communication and Estelle Jussim in Visual Communications and the Graphic Arts: Photographic Technology the Nineteenth Century have described most vividly the revolutionary effects of the invention of

engraving and of photography on art history. They emphasize the technological innovations which in each case enabled a reproduceable image to incorporate more information about the original than had previously been possible. The fact that an image is reporduceable makes it easy to distribute, and if that reproduction process is inexpensive, the image becomes accesible, not to a few, but to many art historians.

The drawings, copies and reproductive engravings that were the visual documents of the past have beenlargely superseded by the photographs and 35mm. slides of the present. These, in their turn, may be supplanted by the electronic images of a rapidly approaching future. Technology again promises another revolution, one which again will affect art history, visual documentation and the relationship between them. Technological innovations are already greatly improving the accuracy of images. Polaroid's new giant camera can produce a virtually exact copy of a painting. Technology is also affecting the accessibility of visual documents. Video discs, for example, can store over 100,000 images on a piece of plastic the size of a phonograph record. Most important of all to our profession, advances in technology will significantly affect the organization of collections. The computer can rapidly retrieve stored images and verbal information in any sequence or combination.

Far sighted individuals in our profession have predicted a time when all students of art will have access to a network, perhaps international in scope, which would form a data and image bank, one that would encompass the world's art. They see a time when art historians will sit in front of a terminal and call up any sequence of images they desire, and have, at the same time verbal information and bibliographical references about that work or about a concept to which it is related.

The size of such a project staggers the imagination. One has only to ask, "How many works of art are there in the world?" The scope of art history is far broader than in its classical day of fixed canons, recognized masterpieces and limited genres. The parameters of art history now include everything made by man, and woman, and even the works of nature that inspired them. There may easily be ten million works of art in the world. Some have guessed as high as fifty million. If visual documentation is to evolve on a parallel track with art history it must deal with images in numbers that embrace such a broad spectrum. Even though the documentation of

such a vast and ever increasing number of works seems beyond our energies, both art history and visual documentation appear to be evolving in that direction, lured on by the siren song of technology.

If such a future is inevitable, how do we, the visual art librarians prepare for it? What do we do in the meantime? I would suggest that there are four possibilities to be considered. First visual librarians should take the central role in shaping this future. We have, after all, the most experience with the practical problems, as well as withx the theoretical context, of visual documentation. It is imperative that we influence the decisions being made. We can help to mold policies by working within organizations, particularly our new Visual Resources Association. In such organizations we can formulate guidelines, devise procedure for cooperation, and review decisions affecting the future.

Secondly, we should set standards, devise authority lists and update our collections with accurate labels and cards. We can only be ready to share information in a network if there is order and consistency within each collection.

Thirdly, we should think of cultivating that which is rare and unique to our own situation, that which is of value to our particular borrowers. Visual collections have usually responded to local conditions: the curriculum of educational instutions, the collection scope of museums, or tne interests of research institutions. No single collection can hope to encompass the breadth of interests now entertained by art historians. We can only do so by sharing resources. By developing our unique strengths and local interests, we will ensure the continuing usefulness of our collections, bu we can also ensure that we will have a coherent and well-developed resource to share.

Fourthly, we might experiment with more sophisticated indexing and retrieval systems, systems that reflect new trends in art history. Subject indexing certainly demands more attention, as does the problem of how best to identify the various other factors that relate works of art to one another. Such indexing will allow researchers to do more with our collections than merely find other works by the same artist or buildings in the same city. More sophisticated indexing should allow for serendipitous discoveries across cultures and time periods. If we identify as many items of visual information as possible and make them retrievable, the large data bank

can be constructed which will permit many illuminating connections to be discovered.

At Harvard we have developed an agenda for tne Visual Collections that addresses some of these issues. In one project we have used Iconclass to index those paintings in our collections which depict Old Testament themes. The project will explore what is involved in iconographic indexing, it will test the feasibility of using the Iconclass system, and it will experiment with identifying concepts wich are not only connected with Old Testament themes, but which also relate to typological or secular meanings and which could be relevant to several kinds of research topics.

In another project we have selected works of art in the Fogg Art Museum. We have then tried to identify other works of art, no matter where they are located, which are somehow related to the Fogg works. These related works include studies, copies, replicas, other versions, other works in a series or decorative scheme. They also include works on the same subject by the same artist or his followers, works bearing the same inscription, commissioned by the same patron, or with other historical associations. Our aim is not so much to discover these connections, as to record the connections observed by art historians in catalogues, monographs and curatorial files, and to be sure we have a representation of all these works in our collection. In time, if we continue the project, any student, curator or art historian will be able to have at hand a complete visual documentation of every work of art in tne Fogg Art Museum, including all of the works related to it. In the meantime we hope to analyze what these relations are and how they can be described for retrieval.

With the invention of engraving in the fifteenth century, technology offered the possibility of reproducing in number representations of works of art; in the nineteenth century the invention of photography allowed for a far more accurate and accessible record. In the twentieth century, technology again offers the possibility of an evolutionary jump in visual documentation. Only through cooperation, experimentation and leadership can the possibility be fully realized. The founding of a new organization offers a guiding hand in this task, as platform for discussion and a center around which we can organize. I hope that we may look back upon this week as an important event in the newest stage of our evolution.

VIDEODISCS AND ART DOCUMENTATION

Janice Sorkow

OVERVIEW

Optical videodisc technology is a very effective tool for art research, archival preservation, and the presentation of visual materials. In fact, this new technology has the potential to revolutionize the current methods of conducting research and the storage and retrieval of art documentation. There are, however, many issues concerning videodisc technology which should be identified before disc systems can become a practical reality for the art world.

This paper will outline:

1. How a videodisc works, including specific advantages and limitations of the technology for the field of art librarianship.

2. How the videodisc may be applied to visual resources and art documentation from the collection manager's point of view. Various art-related videodisc projects completed between 1980 and 1983 will be used as illustrations, and the videodisc done at the Museum of Fine Arts, Boston (MFA) will be used as a case study.

BACKGROUND

Videodisc may be defined as an electronic technology for storing and retrieving visual images. It is a concentric track medium which provides, in a playback-only mode, sustained aural, motion and visual presentations. It consists of a disc, which resembles a 12 inch, 2-sided, long-playing audio record, and a player, which has various features or capabilities depending on its manufacturer.

