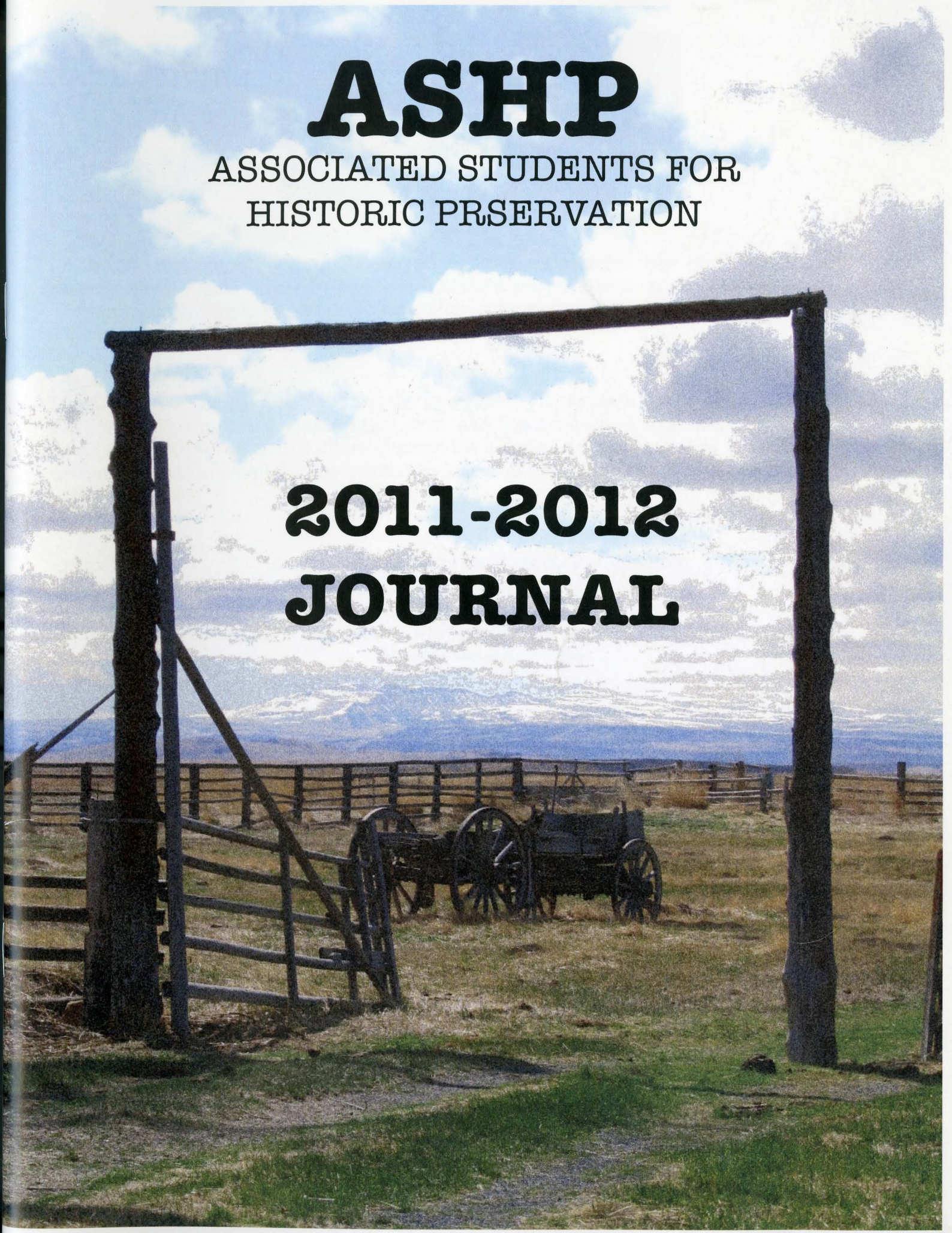

ASHP

ASSOCIATED STUDENTS FOR HISTORIC PRSERVATION

2011-2012 JOURNAL

ASHP

University of Oregon Historic Preservation students founded the Associated Students for Historic Preservation (ASHP) in 1988. ASHP's purpose is to advance the knowledge and understanding of historic preservation policy and practice among students, professionals, and educators throughout the nation.

The ASHP Journal is published annually by student's from the Historic Preservation Program, the School of Architecture and Allied Arts, and the Associated Students of the University of Oregon (ASUO). The ASHP Journal provides a forum to convey views and information, as well as promote spirited debate within the field of historic preservation at the local, state, and national levels.

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For more information about the Associated Students for Historic Preservation, as well as submission guidelines, please visit http://www.uoregon.edu/ashp/.

For more information about the Historic Preservation Program at the University of Oregon, please visit http://hp.uoregon.edu/.

