

INDUSTRIAL HERITAGE

PREMISES AND PRACTICES FOR THE 21ST CENTURY



Quincy Smelter, Ripley, Michigan. Jet Lowe 1978

**25-28 September 2008
Franklin Square Inn
Houghton, Michigan**

A workshop sponsored by Michigan Technological University
with support from the National Science Foundation

WORKSHOP SCHEDULE

Thursday, September 25

Travel day, optional tours.

6:00 – 9:00 pm Reception, Quincy Hoist House

Friday, September 26

8:30 am – 9:00 am Opening Address: Bruce Seely

9:00 am – 12:00 pm SESSION I: EDUCATION

Moderator: Patrick Martin
Helmuth Albrecht
Marie Nisser

1:15 pm - 7:00 pm TOUR: *Mine Locations Along the Mineral Range*

Saturday, September 27

8:30 – 11:30 am SESSION II: ENVIRONMENT

Moderator: Bode Morin
Patrick Malone
Fred Quivik

11:45 am – 2:50 pm TOUR: *Torch Lake Mill and Quincy Smelter Sites*

3:00 pm – 6:00 pm SESSION III: TOURISM & DEVELOPMENT

Moderator: Scott See
Sharon Ann Holt
Wolfgang Ebert

Sunday, September 28

Travel day, optional tours available



Quincy Smelter, Paul White 2008

INTRODUCTION

Over the last half-century, the recognition, advocacy, and management of industrial heritage has expanded rapidly from local avocational contexts to include national and international cultural heritage organizations, foundations, and consultancy firms. The topic has made inroads into different academic fields, among them the history of technology, material culture studies, historic preservation, and the development of a distinctive field, industrial archaeology. The wider acknowledgment of industrial heritage is reflected also in the selection of industrial sites such as Saltaire, Zollverein, and Engelsberg for World Heritage status, in the development of an international committee dedicated to the preservation of industrial heritage sites (TICCIH), and in the emergence of undergraduate and graduate programs in Europe and the United States geared specifically to teaching and researching industrial heritage.

Despite these developments, fundamental questions remain about how effectively to articulate practical considerations with theoretical dimensions. How do we, for instance, tie concerns like adaptive reuse, environmental remediation, community revitalization, and funding with educational themes that explore the path of technological innovation and transfer, the wider meanings of material culture, and the social transformations embroiled within industrialization? The challenges practitioners face in presenting and preserving an industrial past in the 21st century are ever more complicated given the global transformations in which former “workshops of the world” now have long histories of deindustrialization, and with it, long periods of abandonment and neglect. The problem, as Neil Cossons has recently articulated, is that first-hand knowledge and experience of industry is fast disappearing, and we can no longer assume that the significance of industrialization will remain in public consciousness.¹

Industrial Heritage: Premises and Practices for the 21st Century initiates deeper conversation into the connections between the practical and abstract by bringing together a small group of scholars with different but overlapping perspectives on industrial heritage. Six speakers from inside and outside the academy will contribute short position papers on different dimensions of current industrial heritage practice, namely landscape and the environment, models for educational programs, and economic development. These presentations will provide the structure for seminar-style discussions in which all attendees will participate. Field trips to local industrial sites will provide case examples for directing and advancing discussion along lines of real-world circumstances.

¹ Neil Cossons. 2007. Industrial Archaeology: The Challenge of the Evidence. *The Antiquaries Journal* 87: 1-52.

WORKSHOP LOGISTICS

Industrial Heritage: Premises and Practices for the 21st Century serves as the capstone of a National Science Foundation Program in Science and Technology Studies grant to inaugurate a doctoral program in Industrial Heritage and Archaeology at Michigan Technological University. Begun in 2005, the Ph.D. initiative developed logically from an earlier Masters program in industrial archeology, with the intention of allowing students more time and resources to research industrial heritage and ultimately to pursue careers in this field. The timing of this workshop also mirrors recent European initiatives to develop international heritage programs, including the Erasmus Mundus Master's degree on Industrial Technology, Heritage, and Technologies and a proposed International Master's program that will connect universities in Germany, Sweden, the United Kingdom, and the United States, as well as other nations.