Over the past ten years, nearly one billion dollars has been spent by many large corporations to develop the videodisc. This research has resulted in three different technologies which are aimed primarily at the consumer, or home entertainment market. From a marketing standpoint, the videodisc was developed to compete with the popular home video tape recording systems; and to win a share of the annual 6.5 billion dollar color television business. Conceivably this goal for high volume distribution of low volume video programming could be achieved in the consumer market because the industry perfected a method of replicating discs that was more efficient than producing copies of videotapes. Disk replication is similar to making audio records where countless high quality copies are pressed or stamped from a glass master.

Videodisc is diffent from videotape because it is easier to replicate, less expensive to produce and store, and it is permanent. Unused videotape has a shelf life of 5-10 years. Copies of tapes can be made at great expense of time and equipment, and there is a noticeable degradation of quality in successive generations of tapes. Also, making 100 copies of a tape requires 100 tape machines, each running the length of the tape at real time (30 frames/second). Videotape cannot pause or stop without having the tape physically damaged by the tape machine. This results in oxide dropout or "snow" on the screen.

Since videotape is recorded at real time, it is also difficult to access individual frames without counting the approximate location of frames on the tape using a counter on the tape machine. Although it is possible to store single images on tape with equipment called "electronic still stores", these are not widely available and can store less than 4,000 individual frames.

NON-OPTICAL SYSTEM

RCA's videodisc system, which is aimed at the consumer market, was unveiled in March 1981. It is called a groove capacitance system because it uses a stylus which is guided through grooves on a disc, much like a record, and plays 30 minutes per side. This system's player is "dumb", in that it has very limited features, and it only provides linear access to what is on a disc. It is encased in a sturdy plastic cover and is inserted into the player. The disc is very fragile and is supposed to last for only 300 plays.

The second system is JVC's, which is supported by Matsushita, General Electric and Thorn, EMI in England and is not currently on the market. The JVC system is a grooveless capacitance system, where a capacitance stylus reads electronic impulses on a flat, ungrooved disc. It plays 60 minutes of programming per side and has features which include fast forward and reverse, as well as two audio tracks. The life span of the JVC disc is not known, but it is estimated to last for over 1,000 plays.

OPTICAL LASER VIDEODISC

The third system, and the only one currently applicable to the industrial, educational, and information management markets, is the optical reflective laser videodisc system. This system, available

to consumers since 1978, was developed by joint venture between Philips, MCA and IBM. In 1979, they formed a subsidiary called DiscoVision Associates, which in 1982 was purchased by Pioneer Electronics Corporation. Universal Pioneer makes the optical disc player and presses discs in Japan. Optical videodisc systems use a laser beam that optically reads information stored in pits which are pressed into an aluminum disc. The disc itself is plastic coated, making it virtually damage free. Barring any serious scratches or warping, this disc has an unlimited life. Besides permanence, other features of the optical disc system inlcude:

1. Dense storage capacity; that is, in recorded form there is the potential for storing 54,000 still frames on one side of the optical videodisc, and each of these stills can be separately addressed. For those who think in terms of slides, this is the equivalent of 675 universal slide trays.

2. Random access to any of these single frames, which are numbered, in less than five seconds;

3. Frame-by-frame advance and reverse at variable speeds;

4. Two audio channels. This can provide either stereo sound or instruction in two languages;

5. Programmability. This can be done with a microprocessor which is built into MCA's industrial player, or through an external computer which can be attached to the player by means of a built-in port.

This system can be called the "intelligent" frame access player with a random access program approach. The programmability feature expands the capabilites of the videodisc player because it allows for interactivity or programmed instruction. This, coupled with random access and dense storage, allows for endless applications for retrieval of instructional training and other stored information.

Other companies actively engaged in optical laser videodisc systems include Sony, 3M, and Magnavox. Each of these systems employs the same basic methods for disc production, but their players and discs have different features, and some systems may not be compatible or interchangeable with others.

Another laser disc system is the transmissive system which allows a laser beam to penetrate both sides of a clear plastic disc and read 108,000 frames without having to turn it over. This was designed by Thompson-CSF in conjunction with Xerox, for use in the industrial market with specific applications designed for office systems and data processing.

Industries employing the optical videodisc system include hospitals, publishers, and General Motors (who bought an entire year's production of industrial disc players to help train sales personnel). Additional groups involved with the interactive capabilities of optical videodisc include the U.S. Army and Hughes Aircraft, who have developed programs for equipment maintenance. Hughes recently put a six-foot high stack of repair manuals onto one disc.

APPLICATIONS TO ART DOCUMENTATION

Large corporations or government agencies are not the only areas where disc technology is used, however. To date, there have been only a handful of videodisc projects developed specifically for the field of art documentation and these may be divided into the following general areas:

1. Museum exhibition/installations
   a. "audio-visual" resource areas for the public
   b. visitor information/maps
2. Commercial enterprises
   a. publishing - scholarly or "publicity" oriented
   b. educational programming - documentary or interpretive
3. Document storage and retrieval/ collection management
   a. in-house use in slide collections
   b. museum or museum networks

EXHIBITION USE

The Metropolitan Museum of Art, New York, has contributed the most recent videodisc (1982) for use in a public exhibit. It was designed as part of the Michael C. Rockefeller Wing of Primitive Art, and this interactive videodisc allows a visitor to gather more information on the cultures of Africa, the Americas and the Pacific Islands, as shown in the galleries. By pressing a series of numbers on a panel at a viewing station, various topics appear on a television screen. After selecting a topic, the viewer sees a one-minute film sequence and/or still images, with information relating to topics such as people, food, art, ceremonies etc. In this case the videodisc hardware is hidden from the viewer who only sees touch sensitive panels and a television screen. The Museum of Science and Industry in Chicago undertook a similar exhibition-related project a few

years earlier on the subject of newspapers and freedom of speech.

Another early project was done by the Smithsonian Institution's National Air and Space Museum. Existing audio-visual programs (over 20 presentations running in a continuous loop, 10 hours a day, 364 days a year) were transferred onto 20, one-sided discs, which are housed in the Smithsonian's computer facility. The presentations, programmed to play in a continuous loop, are transferred via coaxial cables to viewing locations throughout the museum. Although this application is not interactive, it has been successful from the Museum's point of view because the system is practically maintenance free. This is not the case with the multi-image slide shows which are subject to constant repair and maintenance.

