Points of View

Jane Sledge

Systems Projects Manager
The Getty Art History Information Program

Be patient toward all that
is unsolved in your heart
Try to love the questions
themselves...

Do not seek the answers,
which cannot be given
because you would not
be able to live them.

And the point is
to live everything.

Live the questions now.
Perhaps you will then,
gradually, without
noticing it,
live along some distant
*day into the answers*

Rainer Maria Rilke

Between January and May 1995, the Getty Art History Information Program (AHIP) and the Consortium for the Computer Interchange of Museum Information (CIMI) held a series of three meetings under the rubric Points of View, to examine underlying assumptions about museum information, to study users' demands on data, to explore how museum staff respond to users' requests, and to consider potential audiences and their points of view. The goal of the Points of View project is to amplify access to cultural heritage information by gaining an understanding of users' needs and expectations. The project seeks to ensure that solutions developed for public access will provide the

tools and information that people want. This paper highlights issues raised during the three meetings. Credit for these insights must be given to the meetings' thirty-seven participants. A list of participants is available from the author upon request.

The Internet is a complex web of information that requires us to think in new ways to meet the demands of our audiences and to provide them with the information they seek. The problem is like the old Chinese "beyond the nine dots puzzle" which challenges you to connect nine dots (or, the mysterious web of the Internet) with four lines without lifting your pen or pencil from the paper. To solve the puzzle you must think of a solution that goes beyond or outside the nine dots.

Figure 1

start here
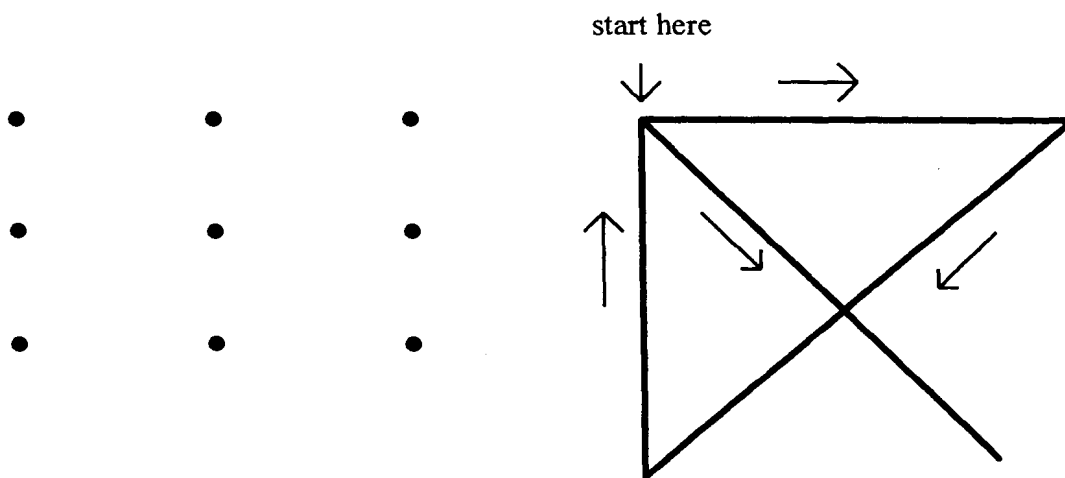
The work of the Points of View project to date demonstrates that museums must think beyond the nine dots to create new structures and frameworks for information presentation and access.

The modus operandi of the Points of View project is simple: invite a group of museum staff, including directors, educators, registrars, publishers, interpreters, and members of the museum audience, to bring questions, posed by users, for examination and discussion with the goal of understanding the implications of the information requested. Meeting participants discuss the questions and consider strategies for amplifying access to cultural heritage information.

Two background articles were given to the participants before the meeting to stimulate thoughts and ideas. The first article, a provocative editorial by Paul Saffo in *Wired* (April 1994), titled "It's the Context, Stupid," Saffo suggests, "It is not the content but the context that will matter most a decade

or so from now. The scarce resource will not be stuff, but point of view." Saffo postulates that in a world of cyberdreck, point of view will be the scarcest of resources.

The second article, by Elizabeth Orna, taken from *Museums Journal* (November 1994 Vol. 94, No 11), entitled "In the know" states, "There seem to have been surprisingly few attempts to answer the question: What access do users want? One cannot but be struck by the contrast between all the publicity about investment in IT [information technology] for media access and the poverty of information about simple things like the questions people ask and who asks them."