This workshop takes an inclusive stance on industrial heritage. Beyond outlining three key avenues for discussion—education, environment, economic development—we have purposefully left latitude for the six core invitees to choose how they wish to address these topics. Helmuth Albrecht, Wolfgang Ebert, Sharon Ann Holt, Patrick Malone, Marie Nisser, and Fred Quivik have worked extensively in one or more of these areas. This workshop is geared mostly at the conversation that results in bringing varying perspectives together. The central question we hope to explore is this issue of connecting the theoretical and the practical—be it through identifying experiences or conditions where these aspects articulate well, or instances where they fail to do so at all.

The core of the workshop will take place over two days, with a three hour session allotted for each of the three main topics. We have asked two invited speakers to present brief commentaries for a given session—each on the order of 20 minutes—and the abstracts of these commentaries are included in this booklet. The remainder of the session will take the form of an open floor seminar-style discussion. In attendance will be faculty and students from the Social Sciences Department at Michigan Technological University, and invited guests from organizations with interests in the area's industrial heritage.



Ruins No. 7 Hoist House, built 1898-1900, Quincy Mine. Photographer: Jet Lowe.

ONLINE RESOURCES

1. Industrial Archaeology Program at Michigan Technological University.

This website describes the goals, faculty, students, and curricula for the master's program (created in 1992) and the newly minted PhD program (2005). This site also provides links to the annual archaeological field-school at the West Point Foundry, Cold Spring, New York, and to the Society for Industrial Archeology.

<http://www.ss.mtu.edu/IA/iahm.html>

2. Bruce Seely and Patrick Martin. 2006. "A Doctoral Program in Industrial History and Archaeology at Michigan Tech," *CRM: The Journal of Heritage Stewardship* 3(1).

This article details the efforts by faculty in the Social Sciences department to teach industrial heritage, as well as the recent National Science Foundation grant.

<http://crmjournal.cr.nps.gov/Print.cfm?articleIDN=2582>

3. Michigan Technological University Archives and Copper Country Historical Collections.

Includes links to a database of historic photos of mining and other scenes from the area.

<http://www.lib.mtu.edu/mtuarchives>

4. Keweenaw National Historical Park (KEWE).

Formed in 1992 and administered by the National Park Service, KEWE preserves and interprets the copper mining operations of the peninsula's two largest and most profitable companies: the Quincy Mining Company and Calumet & Hecla Mining Company. Unlike most parks, it has no entrance gates, campgrounds, or visitor centers. The National Park administers two areas exclusively and several sites in partnership with local museums and other private entities. The website includes photos and descriptions of key historical sites.

<http://www.nps.gov/kewe/>

5. Department of Michigan History, Arts, Libraries.

This state department includes the Library of Michigan, Mackinac Island State Park Commission, Michigan Council for Arts and Cultural Affairs, and the Michigan Historical Center. The website provides links to a wide range of information on Michigan's heritage resources.

<http://www.michigan.gov/hal>



Mine buildings atop Quincy Hill. Jet Lowe.

SESSION ABSTRACTS

EDUCATION (Friday, 9:00 am -12:00 pm, Portage Room)

Helmuth Albrecht. *Educating Industrial Archaeology in Germany: The Freiberg Program.*

The academic teaching program for industrial archaeology at the Technical University and Mining Academy of Freiberg in Germany started in 2001 as a part of a diploma course for Archaeo-Metallurgy and Industrial Archaeology. After 4 semesters basic studies students could choose a 5 semester specialisation in the field of industrial archaeology. In January 2005 a full diploma course of 9 semesters in Industrial Archaeology was established. In 2007/08 this diploma course was changed into a consecutive 7 semester bachelor program and a following 3 semester master program. In autumn 2008 a special 4 semester master program for graduates of regular 6 semester bachelor programs in history or other academic fields will complete the Freiberg teaching program in industrial archaeology.