COMMERCIAL USE

One of the only known commercial "art related" videodiscs is being produced by the National Gallery of Art, Washington, D.C., in conjunction with Videodisc Publishing Inc. (VPI). A consumer-oriented videodisc, its design is based on John Walker's book, "The National Gallery of Art". The two-sided disc (not available at this writing) consists of, on one side, a 30 minute tour of the galleries, and on the other side, 1,500 stills, with details and captions highlighting the National Gallery's collections. Although specific details are sketchy, VPI has made a unique royalty arrangement with the National Gallery based on disc sales, which will be sold in its Museum Shop, and loaned free of charge to museums as part of the Gallery's educational service.

Although this disc was made by a commercial producer under the National Gallery's supervision, (the Metropolitan's disc was done the same way), art collections should resolve the following issues before deciding on a project and/or a production company:
- copyright/royalty arrangements
- quality and content control
- time and budgetary commitments
Also, the lack of standardized consumer videodisc hardware presents marketing problems for the commercially produced disc.

IMAGE STORAGE

Several videodisc projects related to archival storage and retrieval or collection management are described below.

The International Museum of Photography of the George Eastman House, Rochester, N.Y., recently produced a video-

disc entitled "To Search for Treasure". On one side is a 30-minute program showing a tour of the galleries with the Museum's director. On the other side, more than 150 original photographs were tranferred onto videotape to show still image resolution. A large portion of the disc also clearly demonstrates the steps involved in making the disc. This disc was made primarily as a fund-raising tool for a larger disc project which would record the collection's enormous holdings of over 500,000 photographs and negatives, 3 million movie stills, 8,000 pieces of film equipment and a 35,000 volume library. Since almost 1.4 million dollars would be needed to produce and manufacture these discs, the Eastman House's first disc detailed the potential benefits of the videodiscs for collection management, archival preservation, and visitor orientation.

Another document-oriented videodisc was completed in 1981 at the University of Iowa. This system was designed jointly by the Office of Visual Materials in the School of Art History and the computer-assisted Instruction Laboratory as a "possible alternative" to the traditional art slide library. One thousand (1,000) 5 x 7 black and white photographic prints of woodcut engravings by Dürer and Raimondi were photographed onto movie film, and transferred onto disc. Similarly, data about objects (Bartsch catalog number, artist, medium, date, title and theme), were entered into a HP 2000 minicomputer, and a program was designed to display both text and visual documentation side-by-side.

Selections for viewing visual and textual data are controlled by the computer, and it commands the videodisc to randomly access any associated information as it is called up. Besides being one of the first applications where visuals on a videodisc were merged with text programmed into a computer, this project also evaluated and tabulated user reaction to this new "research system".

In general, the system's storage capacity and random access capabilities (as compared to browsing through slide drawers) were praised by its users (staff and students of the University of Iowa's Art History Department). Negative comments focused on the limited resolution and the lack of side by side comparisons of images. Also little interest was shown in replacing slides with videodisc images in a classroom situation. This is a good sign because replacing slide libraries and slides used in the classrooms with videodisc images is perhaps the first reaction viewers tend to make. This is potentially dangerous

because, although videodisc systems take up significantly less space than a slide library, and more images can be viewed on disc than by manually rooting through slide drawers, it is important to note that the image transmitted via disc is a video image and not a photographic image. The resolution of a television screen at 525 lines in the United States or 625 lines in Europe does not seem to transmit enough clarity of image for teaching.

Although the resolution issue will probably be solved in the next few years, it seems that currently the best use of the videodisc is as a reference tool for browsing through large amounts of visual information.

MFA VIDEODISC PROJECT

Perhaps the earliest informational art-related videodisc was conceived and produced by the Museum of Fine Arts, Boston. This case study will be used to highlight the advantages and limitations of videodisc technology for art information. The MFA's disc documents objects from the Museum's permanent collection. It was pressed in November, 1980, and is a prototype for investigating the potential uses of videodisc technology for library and archival applications.

Essentially, the disc was conceived for use as a tool for art historical research and to aid in management of visual resource collections in an art museum.[1] This project also represented an attempt to find adequate solutions to the problems of using video as a storage medium for photographic documents of art objects. Since this was the first application of disc technology in an art museum, many production procedures and technical processes have been refined and standardized in the past three years. It may be that the MFA project appears to be simple, but it was an early attempt to qualify many issues important to the documentation of art objects and art information. Specifically the project investigated:

1. Image permanence and retrieved image quality, or resolution. This was important because perceived clarity of detail is crucial to art research.
2. The difficulties of transferring single still frames to video.
3. The limitations on editing and updating stored material.
4. User reaction to this new technology in a library or research setting.
5. Interface with computers as an aid to cataloguing and access of information.

It is important to emphasize that although the videodisc possesses enormous storage capacity, it is not enough to simply store information on the disc. It is like taking 54,000 catalog cards or 675 carousel trays and dumping them on the floor. Finding aids or sophisticated retrieval systems must be devised and the act of organizing and cataloguing these images is no small task. It became clear at the outset that none of these practical and technical shortcomings or problems could be overlooked by an art collection, if it were to make a commitment to actively produce videodiscs for research or other applications.

Thus the purpose of the project was to test whether videodisc was an adequate medium for archival storage of photographic documentation of art objects. The emphasis here was the disc's use as a supplement to, but not as a replacement for, existing slide and photograph archives. The question remained...could it be done? If so, could videodisc become a viable cost effective part of the MFA's collection? If the disc was not feasible, how limiting were the limitations?

Before committing the Photographic Services Department to a major videodisc project, a pilot project was established based on the following parameters:

1. An optical laser disc system utilizing Pioneer's industrial player was selected as the best technology;
2. A timetable of not more than a year for project completion and a small budget were established. The budget would be applied to slide transfers, disc production, and hardware;
3. Existing 35mm color slides from the Museum's visual collection representing each museum department would be used;
4. No new photographic methods would be attempted for this project, but information about new photographic techniques would be gathered for future projects.
5. Slides demonstrating a variety of photographic qualities would be selected;
6. No slides would be cropped. Instead, special formatting would be investigated;
7. Slides had to be arranged in a logical manner, for easy access, using only the capacity of the disc player's microprocessor.

MFA IMPLEMENTATION

Once the disc system was chosen, two thousand existing slides were selected as representative of the MFA's collection. They were arranged in an order similar to the cataloguing system used in the Slide Library, which is derived from the system used at the Metropolitan Museum of Art.[2]

Each slide was numbered and its label information photocopied to provide a "hard copy" book index. This is an informal data base through which single objects could be identified. With an appropriate computer program, this data base could be maneuvered to allow simultaneous retrieval of a specific image and all information relating to it.

