



# Practical Thinking

Volume 7 Number 2 September 2011

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## Defend our archives!

by Mary Treacy

Learning institutions that serve the public good—and those who serve the public through museums, historical societies, libraries, archives and their ilk—are the vulnerable targets of zero-sum politicians eager to “trim the fat.” There is irony in the fact that those who profess allegiance to the fundamentals of this nation are leading the campaign to strip support for those institutions and individuals who preserve the much vaunted record of the nation.

In recent months I have spent considerable time in the James J. Hosmer Special Collections at the Minneapolis Central Library. I am in awe of the breadth and depth of the resources so meticulously identified, collected, and maintained by generations of librarians and archivists. At the same time I salute twenty-first century professionals who groom the information path for today's seeker of truth. These keepers of the word plumb the depths of the collection as it is while they also painstakingly digitize the record to unlock the treasures for current and future researchers, students, individuals pursuing their genealogy and anyone else who seeks to know more about what's gone before.

### Minneapolis Central library

My experience at the Minneapolis Central Library is the day-to-day in countless public settings—museums, archives, historical societies and other venues—in which ardent keepers of the record serve the nation, the state, and neighbors on a quest. The powerful impact of Legacy grants has been to bring history and stories to life for countless twenty-first century Minnesotans. Projects such as the Minnesota Digital Library and a host of initiatives of state and local historical societies ferret out treasures and open the doors for users. These access projects build on the work of decades of committed service by unsung public servants with a vision and a deep conviction that collecting and tending the record must be a priority.

The record is surely flawed and occasionally shaky on the facts, short on stories of those who fall outside the mainstream, e.g. American Indians, immigrants, women. Still, this is not the issue here. The issue is that, as a tempero-centric society, we have come to disdain the historic record and those who tend to it. Those in power (The Deciders) assume that the world began when they burst on the scene. They treat history with cavalier abandon. When the facts of history conflict with the tales they spin, they dispatch the troops to re-write the record.

Unaccustomed as scholars may be to besmirching their political purity, they need to be aware and to speak out. Scholars who are independent learners, lacking time and privileges of academe, have reason to take particular heed of the challenges

*Practical Thinking* is published semi-annually and distributed by mail to members of MISF and to selected institutions. The return address for this publication is PO Box 80235, Lake Street Station, Minneapolis, MN 55408-8235.

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to resource access. Ironically, independents face a double threat—the promise of digitization and the systems that facilitate the flow of resources among institutions are both absolutely in peril.

### **Threats to preservation**

Make no mistake, the threat is immediate and it is serious. The “reformers” are declaring that their “public” discussion of proposed reform legislation, a group charged with the challenge to determine the fate of a range of publicly funded institutions and information services, has exempted itself from the Open Meeting Law and Data Practices Act. This effectively stifles press coverage today while it assures there will be no record of the process. This “nip it in the bud” posture reveals some Deciders’ attitude about their immense power today and their minimal interest in the future.

Preservation of the record is a slow, labor-intensive process understood by few among The Deciders. Preservation saves not physical objects with price tags but ideas that are informed, implicit, powerful, and beyond immediate fiscal impact.

On the surface, the threat is to the physical manifestations—building, staff, hours, resource development—death by a thousand cuts. In fact, the fundamental attack is on our nation’s heritage, our understanding of our history—not just the wars but science, social norms, movements, arts, health care, education systems, legal and judicial developments, transportation, agriculture, leisure, religious institutions, the media, families, and treatment of children. Only an exploration of the record will be able to trace the forces in our history, the truth about institutions, people, their stories, their impact, and their legacy.

Bottom line, we crave and assume access to retrievable resources to guide and arm us, mere mortals that most of us remain. Knowledge of our history informs and fuels society’s ongoing struggle to understand the past and to envision the future. Reconstruction of the past depends on institutions and individuals whose job it is to shape an effective system of preservation.

Clearly, the burden of making the case for preservation cannot remain to the professionals who have a dog in the fight.

### **What we can do**

So what’s an independent scholar to do.

Analyze the information chain of which each of us is a vital link. Concentrate on the chain per se:

- Who collected the information? From whom or where?
- Who “packaged” the information—in book, video, email, newspaper, clay tablet, diary or whatever format?
- Who were the filters—editors, publishers, librarians, archivists, others who made decisions along the way?
- Does Marshall McLuhan’s “medium is the message” theory apply today?

Explore the territory—it’s a grand adventure:

- What resources are held by county historical societies? (I spent hours last week reading the online annotations of decades of Ramsey County Historical Society journals. Who knew these treasures were so readily at hand!
- Now that the Minnesota Historical Society is going full tilt again, how about spending a few hours taking a virtual or actual tour of the possibilities?
- What’s online through the Minnesota Digital Library?
- What is Minitex, or the Legacy grant program or the Tribal Historic Preservations Offices and what do they do?
- Which of the collections allow independent scholars to visit? Plan a group tour of a site of interest. A few offer regular tours—virtually all, including the smallest ethnic collection, love to tell their story.
- Could MISF and/or some of the interest groups take time to focus on resources rather than on a specific exhibit or topic? A panel of speakers addressing access to the public record, broadly defined, could open doors that may be unfamiliar even to independent scholars.