The consecutive 7 + 3 bachelor and master program is the main industrial archaeology program in Freiberg. It takes aim at the special demands for industrial heritage experts in the field of heritage administrations or technical/industrial museums. Therefore it is extremely practice orientated and at the same time very broad in the range of the disciplines which are part of the study program. Because of this fact it is a consecutive program with together 10 semesters and a Master of Industrial Archaeology as the regular degree for all students.

The program is divided into three parts: (1) The first three semesters are devoted to theoretical and methodical basic studies in natural and technical sciences, in history of technology and economics, and to an introduction in industrial archaeology. (2) The following three semesters complete the basic studies in natural and technical sciences and give an introduction into business administration as well as into industrial culture, industrial heritage, museum sciences and history of science. In addition this second part of the program contains two practical courses, which give the students the opportunity to work on industrial archaeology projects under 'real life conditions' with research partners of our university institute. The seventh semester finishes the bachelor part of the program with a 12 week practical course in a heritage administration, museum or other institution and the bachelor thesis. (3) In the following three semesters of the master program the students have to pass a third practical course as well as advanced studies in theory and practice of industrial archaeology. Special advanced topics are museum sciences, industrial culture, industrial heritage law and administration as well as cultural communication, marketing and project management. A master thesis completes this part of the program.

The special 4 semester master program for 6 semester bachelor graduates of other academic disciplines is a combination of the just described 3 semester master program with an introduction semester. The selection of courses for this first semester depends on the kind of bachelor degree of each candidate.

The structure and the content of the Freiberg program in industrial archaeology is the result of a balancing process between the practical demands of potential employers for industrial archaeologists in Germany (mainly heritage administrations and museums) and the personnel and disciplinary resources of our small university. It took us more than five years to find this balance in an academic and public atmosphere which is not at all enthusiastic about industrial heritage efforts.

Marie Nisser. *Paper Topic To Be Announced.*

ENVIRONMENT (Saturday, 8:30-11:30 am, Superior Room)

Fred Quivik. *The Industrial Heritage of Energy.*

Among other definitions, technology is the means by which humans interact with their environments. Industrialization is a highly advanced and organized means by which humans have learned to interact with and manipulate their environments. Industrialization is a double-edged sword: it has allowed humans to greatly expand the scope of their material culture, with which they conduct all facets of their lives; but on the negative side industrialization has subjected an unfortunate portion of the world's population caught in its maw to degrading employments and, more to the point of my presentation, has caused extensive and in some cases irreparable damage to the very environments upon which it depends. This is an important facet of industrial heritage that we have received and we are bequeathing to subsequent generations.

In my presentation, I will open a discussion about ways that practitioners in the field of industrial heritage can include this environmental facet of industrialization in our work to identify, analyze, preserve, and interpret industrial sites, even as we participate with the larger world to try to chart new trajectories of industrialization that are sustainable in the environmental context. There are at least two ways in which industrialization, as historically and conventionally practiced, is not compatible with environmental well-being: first, industrial sites and processes are often destructive of their particular locations through the discharge or disposal of harmful byproducts; second, industrial society in general is causing global climate change through its excessive reliance on fossil fuels and the consequent and steady increases in carbon dioxide and other greenhouse gases into the atmosphere. Each of these environmental deficiencies merits our attention in the field of industrial heritage.

I will call brief attention at the beginning of my presentation to the challenges of preserving and interpreting historic industrial waste sites, even as those sites are undergoing environmental remediation, and then I will devote the bulk of my time to energy, suggesting ways that we can make the consideration of energy more central to our work in the field of industrial heritage. An essential ingredient in the process of industrialization is an available source of energy, outside humans' own muscles, to power the machinery and processes of industry. Prior to the Industrial Revolution, humans relied on outside sources of energy that were nevertheless dependent on the sun. Those outside sources were therefore limited by the solar energy currently reaching the planet. The history of industrialization is absolutely coincident with the widespread and on-going switch from sources of energy derived from the sun to reliance on the seemingly unlimited supply of energy available in fossil fuels. And it is the combustion of ever increasing amounts of fossil fuels that is driving climate change, threatening the patterns of life among all species that share this planet. I will suggest how every industrial heritage project we undertake can have an analysis of energy as one of its central components.