Orna writes, "Perhaps a museum can be said to offer intellectual access to its resources if:

- It enables people to think, for purposes they have defined for themselves, about the objects in its collections.

- It allows them to approach and move through information about the collections in ways appropriate to what they want to achieve.

- It lets them take their thinking to the limits of the detail available in the museum's resources of knowledge about its collections and offers them the opportunity of dialogue with the museum in which they can contribute their own knowledge and ideas."

Orna views the museum as a threefold storehouse that contains physical objects, the implicit information inherent in the objects, and curatorial knowledge about the objects and their context. She looks inward to the museum and provides insight about the importance of teamwork and the need to consider the museum as a whole. The results of the meetings of the Points of View project extend Orna's thesis further to propose that success hinges upon our ability to work together as a cultural heritage information community, to plan together strategically, to form bridges, to provide common resources and tools, and to share information. No single museum can successfully respond to all the user questions asked of it without relying upon external resources.

A User Satisfaction and Market Demand Survey, prepared by the Canadian Heritage Information Network in August 1993, and presented by Barbara Rottenberg, confirmed the following trends as particularly significant:

- Increased sharing of information nationally and internationally

- Increased cooperation between museums, libraries and archives

- Increased educational usage of heritage information

- Increased push for new media (e.g., CD-ROM)

- Integration of information

At the National Museums of Scotland, Helen McCorry and her colleague Ian Morrison conducted a survey of visitor questions under the rubric "the catechism project." Helen provided valuable input about her research project to participants attending the first Points of View meeting. Helen explained that the catechism project was developed to test a theory that "the present approach to museum information is too highly structured and too theoretical and therefore discourages access instead of improving it." McCorry noted: "There are many assumptions about how information in databases should be organized in order to be useful to museum staff and members of the public, but very little, if anything, is known for sure. Assumptions have been based on

a) the demands of the 1970s and 1980s systems, and even manual systems, such as filing order and elaborate query structuring;

b) information retrieval in bibliographic databases, which is usually carried out on huge databases and in an environment where disciplines such as terminology control and authority files are understood and accepted."

Considering questions allowed meeting participants to look afresh at user needs and to begin to understand the paradigms within which we operate. For example, Catherine Leffler, a fifth-grade teacher at Encino School, pointed out that one of the worst things we can do is to actually answer a question. She noted that when a question is answered it becomes a "dead" subject and suggested that we need to develop tools that invite and motivate users to expand upon their questions. She encouraged museums to consider that they provide pathways to discovery instead of answers to questions. She thinks of a question as a valuable asset, stating that the first step is not to assume that people are motivated to ask questions and suggesting that museums must engage their audiences at the pre-question stage. Jane Bedno, Director of the Graduate Program in Museum Education at the University of the Arts, Philadelphia, stated that when visitors find something that engages them (a personal connection or a relationship to an idea), then they will go on to browse and develop questions that they can explore for themselves. It is critical to allow the user the opportunity to become engaged. Linda Downs, Head of the Education Department at the National Gallery of Art, suggested paying more attention to learning styles and how systems might be better adapted to reflect them.

The next step is not to assume that users know how to ask a question. Meeting participants suggested that museums could do more to assist the formulation of questions. One participant, Dr. Mary Erickson, a visiting scholar at the Getty Center for the Arts and Humanities, was working on a project to help art students improve the quality of their questions. She suggested that the ability to speculate and ask questions requires confidence and motivation. Many users are easily frustrated because they do not know what questions to ask. One of the questions presented by a participant for discussion was "What should I be asking?" Systems must allow for engagement, exploration, and clarification. Iterative questions indicate a learning and exploration process. Users seek information that is unknown, often

not knowing what they want until it is seen. Systems must allow for gaps and messiness. People need assistance to access information. Museums need to provide information about the resources they offer, along with connections to other relevant resources. Museum information systems might be more successful if they provided online assistance for users to develop meta-skills about questioning, an understanding of what information is available to them, and knowledge about how the information is organized. Also just as a good librarian assists a user to ask the question that leads to the information that will satisfy the request, museum system users may require assistance to reinterpret or reconceptualize their questions to gain more meaningful access.