Follow the money – aggressively:

- What and where are the costs?
- Where are the costs buried in the budget?
- Who are The Deciders when it comes to financial support of essential resources?
- On what basis—experience, metrics, relationships, whim—are funding decisions made?
- Does the rationale withstand scrutiny? For example, it pains me to know that elected officials and library administrators are inclined to rely on circulation as the measure of all things meaningful.

Be persistent. Libraries, museums, historical societies, historic sites and all of their works tend to be invisible to The Deciders (until and unless there’s a challenged book). Their relatively small bottom lines are routinely

lost or obscured in the budget of a county, government agency, school, or any public entity. These quietly effective programs are up against competing priorities that hype services that are more tangible, thus more measurable, than high quality services that preserve and make accessible essential information resources.

### **Harland Cleveland's properties of information**

Review the properties of information, articulated by Harlan Cleveland three decades ago. You may be surprised how Cleveland's simple construct shapes your thinking about information as something explicit, real, deserving of attention. Cleveland articulated the elusive characteristics of information, society's renewable resource:

- Information is expandable—The facts are never all in—and facts are available in such profusion that uncertainty becomes the most important planning factor. Thus, “the further a society moves toward making its living from the manipulation of information, the more its citizens will be caught up in a continual struggle to reduce the information overload on their desks and in their lives in order to reduce the uncertainty about what to do.”
- Information is compressible—“Though it's infinitely expandable, information can be concentrated, integrated, summarized... for easy handling.”
- Information is substitutable—It can replace capital, labor or physical materials.
- Information is transportable—“In less than a century, we have been witness to a major dimensional change in both the speed and volume of human activity.”
- Information is diffusive—It tends to leak—and the more it leaks the more we have.
- Information is shareable—Information by nature cannot give rise to exchange transactions, only to sharing transactions. Things are exchanged. “If I give you a fact or tell you a story, it's like a good kiss: in sharing the thrill, you enhance it.”

### **More to do**

Gather and share examples, stories of the impact of good and timely resources that were spotted, gathered, organized and/or preserved by a real person in a real organization or institution with a real budget.

Acquaint yourself—and the organization—with a sense of the political structures and roles of the staff members who play specific parts. Don't try to explain all that to The Deciders, but know enough so you can justify why preservation of the people's stories and the public record bears a cost—the little lady who volunteers is great, but

there's more to it than she can manage in three hours on a good week.

Honestly deal with the painful reality that, powerful as information may be, good information and information workers cannot speak for themselves. Their powerlessness is reinforced when scholars and other info-mavens remain voracious consumers, even producers, while they ignore—or fail to understand—the concomitant responsibility to speak out in support of the institutions and individuals who make it all happen.

Steel yourself, find time, know for a solid fact that one informed and concerned independent scholar can make a difference.

Independent scholars are not generally perceived as a dreaded lobby group—an altogether good thing.

Independent scholars distinguish themselves from the suits with tweedy clothes, thick glasses and a beard—dress for the role.

If you're too busy or reserved for direct contact, write as if to a non-scholar—use easy words, action verbs, short paragraphs, vivid stories. Do not use literary, historic, theological, philosophical, or advanced science references. References to social media and laptop access to resources are acceptable.

Acknowledge that, while you may have a host of degrees, an unschooled Decider, elected by engaged and informed peers, is clearly “smarter.”

Above all, profess whenever and wherever your conviction that scholars, writers, historians, researchers and society must attend to the state's intellectual resources. The cause is worthy, deserving of the individual and collective support of Minnesota's Independent Scholars.

*Mary Treacy is a library administrator and information policy wonk. She was formerly the director of Metronet and of the Minnesota Coalition on Government Information. She has been involved at the national and state levels with information policy. Mary is also a blogger and citizen journalist. She describes herself as “not a legitimate independent scholar but one concerned with support systems for those who are.”*

# How to Use a Research Library

*Timothy J. Johnson, University of Minnesota Libraries*

According to the Association of Research Libraries (ARL), “member libraries make up a large portion of the academic and research library marketplace, spending more than \$1 billion every year on library materials.” There are 126 research libraries in North America who are members of ARL. Together they form a rich network of resources available for research and study. So how does one tap into this valuable store of information?

The ARL website provides a list of member libraries that are a starting point to the independent scholar. Identify libraries of interest in your area and then visit their websites. Most of these online sites will be organized in a similar manner and are worth exploring in depth before making a visit.