Patrick Malone. *Landscapes of Fascination and Concern: Environmental Lessons from Industrial Heritage Sites.*

Industrial landscapes are fascinating but sometimes troubling. People have always been drawn to working places to see what was going on there or to view the effects of past operations. The setting did not have to be beautiful to attract attention. A sense of dread or revulsion could actually heighten the experience of the "technological sublime." A landscape could amaze and awe visitors while also raising concerns. In the current era of rising environmental consciousness, there is less tolerance for industrial processes that are dangerous, polluting, or destructive of natural features, but even in the nineteenth century many tourists came away from places like Chicago's stockyards, Butte's copper smelters, and Pennsylvania's coal patches with conflicting emotions.

It is more difficult to assess the public reaction to places like Lowell, where corporations made major

efforts to impress visitors with efficient factories, attractive company housing, a carefully engineered canal system, and beautifully landscaped property. Most of the negative impacts on the environment were not obvious to casual observers in the nineteenth century or were considered acceptable costs of industrial progress. Although there was occasional resistance to the environmental impacts of corporate policies (by local fishermen, among others), the typical tourist in the city for only one or two days did not recognize ecological changes in the river basin or see the toxic discharge from textile printworks. Even a decade ago, visitors at the Lowell National Historical Park, would learn much more about the daily lives and labor of "mill girls," the physical layout of canals, the operation of machinery, and the social and economic consequences of deindustrialization than about environmental issues.

In recent years, there has been a significant shift in focus. The research efforts and the public interpretation at the Park and the affiliated Tsongas Center for Industrial History have turned increasingly towards environmental history and landscape analysis. In some ways this has reflected the changing interests of academic scholars, but it has also been driven by a dynamic group of Park employees, at every level from superintendent to ranger. New exhibits, revised tours, and recently planted trees give visitors a better sense of what Lowell looked like and how its industrial development affected not only this community but an entire river basin. This illustrated presentation will concentrate on one case study: a regularly scheduled tour by boat from the Swamp Locks, through the Pawtucket Canal and the Guard Locks, to the dam on the Merrimack River and then down the Northern Canal - ending at an exhibit in the Suffolk Mill. The interpretation of environmental history in that particular industrial setting has tremendous potential.

TOURISM AND DEVELOPMENT (Saturday 3:00-6:00 pm, Superior Room)

Sharon Ann Holt. *Industrial History: Where is the Audience, What are the Stories?*

Industrial history challenges public historians to restore a sense of connection and global context to history as presented to the public. Visitors have so little direct experience of industrial processes that they need to see the larger context of industry in order to care about a specific site. To set that context, industrial heritage development must include interpretation of community institutions, transport and supply routes, the natural landscape of industrial areas, and the pervasive nature of industrial products in contemporary life. Experience in Bethlehem suggests that, once the context is made vital, visitors keenly absorb individual industrial worker narratives about the details of production, shop floor experiences, and engineering or management activity. Industrial heritage, presented this way, is an essential tool for linking understanding of the past to civic vitality in the present and future.

Wolfgang Ebert. *Industrial Heritage: What did we Achieve, Where do we Go?*

The industrial heritage as part of the cultural heritage has been widely accepted within the last years. This is based on the long lasting development of industrial archaeology as a science. Therefore the paper does start with an introduction about the history of IA, its definitions, and its development to a term that the Germans call "industrial culture."

Since the early 1950s the research about the historical period of the industrial revolution is growing more and more in most of the older industrialized countries. From the same time scientists and volunteers were starting to appreciate the built heritage of this period as important and worthwhile to protect and to develop. Especially from the 1990s, this was and is a fast growing development, which one can identify for example by the expanding list of industrial heritage monuments on the UNESCO world heritage list. And in addition industrial heritage is developing quickly as an attractive part of the tourism industry.

Most of the talk is about to define industrial heritage as an economic resource for urban planning and tourism. All this will be presented based on the personal experiences and projects of the author.



WORKSHOP TOURS

Two tours to local industrial sites will introduce participants to the landscape of the Keweenaw Peninsula. They also complement the workshop sessions by providing opportunities for discussion on- and off-site about industrial heritage issues. The Friday tour is limited primarily to the invited speakers. The Saturday tour, however, is open for all workshop attendees, and transportation is included. You will, however, need to bring lunch with you.