Text describing objects was not put on the disc because of the inability to edit material once the disc was pressed and because cards of information would have to be specially formatted for television viewing. The criterion employed in making this selection of slides emphasized, along with aesthetic, departmental, and archival considerations, comparative photographic characteristics including age of the slide, film stock and color balance.

The question of slide format was also carefully considered since a 35mm slide has a different aspect ratio than that of a television screen, which is more square. Both vertically and horizontally oriented slides were transferred to fit full frame into the safe-title area of the television screen. This means that on the MFA disc, both the highest vertical and widest horizontal slides are the same size. There was the choice of having horizontal slides fill the whole screen, but this would mean that vertical objects would be cropped, something that cannot arbitrarily be done with museum pieces. This formatting provided a central axis on the screen from which the frames switch, even though a black border surrounds all of the images.

After accounting for these technical considerations, the process of getting the two thousand slides onto a disc began. Although the transfer of motion picture film to videotape had been common in the film industry, little need had ever been shown for doing the same with a large number of still frames or slides.

The slides were tranferred onto rolls of 35mm Kodak Duplicating Film, where each slide was individually assessed for color and density. The film was then shot in motion picture format. Next, the rolls of film were transferred onto videotape which was, in turn, used to produce the master disc which is glass. Here it is important to note the number of generations from the original slides that occur when making a disc.

Two small computer programs utilizing the disc player's microprocessor were also designed for the disc. These programs provide limited interactivity. A series of primary and secondary menus were created to organize the images on the disc and programming instructions were encoded on its audio track. When the program is executed, the user sees consecutive frames showing the disc's title, acknowledgements and operating instructions.

After a command to proceed, a frame showing the eight primary index categories appears on the screen (these are the departments of the Museum). Employing the disc player's key pad, the user presses the number of the primary category to be viewed. A frame showing the secondary categories will then appear on the screen. Once the number of a desired subcategory is pressed, the player searches and then displays all frames in the category, alphabetically by artist, and in groups, by subject. Each image is displayed for 1.5 seconds, which was selected as a good browsing rate. After the last image of a chosen category appears, the player is programmed to return to the secondary index.

With the key pad, the user may also stop at any frame, preview, review or return to either index. Alternatively, if the disc frame number is known (via the book index) the user can search for that frame directly.

IMPLICATIONS

In general, few technical problems were encountered. It was, however, one of the first major art applications of disc technology, and standard procedures and criteria for image quality were simply not available. They had to be developed at each stage of planning and implementation. One specific technical limitation of this project was the use of existing slides. This posed problems of consistency during the transfers, especially in the areas of contrast, color fidelity and aspect ratio.

With future disc projects, new photography specifically designed for the disc is imperative so some consistency could be maintained. Photography could be planned so that, for example, there might be twelve to twenty close-ups following the overall image, instead of having one frame per object.

Strategically then, the MFA project confirms the optical laser disc's ability to be an effective medium for storage and retrieval of art documentation. However, the videodisc replaces neither the need for careful photography, nor cataloguing and research about art objects. It mainly serves as a useful reference tool for viewing visual information. Other potential advantages of using disc technology

for the field of art documentation would be:

1. To make collections housed in major institutions available to broader audiences. If, for example, a scholar was doing research on French paintings housed in U.S. collections, preliminary research could be done by browsing through "disc libraries". The researcher could then contact the collection that houses the desired object to order slides and photographs, by using the frame number on the videodisc as a reference number.

2. Museum collections may be interested in the production and sales of videodiscs to the public as souvenirs (like postcards or handbooks, or as companions to exhibition catalogues).

3. The use of videodisc could reduce the need to handle original materials by providing in video format a reference copy of the material. Clearly, scholars need to work from originals but for many researchers, referring to the videodisc image may meet initial research requirements.

4. The disc can be used as the visual arm of a computer. The text or descriptive information on a computer can be automated and linked with a videodisc which stores the images in a way that is similar to the University of Iowa Project.

The functional and technical limitations of the videodisc, which may make it an impractical alternative for every collection include these issues:

1. Disc cannot be edited or changed once pressed.

2. It is difficult to get good quality hard copy from a frame on the disc as seen on the viewing screen.

3. The resolution of the image viewed on the videodisc is limited by the monitor used to receive the signal. The current American standard television set has 525 lines of resolution. The quality of the image could be improved by using a high resolution monitor, yet the image would still not be the quality of an original print, slide or even a copy negative.

4. Software and hardware is limited in selection and availability. Software applicable to research in art history must be designed and developed, especially since all systems are not compatible.

5. It takes considerable technical and economic commitment to create a video-

disc. In order to produce a disc, all materials (still and/or motion) must be converted into the proper format for transfer onto videotape which is used to master a disc.

There are also a number of subtler issues which need to be addressed if art collections were to prepare videodiscs that would benefit art-related research. Briefly, each museum or collection must formulate policies about disc based on their individual goals and objectives. Collection managers must ask how disc can be used most effectively to meet those objectives. If a collection decides to take advantage of the videodisc's features, and use it for educational programming or publishing, it then should be willing to accept the inherent limitations of the technology. Collections should also be prepared with answers to issues concerning copyright, the current lack of photography and full cataloguing of objects, lack of computerized data bases for accessing materials and the lack of standardization between collections. But, with the development of uniform reproduction standards for documenting art objects by museums, and the production of needed computer software, the optical videodisc can cost effectively expand the services of a visual collection. Art information will be made available to new audiences, and disc can transform the methods by which art collections will collect and disseminate visual information of the future.

FOOTNOTES

1. By way of background, the videodisc project was conceived and executed by the Museum's newly formed Photographic Services Department. This group was established in 1980 to develop Museum photographic policy, coordinate all visual documentation for the Museum and organize a state-of-the-art system for accessing visual materials. It consists of a Photographic Studio, Slide Library and Photograph Collection, with over 250,000 slides and photographs. Each of these departments has been in existence for over 75 years, but each developed separately, and served different functions for the Museum.

The department now develops photographic histories of objects, documents exhibitions, sells and rents slides and photographs, maintains a public circulating library of slides, and oversees copyright policies.

These services are provided to the full Museum Staff, as well as the public, including visitors, publishers, scholars and research institutions. Since the slide

and photograph collections were maintained so differently, the initial step was to consolidate them by putting them on disc. Then the full content of the collections would become apparent. Producing a disc would also eventually assist in other Museum functions like registration, cataloguing, marketing, and sales.

2.   Both Eastern and ancient art are arranged by country, medium, dynasty, and subject. Western painting, sculpture, prints, and decorative arts are arranged by country, alphabetically by artist, and then by subject.