Start with identifying basic information:

- a) Hours of operation (summer hours often change from those of the academic year)
- b) Number and types of libraries that are part of the local system (The University of Minnesota, for example, has fourteen libraries on the Twin Cities campus.)
- c) Types of services offered (e.g. borrowing, photocopying, digital scanning)
- d) Policies and procedures (such as, use policies, food and drink, computer access)
- e) Staff contacts, especially librarians with responsibility for certain subject areas (sometimes known as “subject librarians” or “subject bibliographers”)
- f) Library services specifically for visitors/independent scholars (Some libraries offer limited borrowing privileges and other services such as wireless access for laptop use for non-affiliated users, and some do not.)
- g) Any other information that will tell you about the basic operations and structure of the library system

After you have gathered basic information, focus your attention on the online resources available for organizing and conducting research. These will include the online catalog (which increasingly includes not just books and periodical titles but other materials such as audio/visual resources); online resources such as dictionaries and encyclopedias, dissertations, maps, music, government documents, and subject indexes to periodical literature and journals. Research libraries also are attempting to put more of their unique or locally important information into the online environment, so look for these types of resources.

Some resources may not be part of the online catalog but will be listed as separate databases. For example, the University of Minnesota has a resource called the “U Media Archive” which is a database full of still images, sound recordings, oral histories, and video and another resource called the “Digital Conservancy” which includes electronic documents related to the University. You may have to dig deep into the library’s web site to locate these useful items.

## Using an online catalog

As you use the library’s online catalog, pay close attention to notes in the individual bibliographic item records that indicate which library or collection within the system holds an item of interest. Also note that many of the online catalogs are designed so that search results or lists of records can be saved or e-mailed to a personal e-mail address. This information will be useful when you visit an institution with multiple libraries and collections. Finally, be aware that many libraries have an online “Ask a Librarian” service (live “chat” sessions or e-mail) where you can ask questions prior to your visit. Make use of this service to help organize your approach to the library’s collections.

Many of these electronic materials are available to you from your own computer and provide a useful means for identifying and organizing desired items before a visit. At the same time, be aware that some of these electronic resources are limited to faculty, staff, and students associated with the institution and are not available to the general public (that is, they require user names and passwords, or “authentication” by valid users in order to gain access). But don’t be dismayed if you feel shut out from this electronic material. In many cases public access computers within the library will allow you access to this information during your visit. Also, there may be another way to gain access to the same material. For example, the state of Minnesota funds the “Electronic Library of Minnesota,” otherwise known as ELM, where one can find many of the same electronic resources available to students and faculty at the University.

Once you have assembled basic information, explored all of the resources available through the website, identified the materials that you wish to use during a visit (including which library or collection holds the items), and identified library staff responsible for the collections in your area of interest, concentrate your attention on which library (among the many that may be part of the system) will be most important for your use. In larger institutional systems

the libraries (and their collections) are divided according to traditional academic divisions so that one library may hold most of the humanities and social science collections; another may hold science and technical collections, while another holds medicine or law collections. For researchers with a particular interest in rare books, archives, or special collections there may be a section of one library that holds this type of material or a separate library that houses such collections.

With adequate preparation and exploration of the electronic resources you are now ready to make a visit to your targeted library. But there are a few more steps to take before actually walking in the door of the research library. Make use of online guides and maps to help you identify the location of the library and available parking. If you are dealing with a rare book, archival, or special collection it may be necessary first to contact the archivist or curator by telephone or e-mail to inquire about the material of interest and possibly to set up an appointment. For more generalized research in other areas you may wish to contact the subject librarian/bibliographer and discuss your research interests with them. They may be aware of other collections or materials that will be useful in your research.

Once you've arrived at the library familiarize yourself with the physical layout (many libraries provide a floor plan that helps one navigate through the stacks) and look for a general information/service desk. Staff at these desks will help with other questions and direct you to places of interest (such as the location of computer terminals, microfilm reader/printers, photocopy facilities, elevators, and restrooms). Most research libraries will have "open stacks" for the general collections and adequate tables and carrels for researcher use. Be aware of how materials are arranged on the shelves (usually by Dewey or Library of Congress classification, but sometimes a mix of both systems) and where materials should be left once you are finished with them (usually a designated table or shelf where the staff gathers items for re-shelving). Browse the shelves, locate the items of interest, and bring them back to your study table or carrel. Always be aware of personal security and don't leave laptops or other materials unattended.

Taken together, these steps should allow you to enjoy, explore, and benefit from the wealth of materials found in our research libraries.

*Tim Johnson is Curator of Special Collections and Rare Books & E. W. McDiarmid Curator of the Sherlock Holmes Collections at the University of Minnesota. This article is the second in our continuing series on how to do independent scholarship.*

## Collecting and Archiving in a Digital Age

Recently at a science fiction convention I had an opportunity to hear two librarians talk about Collecting and Archiving in a Digital Age. The librarians were Lynn Thomas of the University of Northern Illinois (DeKalb) and Meredith Gilles from the Kerlan Collection at the University of Minnesota. Both of them were at the convention because their collections archive science fiction literature. Thomas, at Northern Illinois, has a collection of sci fi lit on the order of 125,000 volumes; Gilles curates the Borger Collection of comic books at the University of Minnesota. She is responsible for more than 400,000 items.

