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## Museum Data Bank Research Report: The Yogi and the Registrar

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IN THE COMPANY OF the research reports of this series, this article can claim only the status of an essay. It will attempt to survey, from the vantage point of the art museum administrator, the common ground between the registrar and the curator, and to determine whether the common ground, if any, justifies cultivation in the form of data processing. This investigation aims at no revolutionary conclusions, but it may help in clarifying the nature of some of the problems which characterize art museums and set them apart in the museum community.

Most of these problems are traceable to the nature of the work of art itself. (In this article, "work of art" will in general refer to a painting or work of sculpture; prints and the decorative arts will be considered incidentally and as secondary categories.) Insofar as its fundamental value and significance are commonly accepted as being intuitively apprehended, unquantifiable by any objective scale, and unique to the object, the work of art is the source of both pride and despair to the profession. The demonstration and assessment of value comes, ultimately, only from the response of the viewer, and all data that document this response are subjective in origin.

At the same time, a very rare and highly acclaimed work of art may be worth millions of dollars on the market, so the primary or aesthetic value may be overshadowed by the sensational commercial value. There are, of course, a number of possible kinds of secondary value which may in turn be more or less objectively quantifiable—i.e., not only market price, but documentary value (biographical, iconographic, historical,

social, scientific), value because of associations (religious, patriotic, sentimental), or functions (decorative, didactic), and so on.

Therefore, the director of an art museum finds himself a sort of foster father to a horde of objects whose value descriptors—individually and collectively—run the widest gamut, subjective to objective, and are often completely dissimilar in kind. At one pole, his job is to take an inventory and establish the identity, condition, ownership, and location of each object. At the other, he must assess the grounds by which each object is classified as art, good art, or great art. On the one hand, he appoints as an assistant a registrar with a passion for order. On the other, he appoints a curator, it is hoped knowledgeable, with a sixth sense for artistic quality.

The result, to paraphrase Arthur Koestler, is to bring together into the art museum the yogi and the registrar. The registrar, like Koestler's commissar, believes that "all the pests of humanity...can and will be cured by Revolution, that is, by a radical reorganization of the system...; that this end justifies the use of all means...; that logical reasoning is an unfailing compass and the Universe a kind of very large clockwork [read *computer*]" (Koestler 1945, p. 3).

As for the curator, if we may suppose an extreme manifestation and again borrow from Koestler (1945):

On the other end of the spectrum, where the waves become so short and of such high frequency that the eye no longer sees them,...crouches the Yogi....He believes that logical reasoning gradually loses its compass value as the mind approaches the magnetic pole of Truth or the Absolute, which alone matters. He believes that nothing can be improved by exterior organisation and everything by individual effort from within...He believes that each individual is alone but attached to the all-one through an invisible umbilical cord. (pp. 3-4)

Koestler concluded that these polarities have never been combined in one individual. To be sure, the art museum director may have to attempt to reconcile these opposed temperaments, but that is not where the inevitable antagonism lies. In art museums we find, on occasion, intuitive registrars and orderly curators. But in carrying out their functions they discover that they have divergent needs because of differing and incompatible value systems which pertain to the objects of their concern.

To illustrate this and to bring the point home, let us take a specific example from the publications of the Museum Data Bank itself. In Museum Data Bank Research Report Number Three, Jack Heller has supplied a somewhat abbreviated sample of a card catalog entry, with a hierarchical structure, as a documentation of Picasso's well-known painting, *Three Musicians*, in the collection of The Museum of Modern Art in New York (see Figure 1). His "record" contains "fields of information composed of tag, value and connectivity data" (Heller 1974, pp. 2, 14). Heller's intention in producing this sample record was to demonstrate the application of connectivity data, but the record can also be

used in this present study as a starting point in examining the relative objectivity of the contents of the fields themselves.

In Heller's record, the fields consist of the basic documentation characteristic of registrars' records (these are essentially "objective"—i.e., the first group of fields) and then five or six subject matter descriptions of a kind that would normally be more of interest to a curator or art historian than to a registrar.