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White, Robert M. "Disk-Storage Technology." Scientific American. August, 1980. pp. 138-148.

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Videodisc/Teletex:
    Microfilm Review Inc.
    520 Riverside Avenue
    P.O. Box 405 Saugatuck Station
    Westport, CT 06880

Videodisc News:
    Videodisc Services, Inc.
    P.O. Box 6302
    Arlington, VA 23206

Optical Memory Newsletter:
    Edward S. Rothchild, publisher
    P.O. Box 14817
    San Francisco, CA 94114-0817

AUSTRALIA'S AUDIOVISUAL COPYRIGHT REVIEW, 1982-3

June Stewart

Australia, a party to the Berne and Universal Copyright Conventions, derives her copyright law from her British origins; British and American precedents have been the main source of changing laws, interpretations and practices. Over the past twenty years, these include the Copyright Act, 1968, legal proceedings: University of New South Wales v. Moorhouse, Sydney, 1975-6 and the Copyright Amendment Act, 1980.

Following the proclamation of the 1980 Act, the need for further revision in the area of audiovisual (or "non-book") material was demonstrated by many comments and requests for clarification. The Attorney-General's Department's Review of Audiovisual Copyright, Issues Paper, 1982, summarizes matters raised and suggestions made, including those set out in 193 written submissions from individuals, commerical interests, institutions and organizations such as the Australian Vice Chancellors' Committee, Library Association of Australia, Australian Society of Authors, Art Association of Australia, Australian Society of Archivists and Art Libraries Society, Australia and New Zealand.

Artforce, produced by the Australia Council, devoted a special issue (no. 43, April-May 1983) to the subject "The Arts and the Law". "Copyright in artistic works" is discussed by Sam Ricketson, author of a forthcoming book on intellectual property.

Further legislative developments are expected during the Budget session of Federal Parliament which began in August. In the Budget, categories of items for which sales tax was substantially increased included video tapes and discs and audio discs (both recorded and unrecorded) as well as associated machinery.

THE COMPUTER AS AN ACQUISITION: PROGRESS REPORT ON AUTOMATIC DATA PROCESSING IN A PHOTOGRAPH COLLECTION

John Sunderland

Introduction

Although the theme of this section of the conference is acquisitions, I shall be concentrating on the initial planning and experimentation at the Witt Library in regard to computerization of its collection. The computer is presently being installed, and we have already accomplished a great deal of preparatory planning.

The benefits to be gained from computerized information retrieval in a slide or photograph library are well known. For a large collection, and especially one with very limited manual indexing and access through only one or two main headings, such as name of artist, or place, the benefits are obviously immense. In a collection dealing mainly with representational paintings and drawings, such as the Witt Library, subject indexing must be the major aim, particularly if the collection is arranged by artist or location of object. I shall not be discussing here what system or systems will be employed in the Witt project, as this has not yet been decided, However, we do consider that subject indexing is of primary importance and that a project without such an index, especially in terms of the Witt Library, would not only be greatly diminished in value but would be almost meaningless.

There are also many other headings or fields to retrieve that will be of great benefit to the art historian. Some of these are location of the works of art, provenance, collections, including sale and auction records, references to literature and to exhibition history, the size of the

paintings, their medium and support, the dates of paintings, drawings, and the titles.

There are also the practical benefits to the library staff in controlling and running the collection. The headings I have briefly mentioned above will be important, but so will records listing facts like negative numbers, microfiche co-ordinates if appropriate, dates of accession of photographs, and other information.

In addition to these advantages, the computer is able to combine and merge information so that searches and questions can be narrowed down and made as precise as possible. We hope to be able to answer questions like: what paintings illustrating Shakespearian plays were exhibited at the Royal Academy between 1800 and 1840 which are now in North American collections? This is the sort of question which is at the moment impossible to answer without months of work, but it is the kind of question which art historians would like to answer. The answers will, of course, be dependent on the resources of the Witt, and will therefore be incomplete. But because of the size and range of the collection, the answers will probably be as complete as can be found in any one archive. And of course the information derived from the Witt can be supplemented from other sources.

I would now like to show you the specimen record cards which we have devised preparatory to input of the information in the computer. These have been devised in discussion with the computer company, On-Line Computer Systems Incorporated. They do not represent computer logic, but they are a kind of model of the structure of headings and fields, drawn up so that manual entry on these paper forms will approximate entry at a terminal or VDU. In fact, we have already started to enter information on these forms to gain experience and to see what changes need to be made. It is very likely that some changes will be made and I should be very grateful for any suggestions or criticisms that any of you want to make. In short, we hope that this will work, but we are in many ways still at the drawing board stage and these record cards are by no means necessarily the final product.

There are some concepts that are preliminary to understanding what we are trying to do. In simple terms, there are two ways of looking at the photographs and illustrations in the Witt Library: first, they are images of actual objects, to be

indexed as if the information were true and uncontroversial in every way, second, they are a mounted illustrations with textual information that may or may not be accurate and/or complete. We felt that in order to reflect the nature and the contents of the Witt Library as accurately as possible we needed to treat the items partly as objects with fixed descriptions and partly as material which needed to be referenced to its source, thus allowing for the inclusion of conflicting information about one item. These sample records, therefore, are designed to fit the Witt material; they are not intended to deal with any other photograph collection, or with the ideal or standard photograph collection, if such a collection existed. On the other hand, the headings and categories we are dealing with, in the majority of cases, are inevitably standard cataloguing or indexing fields which will be familiar to all art historians and art librarians. We hope, therefore, that there will be compatibility between the Witt scheme and other similar projects, whether already in existence or yet to come.

The record card we have drawn up is quite a full one. We decided to do this so that we can capture almost all the information on the most well-documented Witt mounts. It may be that the card is not full enough to cover all possibilities, but in practice we may have to cut down on the information entered. We have no really accurate idea as yet as to how long it will take to enter an average record, and time will obviously be an important factor.

The Witt Library Record

The first part of the indexing or cataloguing process is the Object Record. This concentrates on the broadest classifications and also on the subject classification. The computer generates a unique identifying number for the object, whether painting, drawing or engraving. This is followed by the name of the artist, his national school and dates. The authority for this is the Checklist of Painters, c.1200-1976, represented in the Witt Library (published 1978). This artist authority will be supplemented by additions to the Witt since 1976, and possibly collated with other existing artist lists. One aspect of the project is to make a computer tape of this information so that it can be subsequently updated and printed out. Then a broad class division of the object is made, such as Painting, Drawing, Mural, and so forth. This is followed by a short title, in English, assigned to the work. The object record also includes the date or date range of the work and the

subject classification. These last two categories will be filled in after the more detailed parts of the record have been completed.