Mediated and unmediated intervention

In addition, users may require mediated assistance because the system is incapable of providing an adequate reply. "I am looking for any information on Walter Shirlaw, a 19th century impressionist artist. I have one of his works that was done in 1874 of my grandmother when she was a small child in New York. Walter Shirlaw was her uncle. I would like to know if any museum would like to have this work, as I have no one to leave it to. I can send a photo of the work if anyone might be interested." The first part of this question, received by the National Museum of American Art through its America OnLine service, can be answered by a computer: the questioner can search the museum's databases (including the Inventory of American Paintings and the Inventory of American Sculpture) for information about the artist William Shirlaw. This, however, will not answer the second part of the question: "Would any museum like to have this work?"

Many questions cannot be answered by a computer; human intervention is required. Multiple levels of interaction are required in systems. Allowing users to contact a staff member to request further assistance or providing staff to respond to complicated questions must be seriously considered. Museums must weigh issues of staff time and priorities. The National Museum of American Art has a full-time staff person — an online reference librarian — available to respond to questions asked through America OnLine.

Literacy

The Points of View project seeks to learn more about the audiences that use museum information. Participants found it difficult to establish demographic information about age, education, and cultural backgrounds from the questions. The person asking "Why is this painting worth $5,000,000?" could be any one of us, our children, or our grandparents. It is a question that could be posed by a novice or an expert. Demographic discussions quickly led to discussions about levels of literacy, which were recognized to have little to do with age. It was also recognized that while someone may have an advanced

degree in one area, he or she may be at the novice level in others. It is desirable to let users select a point on a novice-to-expert continuum depending upon their assessment of their knowledge and interest level. Users may choose to adopt different levels of expertise for different subjects, depending upon where they fit on the novice-to- expert continuum. Perhaps the best way to accomplish this goal would be to develop a variety of presentation formats (for the same information) and allow the user to select the most appropriate. Participants suggest that it is a mistake to believe that scholars require different entry points into information, as we all benefit from serendipitous connections. Scholars might be interested in more indepth information.

Kody Janney, then with Corbis, and I followed up this idea in an unpublished paper we developed for CIMI entitled "User Access Needs for Project CHIO (Cultural Heritage Information On Line)." We suggested that Project CHIO present information to the user in an approach that puts the most frequently requested material at the top and the "heaviest" material at the end of the display. "Heavy" materials might include auxiliary materials not easily marked up in SGML, denser, more scholarly treatises, detailed articles, etc. Thus users can read to their individual level of interest or satisfaction. An added advantage of this approach is that auxiliary material, not easily marked up in SGML, can be marked as auxiliary and placed at the bottom. It prevents users from becoming frustrated by having to enter repeated queries to get the tidbit of information they want, while avoiding intimidating casual questioners by requiring them to sort through material that has no immediate interest. A depth gauge (a scuba diver descending?) might be helpful to users to know where they are in the material.

Following upon Elizabeth Orna's comments, meeting participants suggested that staff from across the spectrum of the museum organization provide input into the design and structure of the information system. Curators, registrar, educators, and designers must work together to create a product that relates to a multi-level audience. There needs to be institutional agreement about what information is to be made available.

Presentation

Presentation issues differ from literacy issues. Meeting participants suggested that users would like to have access to a flexible set of capabilities that can be intuitively understood. Users want options such as:

- The ability to select to receive information in large print because it is easier on the eyes

- The ability to make information accessible to non-readers

- The ability to select the quantity and depth of information to receive

- The ability to call up, as desired or needed, information about the underlying information structures and system rules

- The ability to choose to apply thesauri and classification systems to searches. Users may be intrested in selecting and applying the *Art and Architecture Thesaurus*, the *Union List of Artist Names*, the *Nomenclature for Museum Cataloguing*, or *Social History and Industrial Classification*.

- The ability to choose image sizes and resolution levels for retrieval. Depending upon the situation, a user may not have the time or patience to wait for the delivery of a high resolution image.

- The ability to browse or to bore into the heart of the matter.

One participant suggested: "I've always felt that it is within current technology to take membership data and to use it as a tool in the computer system, so that the system recognizes a member and tells them what is going on that might be of particular interest to them. Perhaps an advantage of museum membership might be having a finely developed profile so that the computer system is able to offer relevant information."