Even the first group of fields, the basic documentation, upon examination, proves to contain data subject to variation as they appear in other contexts—i.e., data which are established in "authoritative" form only by arbitrary decisions. Early catalogs of The Museum of Modern Art give the title as *Three Musicians (Three Masks)* and the measurements as 80 $\frac{1}{4}$ " by 88 $\frac{1}{2}$ ". Later catalogs give the title as simply *Three Musicians* and the measurements 6' 7" by 7'  $\frac{3}{4}$ " (Barr 1939, p. 108; Barr 1946, p. 122; Rubin 1972, p. 112). But it is at this level that data discrepancies are most easily resolved and agreement as to "facts" most easily reached.

Turning to the second group of data entries and comparing various published accounts of the painting, we find more disparity and less objectivity than in the case of the first group. What indeed is the subject matter of the picture? All shapes are highly distorted and abstracted, but there appear to be three seated figures wearing costumes and masks. Two hold musical instruments and the third, a musical score. There also appears to be a table in the foreground with objects on it and a dog in the background. Because of their musical accessories, the figures can be termed "musicians," but they can as well be labeled "actors" or "masks," or "a pierrot, a harlequin and a monk," on the basis of their costumes. The musical instrument of the left-hand figure is perhaps more like a recorder than a clarinet. The musician to the right holds a musical score, not an accordion, and is perhaps shown as singing (in a second version of *Three Musicians*, owned by the Philadelphia Museum of Art, the monk holds an accordion [Rubin 1972, p. 112]).

In short, the instruments are not clearly established (clarinet or recorder?), the actions are not established (are the instruments being played or merely held?), and the figures cannot all be objectively labeled by costume "musicians" or "actors," and the "monk" may be a "domino"). Even greater confusion would attend the objects on the table had not an art historian queried Picasso and learned that they represent a pipe, packet of tobacco, and pouch. (If one objects to the fact that the painting chosen here for discussion is untypically obscure as to subject, the fact remains that the accurate identification of subject matter is a problem endemic in art history [Rubin 1972, p. 112]).

The *Three Musicians* is a work of such importance in Picasso's oeuvre that many studies of art history refer to it, discussing the version in The Museum of Modern Art interchangeably with its companion piece in the Philadelphia Museum of Art. A quick look at some of these

## RECORD 5

**Group 1**

TYPE	oil painting
ACCNO	21.37p
TITLE	The Three Musicians
ARTIST	Picasso, Pablo
VENDOR	Gallerie Rosenberg
MADE	1921
LOC	The Museum of Modern Art, New York
SIZE	79 x 87 $\frac{3}{4}$ "
REF	Our-2
REF	70-164877
MEDIUM	oil
MEDIUM	canvas

**Group 2**

(5,1)	
FIGURE	musician
POSITION	front
(5,1,1)	

OBJECT	clarinet
COMMENT	left figure

(5,1,2)

OBJECT	guitar
COMMENT	center figure

(5,1,3)

OBJECT	accordion
OBJECT	music store
COMMENT	right figure

(5,2)

FIGURE	dog
POSITION	side

*Figure 1.* A Hierarchical Computerized Catalog Record (Adapted From: "On Logical Data Organization, Card Catalogs, and the GRIPHOS Management Information Systems" by Jack Heller, 1974, *Museum Data Bank Research Report No. 3*.)

discussions reveals all the layers or levels of "fields" or value groupings that the critic-historian characteristically resorts to in describing and evaluating the work. In connection with such discussions, the writer often begins by reproducing the painting together with a title line listing a half dozen descriptors at what might be called the "registrars' level":

Pablo Picasso, *Three Musicians*, 1921, oil on canvas, 79" x 87 $\frac{3}{4}$ ", The Museum of Modern Art, New York

Next, the critic-historian characteristically mentions the subject matter briefly (musicians, instruments, costumes and types, setting), and then goes on to comment on style. Here we enter a third range of values, even more subjective and variable than "subject." We come across such characterizations as:

A calculated rearrangement...of fragmented and geometrized images derived from a *motif*.... (Read 1959, p. 156)

Picasso's *Three Musicians* shows this "cut-paper style" so consistently that we cannot tell from the reproduction whether it is painted or pasted....The separate parts are fitted together as firmly as architectural blocks, yet the artist's primary concern is...with the image of the three musicians.... (Janson 1962, p. 523)

The composition is classically severe....The forms are large, almost solemn. They are almost exclusively geometrical forms, and they are pieced together in the "synthetic" manner to suggest representational elements. (Haftmann 1960, p. 282)

These three characterizations overlap generously in content, but in saying much the same thing they employ almost totally different vocabularies. The only key words that are shared, even in root form, are "image, images" and "geometrized, geometrical." Although the critics might agree, more or less, on a few basic stylistic descriptors such as "cubism" and "synthetic cubism," they pursue their stylistic analyses using their own vocabularies and personal shades of meaning.