The next step after the Object Record is the Witt Library Mount/Documentation Record. This gives more detailed information derived from the illustrations and the text on the individual mounts. There may be more than one mount for a single object. Some mounts have very little information, others have a great deal. In many cases the mount/documentation record will only have a very few entries and there will be many gaps. The amount of information will obviously reflect what is in the Witt Library.

The first part of this record contains details which are largely for computer and library control: a unique mount identifying number which will be related to the unique I.D. number on the object record, the microfiche number to relate to the Witt microfiche, and photograph negative numbers.

Next is the classification of the type of documentation found on the mounts. These are three types. 1.) Witt Anonymous, which means any typewritten or handwritten information on the mount not connected to a text which is physically present on the mount, 2.) Inscription, which means information , i.e. signature, date, etc. actually written on the object and legible in the illustration, 3.) Literary Reference, which means any information on the mount in the form of text cuttings which can be referenced to its source. The third classification can then be identified by an approved list, i.e. Sale Catalogue, Exhibition Catalogue (Dealer), Exhibition Catalogue (Non-Dealer), Journal, etc.

If all three types of information are present on one mount, and if all three include information not present in the other two types, it is possible that three Mount/Documentation Records will be filled in for any one Witt mount. Also if, for example, there are three separate literary references where cuttings are present on the mount, then this could also add further to the number of records of this type. We imagine that common sense will dictate this process to a certain degree, in that if information from two types of sources is identical, it would be necessary to choose one source of information. It is only where additional or conflicting information (i.e. about dating, title or provenance) is provided that it should be necessary to complete all the records dictated by the logic of the documentation structure. It should also be remembered that this structure is designed for a VDU screen prompting

system, not for paper forms, and entry at a terminal will not, we hope, be as cumbersome as entry on paper forms.

Following these introductory categories on the Mount/Documentation Record is a series of headings which are basically familiar cataloguing or indexing fields for paintings and drawings. Information drawn from the different types of documentation will be entered, each related to its particular source, i.e. Witt Anonymous, Inscription or Literary Reference., All this will constitute a complete and unified record, with the information, as it were, footnoted and referenced and sorted together in the computing process.

The headings for the cataloguing of the mounts are as follows: 1.) Additional Artist, 2.) Alternative Attribution, 3.) Second Title - this may be a title in another language or a title by which a painting has become familiarly known, 4.) Medium (approved list), 5.) Support (approved list), 6.) Shape - this is for works of art for which size is not available, and contains a very few basic shapes, e.g Rectangle (Horizontal), Rectangle (Vertical), Circle, Arched, etc., 7.) Size - height, width, and depth (for three dimensional objects), 8.) Unit of measurement i.e. inches or centimeters., 9.) Inscription - this will allow for a number of possibilities, i.e. signed and/or dated, a transcribed signature, a transcribed date, a transcribed identification which may give the name of the sitter for portraits, or a location for landscapes. There will also be a note field which will allow free text transcription of all or part of any other inscriptions on the picture or on the verso, 10.) Date or Date Range for the picture, 11.) History - this is a complex field which deals with provenance. We aim to enter information about provenance as far as it exists on the Witt mounts, in such a way that this can be traced through exhibition and sale catalogues as well as through the names of owners. The form does not specify all the details of this, but a computer prompting system is being designed to make fine distinctions between different kinds of transactions, and different types of owners. It will be necessary to use existing authority lists for names and institutions, and to build up authority lists as we go along.

At this point it may be worth mentioning that different projects with Getty Trust funding might overlap. In the description of names, for example, there may be some duplication with other authority lists for terms and citations. In that case, and also when information from different projects can be classified and

catalogued in the same way, standard
formats and practices will assure that the
different databases will be compatible. At
the same time, each project will maintain
its own identity, depending on the nature
and structure of the information in each
participating archive and institution.

After 11.) <u>History</u> are 12.) <u>Present
Owner/Location</u>, and 13.) <u>Related Work</u> -
this should give us the capacity to relate,
via the computer, preliminary drawings with
finished pictures, paintings with copies
and versions, and so forth. This will
again depend on the information available
in the Witt Library and there will be many
relationships which will not be made,
because the Witt information does not
provide them.

The complete record will also include
the capacity to catalogue prints or engra-
vings and to relate the constituent parts
of objects that are either physically
divided, for example polyptychs or pages of
sketchbooks, or are single entities made up
of a number of scenes or compositions, such
as wall and ceiling decorations. I am not
describing these here, partly because we
have not finished the preparatory classifi-
cation of these sections of the record, and
partly because time is not available.

Conclusion

The record has been designed to re-
flect the nature of the Witt Library as
faithfully as possible, both in terms of
the illustrations and the text. It is thus
not conceived as an ideal indexing
standard, but as a practical way of
creating a database from the material
available in the Witt. Inevitably, as the
Witt is an important reference collection
for art historians, the record will closely
approximate other cataloguing or indexing
systems for similar collections. The
record is still one that can be subject to
flexibility and change and we hope that
cooperation with other institutions will be
possible. We have already gained much from
discussions with our colleagues. We hope
that we shall continue to do so. Our pri-
mary aim, after all, is to make information
available to those who wish to use it, and
to make it available in a form that can be
used as conveniently as possible.

CLIO - A COMPUTER PROGRAM FOR THE EXPLOITATION OF A PICTURE ARCHIVE

Elisabeth Vavra

The following is a brief report on a
project which is in process at the Institut
für mittelalterliche Realienkunde
Osterreichs (Institute for the Research on
Material Culture of Medieval Austria) of
the Austrian Academy of Sciences. This
institute investigates daily life in
medieval Austria, particularly the period
of the late middle ages. It was founded in
1969 as a result of the lack of information
that confronted historical research in this
field.

Besides original objects and written
sources, works of art (paintings, sculp-
tures, prints, drawings, etc.) dating
mainly from the thirteenth through the
beginning of the sixteenth century are the
subjects of investigation. The basis for
the research is the photo-archive at the
Institut für mittelalterliche Realienkunde.
All photographs and color slides are taken
from the original object and must satisfy
high standards of quality. At the moment
the archive holds about 12,000 photographs
and as many slides, a number which will
steadily increase, since one of the
purposes is to document all preserved works
of medieval art in Austria that give infor-
mation about daily life.