Friday (Half-day) Mine Locations Along the Mineral Range

This half-day tour up the Keweenaw Peninsula travels through a string of former mining towns, the surface expression of the line of rich copper deposits. We will stop at several sites operated by Champion, Quincy, and Calumet & Hecla mining companies.

Saturday (Three-hour) Torch Lake Mill and Quincy Smelter Sites

Lunchtime trip to Torch Lake, a shoreline once lined with stamp mills and reclamation plants, and then south to the Quincy Smelter, directly across Portage Lake from the conference hotel. The Quincy Smelter is the only historic copper smelter site with standing structures and equipment in the United States. This site also has been a focus for several different incentives, including restoration and rehabilitation as an interpretive center, commercial development, and complete demolition. The Environmental Protection Agency has recently listed the smelter as a Superfund site, which requires remediation of environmental hazards.

Pre- and Post-Workshop Tours

Tours to other sites in the Keweenaw will be available on other days by request for those wishing to stay longer days. The guide “Keweenaw Copper: Mines, Mills, Smelters, and Communities” included with this mailing provides an excellent introduction to the area’s industrial heritage sites.

Photos, left to right: Quincy Mine shaft-house #2; Cliff Mine map; Re-vegetated stamp sands at Lake Linden; Quincy Smelter.

INVITED SPEAKERS

Helmuth Albrecht

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Albrecht is professor of History of Technology and Industrial Archaeology and Director of the Institute for the History of Science and Technology at the Technical University of Freiberg, Germany. He specializes in the history of technological universities, the history of industrialization, and modern technology and geology. He has published widely on these topics, writing several monographs and contributing more than twenty articles to scientific journals. He is spearheading the 14th TICCIH congress to be held in Freiberg in Fall 2009, which has a guiding theme of industrial heritage, ecology, and economy. He is also currently working on the development of an International Masters Program in Industrial Heritage, a two-year course that will link several companion institutions in Europe as well as Michigan Technological University in the USA.

Wolfgang Ebert

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Ebert is the founder of the KutlurBuero (Culture Management Company), which has carried out numerous industrial archaeological projects for institutions and initiatives throughout Europe. Included in these projects are the "Route of Industrial Heritage in the Ruhr" and the European Route of Industrial Heritage (ERIH). From 1980-1987 Ebert was a professor at the Freie Kunstakademie Düsseldorf. In 1986 he founded and has since been president of the Deutsche Gesellschaft fuer Industriekultur (The German Society for Industrial Archaeology). He has also served as the National Representative for Germany at the International Committee for the Conservation of Industrial Heritage. Dr. Ebert is currently a professor in Industrial Heritage Management at Bilgi University, Istanbul.

Sharon Ann Holt

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Holt is a public historian who teaches at Rutgers University and the University of the Arts in Philadelphia. She consults with historical organizations on new initiatives, including strategic and financial management and has, for the last four years, served as the Director of Programs for the Mid-Atlantic Regional Center for the Humanities (MARCH), in which a key priority has been developing a collaborative model for the interpretation of the endangered Bethlehem Steel Plant in Pennsylvania. As a practicing public historian, she works developing exhibits, publications, programs, and other community-based collaborations. She sits on the board of the McNeil Center of Early American Studies at the University of Pennsylvania, and publishes in journals in public history, museum studies, and American history. She is the author of *Making Freedom Pay: North Carolina Freedpeople Working for Themselves, 1865-1900*. She currently has a manuscript titled *Constructing a Modern Past: Public History and the Repair of American Civic Life* under consideration by the University of Michigan Press.