Finally, we come to the last layer of value groups: to the actual evaluation of the work. For each critic-historian and in each context this may differ, yet it is for this "value" that the work is acquired, cataloged, preserved, displayed, and studied by the art museum. The *Three Musicians* is cited as a masterpiece (Janson 1962, p. 523; Elgar and Maillard 1956, p. 126; Rubin 1972, p. 112), as a synthesis, summary or climax of Picasso's Synthetic Cubist period (Brandi 1966, col. 326; Barr 1939, p. 108; Barr 1946, p. 122; Rubin 1972, p. 112), as impressively monumental (Janson 1962, p. 523; Elgar and Maillard 1956, p. 126; Rubin 1972, p. 112), as disturbingly expressive (Janson 1962, p. 523; Haftmann 1965, p. 232), and as sad, solemn, sinister, superbly decorative and mysteriously majestic (Barr 1939, p. 108; Barr 1946, p. 122; Rubin 1972, p. 112; Haftmann 1965, p. 232). In short, it is regarded as significant because of its formal quality, its place in Picasso's oeuvre and in the history of art, and because of its expressive impact. But these evaluations are all purely subjective, the result of a felt response or a comparative aesthetic judgment on the part of the critic-historian. Moreover, their import evades the computer.

It is not the point to labor the obvious fact that the descriptors used in regard to art works are uncommonly slippery. However, as a spokesman for art museums in the company of botanists, biologists, archaeologists, social historians, and computer scientists, it is necessary to illustrate most explicitly the distinctive nature of the concerns of the critic-historian as they are shaped by the unique nature of the object of

art. Presently we shall go on to consider the general implications of this in connection with data processing and networking, but first let us take another look at the observations made thus far. It should come as no surprise that the conclusions reached through our case study should correspond closely enough to those reached by theoretical critics. We may illustrate this by a comparison with a schema derived by Kenneth C. Lindsay from a study by James S. Ackerman (1963, pp. 144-63) and already related to the computerization of art objects on the occasion of The Metropolitan Museum's 1968 conference on Computers and their Potential Applications in Museums (see Figure 2) (Lindsay 1968, pp. 24-25, 31-33, 36).

The four value groups of our analysis of *Three Musicians* correspond roughly to the "Levels" of the Lindsay-Ackerman chart. The registrar's, or basic catalog, grouping parallels Level I, "Empirical, Work of Art as Object," although of course the basic records also include the documentation associated with the object. Subject matter falls under Level II, "Analytic, Formal and Symbolic Structure." (Ackerman's term "symbolic" is broader than "subject" and embraces abstract painting.) Stylistic analysis of a painting extends from II to IIa (Connoisseurship), and the fully subjective level is reached at III, "Intuitive or Valuable." In Lindsay's analysis, Level I yields data suitable for computer use, Level II does so partially, and Level III lacks such data.

By now it should be sufficiently clear that the critic-historian inevitably finds data more and more subjective and data processing methods less and less helpful as he concentrates on meanings and significance. The greater part of his investigations may be conducted in the mid-level zones of style and iconography, but even here the nature of the data limits the usefulness of the computer.

At this point the question may be asked: "But who is this hyphenated critic-historian and what has he to do with day-to-day curating?" He may, of course, be an academic art historian exercising critical judgments and appearing as the author of standard texts and monographs, and at the same time he may very well show up on the staff of an art museum as a curator, writing such a book as *Picasso in the Collections of The Museum of Modern Art*. Indeed, the creative scholar-curator stands at the head of his profession.

It would be a gross oversimplification to assume that the creative scholar-curator spends the greater part of his time simply experiencing the unique qualities of art objects intuitively. Let us be quite specific in giving credit where it is due. The "empirical" tags are invaluable foundation stones for all art research, understanding, and criticism, and there have been occasions when the power of data processing has been extremely useful in solving problems of attribution. Ways have also been devised to utilize it as a tool at the iconographic and stylistic levels. (See the reports of J.B. Bird [1968], C.C. Daughterman [1968], and W.J.