The first problem to confront the
institute was how to provide easy access to
the holdings. The second was to devise a
system able to produce connections and
relations between depicted persons, objects
and situations. The decision to use a
computer was made at a very early stage,
but it took a long time to develop an
appropriate and practical classification
scheme which satisfied certain conditions:

1. The scheme of description must be
practical for all sorts of pictorial
sources.
2. It must be variable and flexible;
descriptions may be produced in normal
language and need not be codified.
3. Descriptions should be as com-
plete as possible.

Finally a scheme was developed con-
sisting of a sequence of categories, which
are arranged in a hierarchical structure.
The categories are based on descriptions.
The description of every picture consists
of two parts: the 'physical' description
(archive number, artist, title, size, date,
etc.) and the 'iconographical' description.
While the main categories of the 'physical'
description may be used only once for a

picture , all the other categories can be used as often as necessary to fully describe all the depicted objects. The structure of this scheme is shown in TABLE 1; the hierarchical order is illustrated by the indentations of the line to the right.

TABLE 2 shows the entry for a panel painting of the Adoration of the Magi by Rueland Frueauf, the Elder.

The development of this scheme was the basis for creating a computer program which would analyze descriptions of medieval works of art used as pictorial sources. This program was developed by Manfred Thaller, now of the Max Planck Institute für Geschichte, Gottingen, in the years 1976-1978. (1)

DATA – RETRIEVAL

The simplest kind of retrieval is the search for a certain object, person or iconographical scene.

If you want to know all the donors depicted on Austrian paintings, for example, simple commands are necessary:

QUAERO STAND (SUBJEKT)=STIFTER
SCRIBE BILDTHEMA (GEGENSTAND), TOTUM (SUBJEKT)

The output consists of the complete descriptions of the donors, the iconographical scene and the archive numbers of the photographs:

KREUZIGUNG CHRISTI.................000000
S('M','BERNHARD VON SIERNDORF','CHORHERR; PROPST;STIFTER','KNIEND')
HL.MAXIMILIAN.......................000094
S('M','HEINRICH PLEHUBER','PFARRER; STIFTER','KNIEND;BETEND')
GEBET JESU AM OELBERG.............000166
S('M','JOHANNES MELSS','STIFTER;ARZT', 'KNIEND')
(Some standardized abbreviations are used for the sex of the figures, for example: M = male; F = female; KM = male child, etc.)

A second simple kind of retrieval is making a count. The command NUMERUS produces lists of frequency:

QUAERO SEX(SUBJEKT) = M
NUMERUS NUMERI NAME (KLEIDUNG)

FOLGENDE EINTRAGUNGEN SIND ZU VERZEICHNEN:
BEINLING........................329 MAL
ROCK............................324 MAL
HUT.............................274 MAL
KITTEL..........................155 MAL
GUERTEL.........................135 MAL
WAMS............................117 MAL
SCHECKE.........................99 MAL
etc.

The printout shows the frequency of male pieces of clothing. It shows that one of the most frequent forms of clothing is the 'Beinling'.

If you want to know which pieces of clothing were worn by a certain class of persons, you could limit the question to this class defining the 'STAND' of the persons. The following example uses apostles for persons.

QUAERO SEX(SUBJEKT)=M,STAND(SUBJEKT)= APOSTEL
NUMERUS NUMERI(KLEIDUNG)

FOLGENDE EINTRAGUNGEN SIND ZU VERZEICHNEN:
ROCK...........................212 MAL
HEUKE..........................158 MAL
TASSELMANTEL....................52 MAL

In comparing the two printouts, one finds a dominance of 'ROCK', 'HEUKE' and 'TASSELMANTEL', indicating that apostles wear only classical pieces of clothing, and never contemporary dress like 'WAM', 'SCHECKE' or 'BEINLING'.

Frequently it is necessary to ask questions about groups of objects, (certain classes of people, groups of iconographical themes, furniture, flowers etc. For this purpose it is possible to put together a number of terms into a thesaurus.

The following example shows the question and part of the printout consisting of a counting.

QUAERO STAND(SUBJEKT)=THESAURUS(AUSSEN-SEITER)

THESAURUS(AUSSENSEITER)=HENKER VEL GERICHTSKNECHT VEL FOLTERKNECHT VEL BOGENSCHUETZE VEL KETZER

NUMERUS NUMERI (KLEIDUNG)

FOLGENDE EINTRAGUNGEN SIND ZU VERZEICHNEN:

BEINLING........................253 MAL
SCHUH...........................100 MAL
SCHECKE..........................98 MAL
WAMS.............................93 MAL

If you want to get more information about the clothing of peripheral figures (= 'AUSSENSEITER'), a complete printout of all clothing worn by them can be made. The printout will list what each figure wears.

The printouts shown here only demonstrate a few possibilities to which CLIO is applicable. Computer-supported investigations of medieval pictorial sources cer-

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tainly need not only concentrate on problems of clothing. The methods presented reduce the amount of material for interpretation and therefore accelerate research. They can never replace the sources, (i.e. the paintings,) but they make the approach to the paintings easier.

FOOTNOTES

(1) The first step in developing a computer program was the creation of DESCRIPTOR, a program which is only able to analyze the descriptions of pictorial sources. The currently used CLIO, also created by Manfred Thaller, is a further development. It is able to analyze descriptions of pictorial sources, to make statistical analysis, to analyze written sources, etc. Tests using CLIO have been made since 1982.

See: Manfred Thaller, DESCRIPTOR 1.2. Ein Programm zur Dokumentation und Analyse mittelalterlicher Bildquellen, Krems 1979 (typewritten manuscript); ID., DESCRIPTOR. Probleme der Entwicklung eines Programmsystems zur computerunterstützten Auswertung mittelalterlicher Bildquellen, in: Europäische Sachkultur des Mittelalters (Sitzungsberichte der Akademie der Wissenschaften, phil.-hist. Kl. 374) Wien 1980, 167-194; ID., Automation on Parnassus. CLIO - A Databank oriented System for Historians, in: Historical Social Research 15 (Köln, 1980) 40-65.

For some examples of how to use DESCRIPTOR, see Elisabeth Vavra, Kunstwerke als Quellenmaterial der Sachkulturforschung, in: Europäische Sachkultur des Mittelalters (Sitzungsberichte der Akademie der Wissenschaften, phil.-hist. KL. 374) Wien 1980, 195-232; Gerhard Jaritz, Daily Life in the Middle Ages. Iconography of Medieval Art and the Use of EDP, in: Historische Sozialforschung 21 (Köln 1981) 43-55; Elisabeth Vavra, Möglichkeiten einer EDV-unterstützten Auswertung mittelalterlicher Bildquellen, in: Göppinger Arbeiten zur Germanistik (in publication).