Patrick Malone

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Malone is an associate professor of American Civilization and Urban Studies at Brown University and a recipient of the Society

for Industrial Archeology's General Tools Award in recognition of his long and distinguished service to industrial archaeology. In addition to being a past president of the SIA, he is a distinguished teacher, and many of his former students have gone on to make substantive contributions in the field of IA. He is coauthor, with Robert Gordon, of *The Texture of Industry: An Archaeological View of the Industrialization of North America* (Oxford Univ. Press 1994), a pioneering textbook on American industrial history. Malone has also co-edited a volume in *IA: The Journal of the Society for Industrial Archeology* on green engineering (vol. 24, no. 1), and is currently finishing a book on the waterpower system in Lowell, Massachusetts. He has also written on the topic of industrial preservation and reuse. Malone has firsthand experience with the interpretation of industrial sites and artifacts, having served as the director of the Slater Mill Historic Site in Pawtucket, Rhode Island for 15 years. Since 2002 he has served as an advisory curator of Industrial Archaeology at the New Bedford Whaling Museum.

Marie Nisser
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Nisser is Professor Emerita of Industrial Heritage Studies at the Royal Institute of Technology (KTH) in Stockholm, Sweden, receiving the appointment of Chair of Industrial Heritage in 1992. She has been concerned with the study of industrial heritage since the 1970s, and has authored more than 100 publications on the iron and steel industry, pulp and paper manufacture, the conservation of industrial heritage, and industrialization in general. Nisser has graduated several PhD students in industrial heritage, many of whom have continued professional careers in the field. She served as the president of TICCIH from 1984-1990, and has remained a member of the board since. In 2000 Nisser was appointed honorary president of TICCIH, and she is also one of the main organizers behind the TICCIH initiative to develop an International Master's Program in Industrial Heritage.

Fred Quivik
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Quivik is a past president of the Society for Industrial Archeology who works as consulting historian of technology and teaches part time at the University of Pennsylvania. His contracts are divided between preservation projects involving cultural resources having industrial or engineering character and legal cases related to Superfund or related remediation of hazardous materials left at old industrial sites, especially those involving the processing of mineral resources. He has worked as an expert witness for the U.S. Department of Justice, where he contributed a report on the history of operations at the vermiculite mine and mill at the center of a Superfund cleanup at Libby, Montana.

MODERATORS

Patrick Martin

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Session I: Education

Patrick Martin is Professor of Archaeology at Michigan Tech, where he has worked since late in 1977. He has wide experience in historical archaeology and cultural resource management, conducting dozens of projects for a wide variety of sponsors. Since the early 90s he has been the Director of Graduate Studies in Industrial Archaeology at MTU, running the program that has awarded over 50 MS degrees. He serves as the Executive Secretary for the Society for Industrial Archeology, and edits the SIA's journal IA. For the past several years, he has also been the US Representative and a Director of The International Committee for the Conservation of the Industrial Heritage.

Bode Morin

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Session II: Environment

Bode Morin is a two time MTU industrial archaeology student. Graduating with an MS in 1995 after a short career as a mechanical and environmental engineer focused on oil pollution, he worked as a historian for the Historic American Engineering Record on two foundry documentation projects. He next served as curator of the renowned blast furnace museum, Sloss Furnaces National Historic Landmark in Birmingham, Alabama, substantially increasing its collections and formalizing and executing its preservation plan. After Sloss, he moved back to his hometown of Detroit to manage the restoration and redevelopment of Historic Fort Wayne, a former military and industrial base that operated from the 1840s to 1970s then operated by the Detroit Historical Museum. He is currently a Ph.D. candidate at MTU, working on his dissertation that explores the conflict created when environmental remediation projects are required to consider their impacts on industrial heritage with a specific focus on copper smelting.

Scott See

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Session III: Tourism & Development

Scott See is a Ph.D. candidate in the Industrial Heritage and Archaeology program at Michigan Technological University. He is currently employed as the Fund Development Director for the Keweenaw National Historical Park Advisory Commission and also serves as a volunteer board member for the Quincy Mine Hoist Association. Scott's research interests include industrial heritage management activities, landscape studies, and the mining history of the upper Great Lakes region. His master's thesis work focused on the history and evolution of the shaft-rockhouse structures of the Keweenaw copper mines. Prior to pursuing his master's degree in Industrial Archaeology, Scott was an information systems director at Intel Corporation in Folsom, California.

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Slag Dump at Quincy Smelter, Jet Lowe 1978