Levels	Objectification spectrum of our statement	Operates with	Range of individualization	Information theory
I. <i>Empirical</i> Work of art as object; record of physical properties (size, shape, materials, condition), technique	I. by comparing against conventional standards of measurement	Operates with extrinsic characteristics of art	Least individualized	<i>Less information</i> because it has the most easily communicable message
II. <i>Analytic</i> Formal and symbolic structure (conventional character) IIa. (Connoisseurship) Style of individual artists	II. by comparing two or more works of art			
III. <i>Intuitive or evaluative</i> Work of art as a unique object (total import)	III. by experiencing—not tabulating—the impact of the total art work	Process of articulating the uniqueness of individual works	Most individualized	<i>More information</i> because it has the more complex and individualized message

Figure 2. Levels of Information Analysis (from "Computer Input Form for Art Works" by Kenneth C. Lindsay, 1968. In *Computers and their Potential Applications in Museums*. New York: Metropolitan Museum of Art, pp. 24-25.)

Paisley [1968] in *Computers and their Potential Applications in Museums*. Paisley suggests various uses for computers, but, in general, to research they have not yet proven effort- or cost-effective.) But after more than a decade of availability, the use of the computer for such art-related museum research remains fairly rare. The occasions when a mass of catalog data can be analyzed for results significant to research are infrequent (see later discussion for the special cataloging efforts of the National Collection of Fine Arts and the National Portrait Gallery), and so, it seems, are problems which are most effectively solved by special constructed databases. We come back to the fact that we are in a field where rarity and uniqueness are characteristic attributes, and where more or less subjective observations form a large part of the data on record.

To put this another way: in museum fields where the collections consist of many objects, each sharing certain extrinsic characteristics with numerous others, the mere cataloging of objects creates a potential tool for computer-assisted research. Three factors are important: the size of the collection, the degree of overlap of the descriptors, and the nature of the descriptors. In the art museum, the rarity of the objects limits the extent of the database; the individuality of the objects limits the overlap of the data; and the subjectivity of significant descriptors makes the accumulation of useful objective data difficult.

In the case of the National Gallery of Art, with about 2,680 paintings and 1,770 works of sculpture in its collections, the items within the purview of each curator can be reviewed or even inspected physically without difficulty. The registrar's office does not find card records unmanageable. In 1971, the gallery, with the assistance of David Vance and Jack Heller of the Museum Computer Network, computerized the sculpture records as a test project. The principal benefit was probably the bringing of greater conformity to the record entries; also, the various printouts by artist, medium, title, subject, donor, etc. were convenient and useful. However, there has been no expressed interest in a follow-up, and the gallery's sculpture curator remains convinced that the catalog database is of little help in research unless it is to be supplemented by an extensive descriptive record, using at least 300 tags, breaking down materials, techniques, iconography, and stylistic factors in detail. The formation of such a database for the 1,770 items of sculpture is a staggering proposition, yet, even if it were to be completed, its use would be limited unless it were networked to similar banks in other museums.

The curators of painting in the National Gallery also considered the sculpture computerization test project to be of only limited use. The Print Department, however, with some 30,000 to 40,000 items to keep track of and a rapidly expanding collection, recognized that the operation is at a point at which computerization could be of substantial help. Prints, of course, are objects less individualized, more repetitive, more

easily collected in quantity, more reflective of standardized and mechanical techniques, than paintings. Accordingly, computerized data are more useful in cataloging procedures and probably even elementary notations on technique and materials would make possible data sorts which would assist research.

Few museums have painting collections large enough to make computerized collection management obviously attractive from the cost-effective or effort-effective standpoint. On the other hand, other types of collections can easily grow to such a size, especially if the objects collected lend themselves to characterization by repetitive and objective data. The National Portrait Gallery in Washington has only 700 works of painting and sculpture, but its Catalogue of American Portraits contains 30,000 entries. The gallery resorted to data processing at an early stage. It is by policy not concerned with aesthetic quality but with likeness, and it disclaims being an art museum. The National Collection of Fine Arts has sponsored an Inventory of American Painting. To date it has amassed about 130,000 entries. Computerized data processing obviously provides the proper tools for this undertaking which is, in fact, not concerned with cataloging so much as creating an extensive and necessarily uncritical inventory.