TABLE 1
"Physical" description:
NUMMER (N) = number ('archive number', 'slide number','negative number')
GEGENSTAND (G) = work of art ('technique', 'object','artist','iconography', 'provenance')
DOKUMENT (D) = documentation ('earliest date','latest date','place','province", 'institution')
COMMENTAR (C) = commentary ('measurements' 'place of origin','inventory number', 'literature')

"Iconographical" description:
BILD (B) = scene ('action','place of action')
 SUBJEKT (S) = character ('sex','name', 'rank','gesture')
  SUBJEKTTEIL (T) = part of (S) ('name', 'color','shape')
   ATTRIBUT (A)= attribute ('name', 'color','material','shape')
    RELATION (X) = relation ('name', 'color','material','shape')
   KLEIDUNG (K) = piece of clothing ('name','color','material','shape')
    RELATION (X) = relation ('name', 'color','material','shape')
 OBJEKT (O) = object ('name','color', 'material','shape')
  RELATION (X) = relation ('name','color', 'material','shape')

TABLE 2

N$0023457001220/3002291
G$TAFELMALEREI/TAFEL EINES FLUEGELALTARS/ RUELAND FRUEAUF DER AELTERE/ ANBETUNG DER KOENIGE/SALZBURG
D$1490/1491/WIEN/WIEN/OESTERREICHISCHE GALERIE
C$2090x1340/SALZBURG/4839/KAT.MUSEUM, 1971,S.83 U.87
B$ANBETUNG;GESCHENKUEBERGABE/INNENRAUM
S$M//KOENIG
T$HAARTRACHT/BRAUN//SCHULTERLANG;GEKRAUST
A$POKAL,DOPPELPOKAL(?)/GOLD/METALL/HOCH
K$KOENIGSHUT%IN DER RECHTEN HAND/ROT/ SAMT/FLACH

ACQUISITIONS THROUGH THE LOOKING GLASS
(summary)

Anna Whitworth

As the University Colour Slide Scheme supplies slides to over 130 subscribers, as well as to the Courtauld Institute's own slide library and to the National Art Slide Library at the Victoria & Albert Museum, it has an obvious place on the "supply side" as well as the "demand side" of visual resources. Hence to include it in a session on acquisitions has its ambiguities. But many of the questions which arise in the course of running the scheme are of equal concern to slide librarians, and the U.C.S.S. organiser also acts as a pre-selector or filter of the acquisitions available through the U.C.S.S. I hope that a brief look at the criteria for selection may therefore be useful and that we can discuss any common problems. This selection takes place in three stages:

- the exhibition
- the photography
- the distribution

Of these, the first is the most complex.

From the great range and variety of exhibitions in any year, only a few can be covered by the U.C.S.S. A maximum of 570 slides a year is offered to subscribers. Over 46,000 duplicated slides were issued in 1982/83, and this is the maximum which the present staff of one organizer and one half-time photographer can produce. This naturally results in a drastic process of elimination of any exhibitions which are intrinsically important and which contain material potentially useful to the subscribers. Each year, of course, has its own strengths and weaknesses in different periods and different fields. A balance has to be established in the works photographed between old master and modern, British and foreign, and between that which is obviously important and rather more esoteric subjects which many be only rarely available for photography. As well as requests from subscribers, an over-riding factor may be requests from the Courtauld teaching staff to cover a certain exhibition.

The owners of individual works, as well as exhibition organizers, must of course be asked for permission to photograph. Most private lenders and museums are very generous in this respect. Copyright must also be cleared where this applies.

The photography session dictates selection criteria of its own: with electronic flash, different lenses, and step ladders there is little that cannot be attempted, but as the work is usually carried out in short early morning sessions time is also a factor. At the duplicating stage, certain subjects are particularly difficult to copy satisfactorily. A balance must then be struck between quality and the need for a visual record: there are times when something, even a poor quality something, is better than nothing. But it is not easy to decide to issue a set which contains slides which do not come up to the usual standard, and which will remain for years in subscribers' collections as examples of U.C.S.S. slides. The alternative is to leave unfortunate gaps in the illustration of works which may be crucial to a lecture or a course.

The number of slides in each set is, like the sets distributed, arrived at by a judgment of what will be welcomed by subscribers of widely differing interests: some are art schools, some are museums or universities with a historical bias, some have thriving design or conservation courses, other specialize in the art of one country. Past orders are a useful indication of the level of interest, but with such disparity it can be hard to predict the popularity of, say, a set of Canaletto slides including many details, or models of Tatlin constructions, or the retrospective exhibition on the Royal Opera House, where the slides might be used by English and Drama as well as Art Departments.

The slides are sometimes ordered by slide specialists - librarians or technicians - sometimes by the members of the teaching faculty. And the level of communication between the two varies from one institution to another. A change of visual resources staff, or the addition of a new course to a curriculum, may lead to a change in the emphasis of the orders. Requests for back issues can only be fulfilled if spare duplicate or original slides happen to be available. The demand for "one of" copies might be considerable if such a service were offered, but if the cost were to reflect the administration involved it might be prohibitively high.

Subscribers to the scheme are faced with certain problems in their acquisitions which arise if they are among those who, rather than receiving all the slides issued, order from the four circulars which arrive in the course of the year. Although the major public galleries announce their exhibition programs well in advance many others do not, and often the decision to photograph is taken after a show has opened. It is therefore impossible for either the organiser or the subscriber to know what will be covered in the year ahead. If the subscriber's budget is limited this means that a decision must be made whether to order what is listed on the first circulars of the financial year, or to save up the allocation for what may be more important teaching material from exhibitions later in the year. This difficulty is probably specific to the U.C.S.S. with its system of pre-payment for a stated number of slides, but the system also has advantages to subscribers in that they can set aside a certain sum for U.C.S.S. acquisitions on an annual basis which suits the budgeting arrangements of many colleges.

If a sufficient level of demand could be assured, there would be scope for similar schemes to cover architecture, and far more in the field of design. Present physical and financial resources dictate that expansion must be limited for the time being, but if those who are responsible for acquisitions will play an active part in indicating their requirments to suppliers, the U.C.S.S. will be as responsive as possible to their needs, individually and collectively, in its coverage of exhibitions.