Another participant suggested that some requests go beyond the bounds of what is possible, and that the museum needs to define the audience and the information that it can serve. Perhaps members might have more privileged access to greater amounts of information. Schools and researchers might be offered associate memberships.

Jim Blackaby, a consultant representing the Holocaust Museum, raised a concern about the current limitations of interfaces, saying "that there seemed to be a 'government-form-like' structure in most computer interfaces and that public was required to interact with computers as if they were government officials." He suggested that it is easy to build courtesy into responses. Much of the information that we see on a computer system is not presented in the way that we would actually like to be communicating. Our current tools have many limitations. Museums understand the medium of gallery design and have worked to advance display technologies. We need to be able to replicate the best of our knowledge in this field in our computer displays. One participant noted that she was profoundly irritated by the extent to which current databanks are verbal rather than visual.

Participants were very supportive and interested in projects that enable museums to establish connections that link the database of one institution to another so that there is discipline-wide access to information. They hoped that the knowledge gained through projects such as CIMI and RAMA would lead to more open systems, reduce duplication of effort, and extend the information that a single institution has available.

Unknown information and "the truth"

The analysis of the questions provided much food for thought. The simple question "How long did it take to make it?" (a painting) started a philosophical discussion about unknown information. While many museums record the date of creation of an object in their databases, the amount of time it took to create an object is not normally recorded. As Helen McCorry proposed, many questions illustrate that museums cannot provide the information that users request because databases have not been not designed to hold this information, or the information had never been collected, or the information is unknown.

Participants grappled with admitting that museums did not know everything. Dr. Ken Hamma of the Getty Museum led a very interesting discussion about truth and how museums struggle to present truth by trying to be comprehensive, flooding the user with too much information. Dr. Hamma suggested that museums must take responsibility for representing points of view and shades of meaning. Museums need to learn how to present more open responses, with fewer "answers." We need to trust our audiences more and explain that museums do not hold all the answers, that all the information does not reside within our computer systems, and that we will never have complete records.

Karol Schmiegle, past Manager of the Museum Collections Division at Winterthur and now a free lance consultant, extended this discussion by suggesting that museums have not explained their data in ways that the user can understand it. She presented two examples: "We may record that the object is made out of leaded glass, but the person seeing this material may wonder why, if the object is made out of lead, it can be so transparent. We have not defined our terms for ourselves or our audiences. We may record that the object is a 'high chest' and leave the user wondering why it is not called a 'tall chest.' Museums need to communicate that the information they hold is based on current, scholarly, or even personal opinion." We need to be able to offer questioners access to the rich universe of object names, providing a time and space context for information. Dr. Katherine Lee, Director of the Virginia Museum of Art, said, "I would like to see museums take strides towards presenting information that is offered to the public as something that is relative and positional, as something that is fluid rather than fixed. We need to escape the tyranny of our truth-telling. . ." As a solution, one participant suggested that museums allow for multiple, authored interpretations of objects.

On the other hand, participants noted that museums might also be in danger of knowing too much and that they hold information that should remain privileged. As an example, Dr. Erickson presented the case that information about contemporary artists such as their gender and their religious and political affiliations should remain private to avoid contentious public debates about the representation of certain ideas and not others.

New Tools

Allowing users to compare and contrast information lets them gain an understanding of similarities and differences. The ability to compare multiple (user-selected) images simultaneously, to enlarge sections, and to download video and sound is important. A tool such as this would allow the user more flexibility to consider "What is the essence of *minimal art*? What is the difference between American minimalism and the Italian counterpart?" Users would like to have the equivalent of the ideal museum workstation that so many projects have been working to achieve (i.e., Van Eyck, MIT Center for Educational Computing Initiatives).

Understanding what people want to do with information

It was not thought possible to characterize a point of view through a generic attribute set: i.e., a scholar wants these pieces of information. Rather, participants suggested that a point of view indicated a relationship to the intended use of the answer to the question. In many questions it was evident that teachers were searching for classroom study materials; this idea prompted participants to suggest that museums consider making available educational and interpretive materials. Expanding the breathe of materials and information to include more points of view is important.