The librarians were intent on making the point that they did not hoard, but rather traded and shared items from their various repositories. They try, in so far as possible, to coordinate collections so that related items are gathered in one location.

But the real question was how do they choose what to collect in an age where there is so much "stuff."

Thomas reflected that in collecting sci fi literature, she is sometimes "stalking" an author to make sure that manuscripts will come to Northern Illinois; using this process, she has built up a nationally known archive of science fiction manuscripts. In some cases, however, she is the happy receiver of previously unknown archival material. While both librarians reflected that they have to make choices, they expressed great interest in a wide cross-section of material in their field; they particularly wanted to be able to show how people "slog along for 15 to 20 years" before they get published or become famous. Both librarians really wanted to collect "everything" from, or establish "working relationships" with, their chosen authors.

They suggested that authors who want to contribute their papers to an archive contact a local institution for suggestions as to where their archive might fit in. Librarians like to have "working relationships" with authors, so that the material comes to the library in a living order. Other organizational suggestions included the following: 1. Don't cull your material—let the librarian decide what to keep and what to throw. 2. On the other hand, don't send stuff in random order. Keep things in a order that makes sense to you, often chronological. 3. Each time you revise a manuscript, give it a new name, so that all versions of the

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manuscript are kept. 4. Send a box or two at a time as you are done with material. 5. Don't put your social security number on anything you send, because archivists must go through and cross it out to preserve privacy.

Some of the problems that modern archivists face are that they are all over-extended; almost all of them are managing two or more collections. In addition, data deteriorates no matter what form it is stored in. Digital information must be forward migrated each time the technology changes, but collections try also to hold onto the original material.

As to researching in archival collections, both Thomas and Gilles felt that visiting more than two libraries in the course of a research project was over-kill. They recommended utilizing copying services from libraries with only a few items that you are be interested in. Although the Google archive is very helpful, it does not print full copies of things that are still under copyright. Although it is quite hard to get grants to digitize popular literature, all archival libraries are making long-term data management plans, which will include digitization of popular material and finding aids (box lists on line) for the rest of it.

Finally, both librarians stressed the idea that special collections actually protect valuable artifacts and archives because they protect them from over-use.

Lucy Brusic

## Book Review

### ***The Unconscious Civilization* by John Ralston Saul**

*Whenever governments adopt a moral tone—as opposed to an ethical one—you know something is wrong.*

John Ralston Saul

One of the delights of being an eclectic reader is the discovery of minds that articulate that which you've been struggling to comprehend and do so in an accessible way, free from the jargon that so clutters our civic life. Such a discovery was *The Unconscious Civilization* by John Ralston Saul.

Admittedly, with my predilection for anything Jungian, I was drawn to the word "unconscious." I'd never heard of Saul. It turns out he's a distinguished Canadian writer and thinker, published in nine countries, and an iconoclast of the first order.

Among Saul's major premises: we are caught in worlds of illusion, when language has lost its relation to reality and is increasingly the province of the specialist and the corporate elite. At stake today is the very idea of democracy and rights of the individual. In fact, the concept of "individual" has been corrupted—hijacked according to Saul—and with it,

Western civilization. Saul states that we seem "devoid of useful memory" and that what we do remember has "little or no impact on our actions."

We have the sense that our civilization is in a long-term crisis, and to combat our unease, we take refuge in artificial certitudes and create an artificial sense of well-being. Saul cites the 1973 crisis in oil supply as the economic manifestation of the crisis, which has had its resultant social and political aspects.

Saul finds especially egregious the linking of democracy and economics, as if individualism was a result of the Industrial Revolution and not born in ancient Athens.

Though published in 1995, *The Unconscious Civilization* reads like a primer for the current American political situation. How can one account for a country polarized by so many factors? As scholars, we know the answers reside in the worldview and scale of response of individuals, groups, tribes, and nations. Increasingly, I've come to believe, like Saul and like Jung, that problems are as much about the perceiver as they are about that which is perceived. And a powerful perceiver, whether an individual or a nation, who can seize the narrative structure, can define the discourse. Thus an "act of terrorism" can become a "war on terror."

Saul's concern about the use of language is relevant here. Increasingly we're being subjected to language from one arena being applied to another. Advertising has desensitized us to this, but psychologists know that the constant stream of images we receive from television and print media is effective. If it weren't it would cease to be used.

When advertising techniques, especially repetition and demonization, are used in the political arena it is called propaganda. Despite the cognitive dissonance such usage produces, we gradually become accustomed to it but our sense of community suffers. In addition, euphemistic use of language can serve to hide ideology. One can sense that more is being conveyed than the words imply. Subtle distinctions can marginalize individuals or groups while keeping the "insiders" focussed on their goal.

Business schools, which support the corporate world, use words like *customer* and *consumer* where many of us would prefer to be thought of as *citizens*. Indeed the overlap of corporate language, political discourse, and religious rhetoric has led to a virtual Tower of Babel, and may be a reason that so many people don't vote.