The National Gallery of Art is faced with the problem of processing an even larger mass of art-related data but in the form of collection control and cataloging. The Photo Archive at the gallery has been building up the photographic collection actively for about five years and now has some 600,000 photographs with a goal of 2.5 million. Obviously, if only three sets of index cards were to be kept (artist, title, and subject), the result would be 7.5 million cards, for practical purposes an unmanageable and unsortable number. The gallery has had computerization of its photographic collection data under study for several years, and it appears finally to be near the start of active processing.

The problem of identifying the essential descriptors for such a catalog is difficult. The size of the collection is such that it is tempting to list all questions which might reasonably be asked so that the computer might be called on to help whenever one of them should arise. On the other hand, given a cataloging task of this magnitude, every entry on the record card that can possibly be dispensed with must go. If each record card took an average of five minutes to fill out, a staff of five catalogers working full time would require six years to process the photos already on hand, and at the end of that time the staff would be at least another six years behind in processing the acquisitions that had come in while they were working. (The design of an appropriate catalog entry form for a large photographic archive has been under study for some time at the National Gallery. Sample forms designed for both SELGEM and GRIPHOS use have been designed, but no actual entries begun. Meanwhile, the Mellon Center for British Art and Studies at Yale has been awarded a

four-year grant by the National Endowment for the Arts for the use of GRIPHOS in cataloging their photographs.)

The dimensions of the problem are such that it is easy to understand why the most nearly comparable photographic collection, at the Witte Library in London, keeps no cataloging record at all of its holdings. It has about a million photographs and a very limited staff. Photographs are filed alphabetically by artist in boxes and on the shelves where they are stored. If a print is misfiled, there is not only no way of finding it, but also no direct way of determining whether it ever existed or how it could be replaced. The Witte Library is an invaluable resource but, for economic reasons, it has entered the realm of the yogi without benefit of registrar.

While we are considering examples of cataloging, we should also turn to the other extreme: The Museum of Modern Art in New York, where a zealous and inventive registrar played a major role in developing a data processing system suitable for the records of art collections (but adaptable to other types of museum collections), and then supervised the entry of the museum's catalog data into the computer. The example of The Museum of Modern Art demonstrates that an art museum with a collection of moderate size can process its catalog records without great difficulty or expense if the registrar takes the initiative, with the support of the administration, and that the resultant printouts are useful. (David Vance has documented his work at The Museum of Modern Art and for the Museum Computer Network in a series of articles and publications; much of it is summed up in his *Manual for Museum Computer Network Data Preparation* [State University of New York at Stony Brook 1975].)

If other art museums appear currently to be slow to follow this lead, the reason traces back to the problem that lies behind the conflict, if any, between the curator and registrar—i.e., the problem that lies in the nature of the art objects themselves. To be sure, the registrar may be more interested in a computerized catalog than the curator, but, more importantly, the art museum staff as a whole is less likely to be interested in such a catalog than the staff of a history or science museum.

In summary, in the case of art galleries with a relatively select and limited collection of paintings and sculpture (if we may generalize from the experience of the National Gallery of Art and random observations):

- the registrar may be attracted to data processing but is not driven to it by collections management problems;
- the Painting and Sculpture Curators do not regard the catalog database as a research or management tool requiring computerization;
- as a result, the staff and administration tend to avoid the disruptive cost and effort necessary to convert the basic records;
- however, curators on specific occasions may resort to computer-assisted data analysis as a research tool, using specially constructed data banks;

- meanwhile, as certain collections grow, such as print collections, the value of computer-assisted cataloging becomes apparent to the curators concerned as well as the registrar;
- and especially in the case of research inventories and very large research collections like the Photographic Archive of the National Gallery, the museum staff will be forced to use the computer; this may well be the point at which the average curator first becomes familiar with the tool.

There is no doubt but that the computer will be used increasingly in art museums, but since most of the registrars will not soon be in a position to convert their core data into computer form, art museum networking, however desirable in theory, will be slow in coming about.

*Editor's Note:* This paper represents a revision of a 1976 essay by the author which was number 7 in a series of Research Reports of the Museum Data Bank Committee. The author was then planning officer for the National Gallery of Art. He is currently planning consultant at the National Museum of American History where the registrar's office is engaged in a multiyear project of inventorying the collections. The article, revised for this issue of *Library Trends*, retains its pertinence in describing the problems of classification and computerization peculiar to art collections.

The author notes that, since this article first appeared, the National Gallery has developed massive computer capacity under the leadership of the treasurer. In the course of establishing control of general inventories, the trustees requested that the art collections be computerized.

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