A favorite question was: "Do you have any pictures of interiors designed by Mr. Rococo that are suitable for framing?" "Suitable for framing" indicates an intended use for the information. Even if the museum has images of rococo interiors, unless it is able to indicate to the user whether or not the image is reproduced in a format suitable for framing, the question will not be answered successfully. This question may require a response that points to a museum store catalog or that allows the user to order a copy of the print. The home user may desire a print to match a wall color or fit a subject or theme. Increased sales of museum reproductions over the Internet because of user interest in specific objects or images may produce a revenue stream sufficient to encourage museums to consider expanding their online offerings.

"For publication purposes, do you have any images of the Mexican-American War?" Again, this is a two-part question, although the second part remains unasked: if the museum has images of the Mexican-American War, then it must also be prepared to discuss circumstances under which copyright and reproduction rights might be made available.

"Do you have any works by *James Elder Christie*? Would you be willing to lend them next summer?" Museum may need to able to point users to collections management policies or other administrative policy documents. Museums also need to make policy decisions about what information will be made available online. Information about modes of acquisition, sources, and condition might be best

considered privileged, internal information. McCorry notes: "Information relating to procedures involved in the acquisition or management of the object, including source name, date of acquisition, and current location, information about loans, is also of importance, representing 13% of those queries sampled."

"Do you have an owner's and an operator's manual for a Clayton Combine Harvester?" Besides a "yes" or a "no," the answer to this question may include opening hours and information about how to obtain an appointment to have access to the collection.

Expanded information sources

Wealth of cultural heritage information	Museum procedures	Collections databases	Exhibition catalogs	Educational materials	Interpretive programs	Brilliant staff

Finding aids and tools

Bibliographic databases

Thesauri

Classification systems

Museum directories and home pages

questions   Public

questions   Scholars

questions   **USERS**

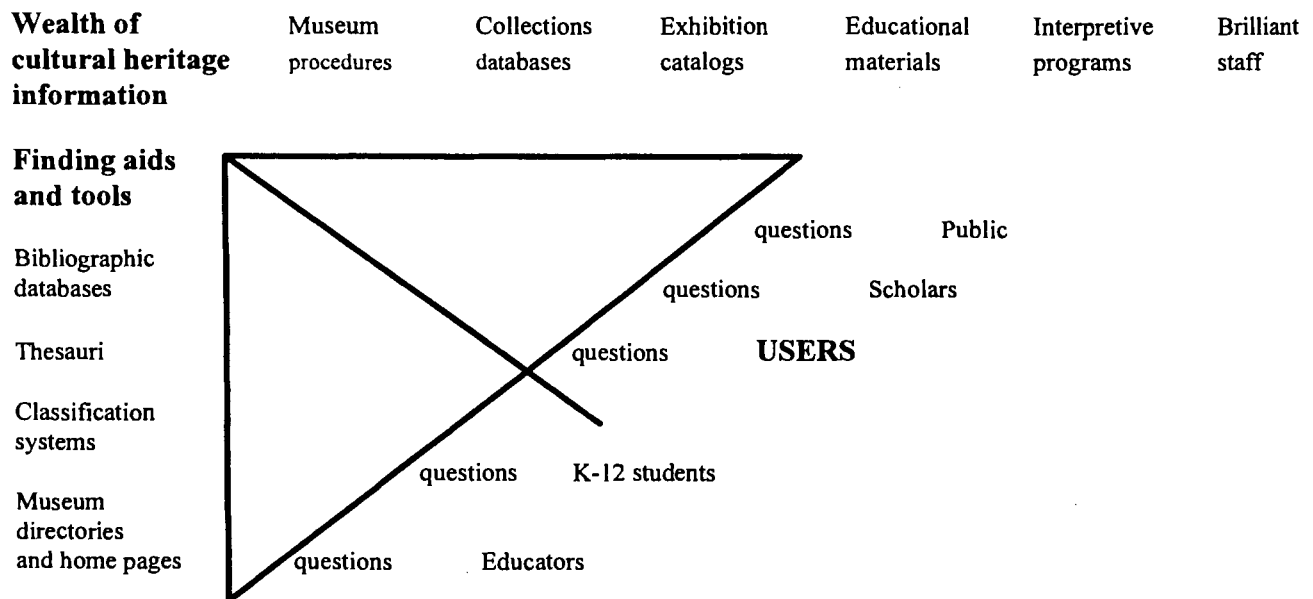questions   K-12 students

questions   Educators

Figure 2

The need for an expanded information resource validates a model initially proposed at a December 1994 meeting of CIMI project participants and consultants at the offices of the Getty Art History Information Program. David Bearman (see Bearman, "CIMI Entertains New Framework," *Archives and Museum Informatics*, Vol. 9, No. 1) supplied the model, modified in figure 2.