Saul sees the corporatist approach as influencing everything from higher education to globalization, from humanism to civil liberties. The huge, impersonal effect of uncritical faith in technology and such concepts as "the invisible hand of the market" give an aura of mystery to the forces

that are operating on us. Without a critique of such forces, the citizenry, even the elected officials, feel power slipping away.

Saul is critical of universities for failing in their most important function: teaching individuals to think. By aligning their interests with those of corporations, universities are creating managers and technocrats while citizen-based democracy gradually suffocates.

Lest one feel too discouraged to pick up Saul's book, there is hope that growing numbers of people will recognize the situations Saul describes. With mass communication, the planet is too small for these trends to go unnoticed. And, as we know, the first step in solving a problem is to recognize that there is one. The solutions Saul recommends are in our hands: in the language we use—and our willingness to shake off our lethargy, refuse to conform, return to awareness of our individual gifts and rights, and strip the doublespeak from our social and political life.

Carl Jung would approve.

*Shirley Whiting*

**March 19, 2011**

## **Forensic Physiology**

David Juncker, past president of the Scholars, spoke to the MISF on March 19 on the subject of Sensory Perception and Memory. Juncker, who holds a PhD in Physiology, has recently used his training to help railroads find the reasons for train accidents involving pedestrians and drivers. He talked about how understanding physiology helps him figure out what happens in railroad accidents.

He set the situation by describing an accident that took place several years ago in broad daylight near Rochester MN during the first week of August. A DOT worker driving a pickup truck hit a single engine broadside at a grade crossing. The engine was only moving 15 mph. The truck hit the train at full speed indicating that the driver was not aware of the train at all. The impact was sufficient to push the truck into the woods and the driver was killed.

The accident was witnessed by the occupants of a car coming from the other direction. Both witnesses declared that the train had eight to ten boxcars and a caboose.

The engineer was able to see that the car was going to stop and the truck would not.

Juncker's job was to figure out why the DOT worker in the truck did not see the engine and why the witnesses thought the single switching engine was pulling a full train.

In order to involve the attendees in his investigative process, Juncker gave a short course in physiology ending up with remarks on the physiology of the eye. The eyes receive photons but have to slow the photons down in order to measure the information received. Light reflected from an object passes through the cornea of the eye, moves through the lens which focuses it, and then reaches the retina at the back of the eye where it meets a thin layer of color-sensitive cells called the rods and cones. The rods and cones in the eye face away from the information as part of the slowing-down process. Rods are very sensitive to light; the cones, which perceive color, are less so. Because of these complex mechanisms, it is very difficult for a driver or anyone to estimate accurately the speed of something approaching from a right angle.

After his investigation, Juncker eventually concluded that the DOT truck driver never saw the switching engine at all—because it was green and black (like the cornfield it was passing by); the corn was just high enough that the wheels were obscured; and the train was not usually there on this route on which DOT worker traveled every day. In sorting out perceptions, the mind looks for edges and lines. Juncker assumes that what the DOT worker “saw” was a “shed or a truck” in the cornfield.

The two witnesses, on the other hand, concentrating on the terrible accident that was about to happen right in front of them, supplied from their memories images of full length trains so that they could pay attention to more immediate concerns. They filled in the blanks by “remembering” long trains because they had more important things demanding their full attention at that moment.

Juncker is a physiologist who has degrees from MIT and the University of Minnesota. He taught at the University of Minnesota for some time before becoming an executive at Medtronic. In his “retirement” he runs a consulting business and teaches at Argosy University.

April 16, 2011

## Poetry Day

The Minnesota Independent Scholars' Forum hosted its second annual poetry reading April 16. The leaders, Morgan Grayce Willow and Evelyn Klein, both members of the Scholars, read their poems. We quote here a poem by Evelyn Klein.

BILL

After he had left  
for college

I came up the ramp  
from the weekly grocery trip  
when an old Dodge charger  
rushed across the overpass  
before me

I strained to recognize  
the tall dark figure

waving at me through  
dark tinted windows  
of an unfamiliar world  
he passed and I followed

in our driveway  
my son emerged

from his newest vintage car  
ready to take its turn  
in the driveway  
like the models on his book shelf

getting out he smiled  
and stood much taller  
than I remembered

Among the audience members who also read were Joseph Amato, professor emeritus from Southwest State in Marshall, and Judy Yeager Jones who read a poem by the deaf poet, Laura Redden. Another Scholar, Gajendra Kumar, talked about being from India, his engineering career, and read some poems that he had written.

POSSIBILITIES

Doing nothing is impossible  
Doing something is always possible

Doing every thing is impossible  
Doing anything is always possible

Some Problems are impossible  
Many solutions are always possible

Don't be thwarted by impossibilities  
Play with the always-present possibilities

by Gajendra Kumar, 2001

May 21, 2011

## The Art of Music: The Music of Art

Bob Brusica, with help from his friends Morva Klein and David Juncker, took some twenty scholars on a fast trip through 2000+ years of history on May 21. His talk was titled "The Art of Music: The Music of Art: An Investigation of the Relation of Art Music and Culture." Brusica, who is a docent at the Minneapolis Institute of Art, showed examples of art from many different centuries. He integrated the art with musical selections played by Klein on the keyboard and Juncker, on the flute. All the works of art in his talk, Brusica said, are on display at the Minnesota Institute of Art. Brusica endeavored to demonstrate that we cannot fully understand a culture or a period of history without considering its art and music.