ASHP Officers: 2011-2012

President: Kathryn Sears
Vice-President: Serena Orwick
Treasurer: Evanne St. Charles (Winter and Spring 2012)
Leesa Gratreak (Fall 2011)
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Events Coordinator: Anna Borthwick
Journal Editor: Holly Borth
Journal Assistant: Lauren Rieke

A Letter from the Editor,

This past year at the University of Oregon has proven to be many things- stressful, newsbreaking, enlightening, and limit-pushing, but it has also been exciting, promising, accomplishing, and most-of-all, enjoyable. With an incoming class double the size of any previous year, the new recruits have demonstrated day after day just how knowledgeable and forward-thinking they are, and how future preservationists need to be. It has been a great honor and very humbling to work and learn amongst every peer across whose paths I have come every day for the past two years. As a Michigander, I would not have wanted to be anywhere other than Eugene, Oregon to receive my Master's degree in Historic Preservation.

The field of historic preservation is in great need of review and pushing towards breaking out of its own skin, and I know that graduates from the University are on the threshold of not only witnessing this transformation, but are going to be the ones guiding the way. This year's journal is a fantastic demonstration of what us future preservationists are capable, and also have just been all around good reads!

I would like to thank all of those involved in the making of this journal, including the journal contributors: Evann St. Charles, John Arnold, Noah Kerr, Anna Borthwick, Lauren Rieke, and Jobie Hill. I would also like to especially thank Lauren Rieke for her hard, but very much appreciated, work behind-the-scenes in editing this document and putting it together.

Congrats to another year completed in Historic Preservation!

Cheers and Best Wishes,
Holly Borth

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ASHP Events: From Tours to Roundtables, ASHP Has Been Busy!

Lauren Rieke and Anna Borthwick

Associated Students for Historic Preservation started off 2012 with a Friday the 13th tour of Hull-Oakes Lumber Mill in Monroe, Oregon. Listed on the National Historical Register of Historical Sites, Hull-Oakes is one of the last remaining steam powered lumber mills in the United States. Our tour guide, Nathan, took us through the entire process, from where the logs are stored in the mill pond, to where they are milled and planed and finally stacked to ship and sell. We even got to peek into the broiler room!

In February a small group of ASHP members attended the State Advisory Committee on Historic Preservation meeting in Portland's Oregon Department of Transportation building. The National Register nomination being reviewed was a Multiple Property Submission of four historic bridges in Portland including the Hawthorne, Broadway, Burnside, and Morrison bridges.

We kicked off March with a pizza party and attendance at two Historic Preservation League of Oregon (HPLO) events. The first was a presentation by Steven Semes, author of *The Future of the Past*. His presentation focused on appropriate design for infill in historic districts and was followed by a panel discussion on infill issues specific to Portland. The second was an HPLO Preservation Roundtable on historic masonry buildings in Oregon hosted by the historic City of Jacksonville. ASHP students participated in the discussion groups and took notes to be used in the compilation of the HPLO's annual roundtable report. We were able to tour many historic buildings in Jacksonville, including the Masonic Lodge, the Oddfellows Lodge, and the Redman Lodge.

Currently, ASHP is working on restoring a set of historic benches from campus, circa 1923. In April, we hosted a bake sale to raise funds for this project, and once restored, we plan to return them to campus. Also coming up spring term is the annual Vernacular Architecture Conference in Madison, WI, which selected ASHP members will attend as Student Ambassadors.

Next year we are looking forward to working more closely with the Historic Preservation League of Oregon, and welcoming the incoming class of Historic Preservation graduate students!

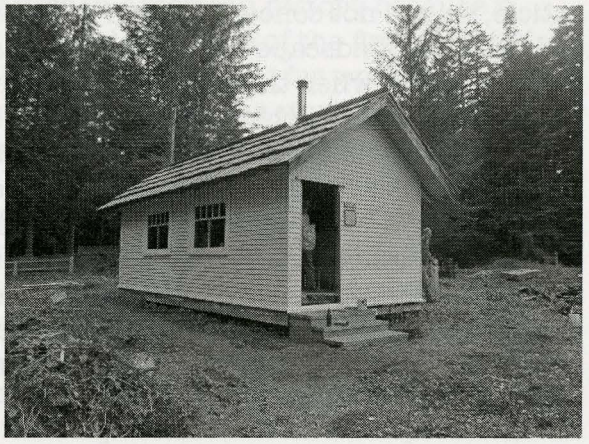
2011 and 2012 PACIFIC NORTHWEST PRESERVATION FIELD SCHOOLS

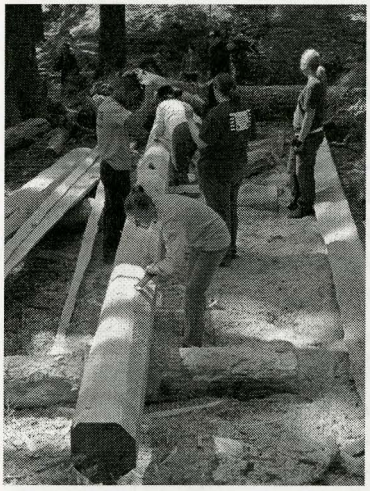
Holly Borth

Over the course of four weeks during the summer of 2011, the Pacific Northwest Preservation Field School held its annual field school in Olympic National Park in Washington state. ## students attended, with a wide variety of specialties and circumstances. ## of the participants were incoming graduate students to the University of Oregon's Historic Preservation program. As the new students' introduction into the program, the field school was highly successful in demonstrating a wide array of wood-working tools, techniques, and skills that greatly excited each one of them.