Jane Bedno provided an example of the importance of the extended information set. She noted that she was aware of an excellent exhibition at the Chicago Historical Society last year and met with a student that attended the exhibition and returned with a wealth of information about it. Bedno said,

however, that the best thing written on the exhibition was an article in *Curator*, generated long after the exhibition closed and not by the institution that prepared the exhibition. We need to move toward recording through video and film, events and contexts of use concerning objects, not just before they were collected but afterwards as well.

Rachel Allen, Chief of the Research and Scholars Center at the National Museum of American Art, estimated that a large majority of questions posed to the National Museum of American Art's America OnLine service might best be answered by a good encyclopedia of art. Alliances with other products, such as an online version of McMillan's *Dictionary of Art,* could prove very useful.

Other tools may also be required, such as the application of geographic information systems. Jim Blackaby drew attention to this by presenting the question "Tell me about what you've got in the way of upholstered furniture from the Portsmouth area from before 1840. . ." He said that the concept of area is not often accommodated in systems, although it is an access point that is frequently requested. It requires that the user be able to see a map and draw a grid on an area of interest and then have the coordinates contained in the grid act as search keys against geographic information in a computer system.

One of the participants brought a Spanish question presented to the museum's information, noting that she had to ask for the aid of a guard at the entrance to translate it for her. Being able to respond to questions in more than one language, and offering multilingual access, requires clever interfaces backed by multilingual thesauri , authority tools, and a greater use of images to illustrate what cannot be translated.

A dialogue is a conversation between two people. One talks, the other listens; then the other responds while the first person listens. Sometimes both people talk at the same time. Participants in a dialogue have active roles. Does our public actually carry on a dialogue with a computer? Can more opportunities for dialogue be provided? How can we individualize the dialogue? Are we structuring one-way vehicles. . .people requesting information from a computer. . .or can we design opportunities for users to add comments, beliefs, and stories? Can we encourage communities to represent themselves in our displays, using the tools we provide, to reach out to others to describe the significance they attribute to particular objects and to present their values, traditions, and interests, thus further enriching our resources?

A simple example of this is contained in a question presented by Bruce Evans, Director of the Mint Museum: "Do you have any pictures of teeth?" Dr. Evans noted that when the museum first received the question, the first response was to consider it bizarre and to say no. However, the museum staff reconsidered the question and replied that the museum had portraits with people smiling and showing teeth. The questioner said that was exactly what he was looking for, and came to the museum to look at the portraits. The questioner turned out to be a dentist researching gum disease who was particularly interested in a typical Hans Torrest painting of a woman with tiny teeth and puffy gums. The museum's curatorial staff had thought that this was an aesthetic decision on the part of the painter, but the dentist

said that the subject represented a perfect example of someone suffering from a very common 17th century gum disease that he was researching. The museum learned something and the dentist learned something.

The Points of View project also hopes to continue to learn through its ongoing research agenda which calls for:

1. Gathering more information about the questioners, their questions, and their intended uses of the information to:
   Understand the access points required
   Develop the filters that might be applied
   Determine the levels of detail in the data to be recorded, tagged, and presented
   Make more sense of the information requested in the questions and provide pathways to discovery.

2. Inventorying and evaluating existing tool sets to assist audiences and information providers to understand:
   What search engines and retrieval tools could aid users of cultural heritage information?
   What special-purpose interfaces could be applied to enhance access and retrieval?
   What tools are we not using or are we under-utilizing?

3. Enriching our information resources. This requires advocacy at national and international levels to engage organizations to provide funding for data creation, research, and collaborative work.
   What are the critical resources needed to link information together?
   If our information resources are too narrowly structured, what can be done to improve them?

4. Exploring the relationship between the expectations of questioners and their understanding of the resources and purposes of the information repository.
   How does the public face of the repository influence the framing of the question?
   What tools can be developed to assist the user to explore and exploit the information resource?