The helpful handout quoted William Fleming from *Art, Music, & Ideas*. "A study of the arts in relation to the life and times that produced them provides not only a broader and deeper understanding of human behavior in its past, but a richer, more multidimensional awareness of the present, along with some sense of the future that awaits each new generation."

Brusica indicated that his investigation could have been illustrated by studying works of art that include musical instruments. He briefly indicated this idea by showing paintings containing a lute, a bagpipe, a piano, and a surrealistic guitar by Salvador Dali. However, instead of pursuing this avenue of inquiry, Brusica chose ten historical and cultural periods, and proceeded to illustrate each one

with works of art, all accompanied with musical expressions from each period.



*The Doryphoros*

ably assisted by Morva Klein at the keyboard and David Juncker on the flute, sight and sound adumbrated the overall thesis. For example, Juncker played a haunting Greek melody from the second or first century BCE, while the audience inspected a Greek/Roman sculpture, the Doryphoros, from about the same period. The melody, in the Phrygian mode, was a skolion, or drinking song. In its original context it supposedly evoked a mood that echoed the Epicurean philosophy of the day: eat, drink, and be merry, for tomorrow we die.

Later, while viewing the stunning ancient Chinese Celestial Horse from the Han Dynasty, the audience was invited to imagine itself lying in a tomb with this magnificent beast



who was there to protect and serve in the after life. Klein heightened the effect of this funerary art by playing an evocative Chinese melody. A mask from the Baule culture (modern day Ivory Coast) was accompanied by rhythmic percussion and ululation.

A painting by Canaletto and the music of Vivaldi suggested the sight, sound, and culture of the Renaissance in Venice. Beethoven and Delacroix illustrated the Romantic Period in western Europe. The twentieth Century was brought to life, so to speak, by viewing a 1937 art nouveau work by Walter Teague, *Nocturne, Radio*. For a few spell-binding moments Klein played and crooned a tune from the 1930s, “American Lullaby,” by Gladys Rich.

At the conclusion of the formal presentation, Brusic, Juncker, and Klein came forward, responded to questions, and conducted a lively discussion with members of the audience. While some felt that Brusic’s thesis was arguable, most appeared to enjoy the multi-media presentation. They seemed willing to consider a thoughtful closing quote from a *New York Times* article (December 31, 2010) by Roberta Smith. “(Works of art) are tools that help us grasp the diversity of the world and its history, and (they) help us explore the emotional capacities with which we navigate that world.” Cultural waters do run deep; if Brusic is correct, art and music can help us understand and navigate those deep waters.

*Charles Cubrimi*

June 18, 2011

## Thoreau’s Journey

One rainy afternoon in June, some one hundred fifty people recreated Henry David Thoreau’s journey up the Minnesota River—approximately one hundred fifty years after the original voyage. Fifteen MISF members were among that number on the *Jonathan Paddleford*, a modern replica of a river boat.

In June, 1861 (at the conclusion of a month in Minnesota), Thoreau accompanied the then-governor of Minnesota, Alexander Ramsey, and other officials to the Lower Sioux Agency at Redwood. The purpose of the trip was to have a council with the Dakota Indians and pay them their annuities. One of Thoreau’s reasons for making this trip was that he believed that you could best get a sense of a place by learning about its ancient peoples.

The June 18, 2011 trip, sponsored by the Bloomington Historical Society and the Thoreau Society and supported by MISF, tried to recreate some of the feeling of the 1861 trip by having historical reenactors portraying Thoreau and Ramsey. In addition, numerous speakers from the “modern”

era gave insights into the history and significance of the Minnesota River.

Rivers were the super highways of the 1860s. From 1851 until the coming of the railroad in the 1860s, there were at least five to seven boats running on the river during the summer season. The average life of a steamboat was about three years, but you could recoup your investment in just one year, so you might get two years of profit if you were lucky. Snags, sandbars, wrecks, and explosions all bedeviled steamboats, but boats were repaired if at all possible and put back into service on the river.

Ten years before Thoreau’s trip, by the 1850s, the country had been surveyed. We know what the land was like then from the surveyors’ notes. There was prairie on the upland and some mixed forest. Forest regrowth was held back by Indian burning. The Dakota still lived along the river, planted on the flood plains, and had summer villages with burial sites on the cliffs above. “Once there were over 300 burial mounds along the river,” said one speaker.

Now, the flood plain is filled with non-native species. There seems to be a green jungle along the river. Caves, which form at the join of the sandstone and limestone layers that define the river, are still apparent in places. Many bogs still contain native plants such as lady slippers. Eagles nest in the trees along the river. However, the river has been straightened and runs much faster than it did when Thoreau journeyed up it. Thoreau’s description of the voyage says that the Minnesota was “a remarkably winding stream”; our boat found that the river was running so fast against us that we could not make the upriver journey as far as Shakopee (our intended destination) in the time allotted. One interpreter said that so much sediment washes down the Minnesota that it threatens to fill Lake Pepin.

We were reminded by several speakers that the Dakota people continue to think of Mendota, where the Minnesota and the Mississippi meet, as their homeland. In fact, Mendota means “where the waters meet” and is considered to be the birthplace of the Dakota people.

Minnesota is the Dakota word for “cloudy sky-colored water.” The river lived up to its name on that rainy afternoon.

It was in all a remarkable experience. In some places, where the river ran through open woods, it seemed as though the clock had been turned back and we were close to touching the nineteenth century. At other times, as airplanes from the Minneapolis-Saint Paul airport passed over us, it was hard to bridge the gap between Thoreau’s time and our own.

September 17, 2011

## A History of Astronomy

At the first MISF meeting of the program year, Ed Ferlauto covered the history of astronomy and cosmology. He tried to do it in an hour, but it took him about an hour and a half. It's a big subject.

The first third of the lecture covered the evolution of human concepts of astronomy. We know from the evidence of Stonehenge and similar sites that Stone Age humans had sophisticated knowledge about the movement of the sun. The Arab culture also developed advanced math and named stars such as Betelgeuse and Rigel.

A Greek philosopher, Aristarchus (310-230 BCE) proposed a sun-centered universe and tried to determine the size and distance of the sun and the moon. His math was right, but his measurements were not exact enough to get good values. However, Eratosthenes (275-192 BCE) was able to determine a fairly accurate circumference of the earth by trigonometry. A Roman, Ptolemy (85-165 CE), published mathematical explanations for astronomy based on an earth-centered universe; unfortunately his was the dominant view of astronomy until the sixteenth century.

Copernicus (1479-1543) proposed that the sun was central, but did not publish his work until late in life because of fear of the Roman Catholic church. Galileo (1564-1642) developed the first astronomical telescope. His work also upset the Catholic church because his depiction of shadows on the moon suggested that the planets were not the perfect or "god-like" constructs that Ptolemaic astronomy had postulated. Johannes Kepler (1571-1630) discovered the planetary laws of motion by applying mathematical principles to Tycho Brahe's (1546-1601) observations of the heavens. Isaac Newton (1642-1727) proposed the concept of gravity to explain the equations of astronomy.

In modern times, these ideas become considerably more complex. Albert Einstein (1879-1955) formulated gravity as a "warping of space time," which led to the theory of relativity.

### Modern astronomy

In the second third of the lecture, Ferlauto looked at the modern history of astronomy in terms of increasingly sophisticated ways of measuring the universe. In effect, what you know is determined by what you can perceive. Modern telescopes, such as the Hubble, have made it possible for us to see much farther away and, because of our understanding of how long it takes light to travel through space (6 trillion miles in a year), much farther back in time.

A very important part of our understanding of the universe is our ability to measure astronomical distances. A variety of methods have been used over time to measure greater and greater distances. Initially, measurements were made using "stellar parallax," which involves measuring the difference in angle to an object at the same time of day from different locations. With very precise measurements, this method can be used to determine the distances to the planets and the nearest stars.

For greater distances, a set of methods based on star luminosity can be used. The measured brightness of a star seen from earth equals the luminosity of the star divided by the square of distance to the star. In other words, equally luminous stars will appear brighter the closer they are to us. To use this method, we need to know the luminosity of the star we are looking at.

There are three main ways in which we can determine the luminosity of stars. The first, which works for stars within the Milky Way and nearby galaxies (30,000 light years), is to identify the type of the star by its spectrum. Bluer stars burn much more brightly than redder stars (by a factor of 10,000) and there are well-established relationships that allow us to accurately estimate a star's actual luminosity. The second method of determining star luminosity uses "Cepheid variable" stars, for which there is a relationship, discovered by Henrietta Leavitt (1868-1921), between the period of variation and luminosity. Distances can be determined using Cepheid variable stars to fairly distant galaxies (50 million light years). The third method is to use Type 1A supernovae events, which are accepted as a "standard candle" and can be used to measure distances to very distant galaxies (600 million light years).

For even more distant objects we determine the speed they are moving away from us from Doppler red-shift of the light and use the relationship, discovered by Edwin Hubble (1889-1953), that the speed at which an object recedes from us is proportional to its distance from us. It was pointed out by questions from the audience that these distance measurements all rest on some sophisticated theories and assumptions about things we cannot directly measure, but since the measurements from different methods agree fairly well, we have reasonable assurance that they are correct.

By using modern astrophysical concepts and the Hubble telescope, we are able to "see" almost 13 billion years back in time. Based on analysis of the microwave background radiation, the universe is estimated to be 13.7 billion years old.

*This article concludes on page 12.*

## Editor's Note

Every scholar has a memory of a special library (and maybe a special librarian) to which they owe their love of books. My first library was at Fitzgerald Elementary school in Detroit where I read my way through all of the biography collection, signaling perhaps my interest in history. The mission of that school librarian was to encourage us to sign the books out of the library in the hopes that we would read them.

Public libraries still function this way, with their budgets built around circulation figures. Archives are, however, another kind of library. These are non-circulating libraries and are often the repository for unpublished manuscripts, letters, and other ephemera. Mary Treacy correctly points out that such libraries do not have the kind of circulation figures or high profiles that protect them from budget cuts; her article is a plea to all scholars to support archival libraries by using them, donating to them, and lobbying for them. Tim Johnson gives some helpful suggestions on how to use an archive.

But these articles beg the question of why we should support archival collections. What could we hope to find in them that would make a difference—to us, to a legislator, or to anybody? I have been thinking about this question in terms of those times in my life when I have used archives. I am mostly a journalist, rather than a researcher. Google and similar search engines are usually adequate for my purposes. However, there have been some occasions when I have had the opportunity to read original documents.

For example, in 1917, every man in the USA was registered for the draft; these records are kept in state libraries and contain incidental genealogical information. When I was researching in new England, I found that many farmers kept very detailed weather diaries. Researching here at the Minnesota Historical Society I learned that the missionaries to the Ojibwe found their work adventurous but heartbreakingly ineffective.

Again, my husband and I use a small archive of radio scripts in the Sherlock Holmes collection at Andersen Library at the University of Minnesota to produce an annual Sherlockian play; without the archive of original scripts, we could not produce the plays. The plays do not change the world or bring in money, but they are fun and give some insight into the charms of old-time radio. The scripts are a record of the talent of the writer, Edith Meiser, and, being radio, they would be lost without an archive to preserve them.

In all these cases, it is not always that the information from the archive is useful in the modern, commercial sense of the word, but rather that someone preserved the papers as a record of what someone wrote. In this age of computers, we can only hope that someone will be as thoughtful with our papers and other media in the centuries to come. They are the records of what we thought and sometimes what we did. Perhaps they will remind readers in the future that earlier generations have faced challenging times and yet survived.

Lucy Brusic <lucy@brusic.net>

I am always interested in proposals of articles for this journal. Please let me know if you have something you would like to write about.

*Practical Thinking* is published semi-annually and distributed to the mailing list of MISF and selected institutions. The return address for this publication is PO Box 80235, Lake Street Station, Minneapolis, MN 55408-8235

A subscription to PT is a benefit of membership in MISF. Independent subscriptions can be obtained for a \$15 annual fee. Single issues are \$7.50.

Send subscriptions and address changes to MISF, PO Box 80235, Minneapolis, MN 55408-8235.

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### Contributors to this issue:

Charles Cubrimi, Tim Johnson,  
Bill McTeer, Mary Treacy  
Shirley Whiting

### Minnesota Independent Scholars Forum (MISF)

POB 80235, Lake Street Station  
Minneapolis, MN 55408-8235

[www.mnindependentscholars.org](http://www.mnindependentscholars.org)

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### **Questions about the future**

The third part of the lecture covered questions, the future, and cosmology. There are unresolved questions about the motions of galaxies and galaxy clusters. Observations of the speed at which these objects rotate indicate they should fly apart, based on the amount of gravitational force we can predict from the stars we can see. For them to move as they do, several times as much force is needed. Astronomers and particle physicists are now looking for the so-called “dark matter” that provides this force.

Another question concerns the fate of the universe. Before Hubble, astronomers assumed that the overall configuration of the universe was eternal. However, an implication from Hubble’s discovery of cosmic expansion is that the universe started with a “Big Bang” in which all matter was confined into a very small space. From that point, universal expansion should slow as gravity tugs everything together. In fact, recent measurements have indicated that the expansion has been speeding up, indicating there is an unknown force that counteracts gravity (dubbed “dark energy”).

A new space probe, the Kepler mission focused on the

Cygnus constellation, has found 1600 planets of which five are earth-like in size. A new Webb telescope will be launched in 2018. It will have seven times the power of the Hubble and can use infrared light (which is less affected by cosmic dust clouds). It will be parked about a million miles from earth.

Another probe (the LISA) to measure gravity waves from the Big Bang may or may not take off; the United States has withdrawn from the project due to lack of funds.

In cosmology, thinkers such as Paul Steinhardt and Neil Turok are envisioning the universe as residing on a multi-dimensional brane. In this model, another brane could exist right “next” to us and a collision between the two would cause another Big Bang in an endless cycle.

In spite of sophisticated measurements and equipment, we still have many astronomical and cosmological questions to explore. How did the universe begin? Does space have edges? Does time begin and end?

Ferlauto teaches Astronomy/ Cosmology for OLLI and is a former member of the Minneapolis Planetarium Board.

*Bill McTeer*

MISF

PO Box 80235, Lake Street Station  
Minneapolis MN 55408-8235

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