Peter Roose Homestead

The first two weeks of the Pacific Northwest Preservation Field School were held in the backcountry of Olympic National Park at Peter Roose's Homestead, located off the Cape Alava Trail. The field school's projects for the site, lead by backcountry carpenter Don Houk, included splitting cedar fence rails, re-establishing three different types of fence-lines in their respective areas, which were determined using historic photographs, stabilizing the root cellar, and priming the extant house with wood preservative and white paint.



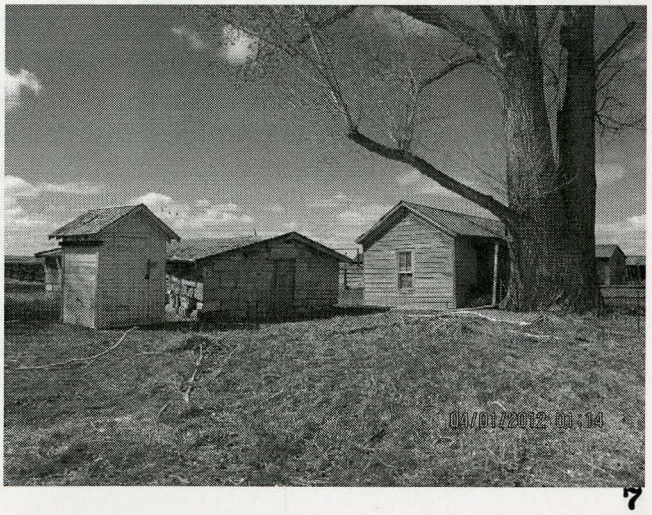


Sol Duc Shelter

The last two sessions of the Pacific Northwest Field School were separated into two one-week sessions. The chosen site was a trail shelter built by the Civilian Conservation Corp (CCC) in xxxx on the Sol Duc trail in Olympic National Park. John Platz, preservation specialist and co-owner of Pilgrim's Progress Preservation Services, joined the projects for the sessions, which focused on replacing rotting logs that were major construction components for the shelter and re-roofing the split cedar shake roof.

2012 Pacific Northwest Preservation Field School

This year, the Pacific Northwest Preservation Field School will be heading to quite a different climate region from Olympic National Park, and into Southeastern Oregon- the home of the first ever field school. Again, the field school will be separated into two sites, the Frenchglen Hotel and the Sod House Ranch. Work will include an archaeological dig, foundation work, siding and roofing repair, window repairs and replacements, and masonry.



Cultural Landscapes and Their Importance in the Study of American Heritage

Evanne St. Charles

According to the Oxford Essential Dictionary, the word "landscape" is defined as "scenery, as seen from a broad view from one place."[1] When one hears the term "landscape," one might be inclined to imagine a picturesque park or countryside. However, for the purposes of this article, we are not concerned with the mere definition of "landscape" or the picture that comes to mind when thinking about a landscape. We are interested in the meaning of landscape and how its significance has been shaped by human beings over time. Thus, for the intentions of this essay, a more appropriate understanding of the term "landscape" is the "embodiment of the cumulative evidence of human adjustment to life on earth."[2] The particular landscape that involves human interaction is often referred to as a cultural landscape.

Cultural landscapes and properties are different than properties recognized for their relationship to a particular style of architecture or designer because they represent the ordinary – the vernacular – the landscapes of ethnic groups and minorities. Until recently, cultural landscapes have often been overlooked, but nonetheless have played a major role in the formation of America's past.

In order to comprehend the importance of cultural landscapes and why we preserve them, one must first be familiar with the history of preservation in America and how our perception of what we find meaningful to preserve has evolved. Up until around the late 1970s and 1980s, structures that were preserved highlighted properties of our American heritage that affected the nation as a whole. Most of these structures and artifacts prior to the 1960s were "houses associated with national leaders and the best examples of architecture from the colonial or federal periods."[3] High style, monumental structures were recognized, whereas vernacular architecture was completely disregarded. This began to change in the next decade. As stated in *A Richer Heritage*, "The authors of the essays contained in [the 1966 book that triggered the National Historic Preservation Act], *With Heritage So Rich*, could not have imagined that the historic preservation field would incorporate such a broad story into the narrative of the nation's heritage."[4] By 1986, what we considered meaningful to preserve had changed greatly. The "scope of the preservation movement expanded to embrace, among others... sites of no particular architectural distinction but with close ties to ethnic groups."[5] Today, a much more extensive group of individuals from different ethnic backgrounds participate in historic preservation, as the meaning of what is historic and significant has evolved to encompass structures associated with a diverse array of ethnic and cultural pasts.

High style, monumental architecture is valuable for understanding the social, cultural and political progression that has been made over the course of the history of the United States. High style architecture allows us to comprehend ideals held by the elite and intellectual influences of the period, and thus can provide us with information that vernacular, cultural landscapes lack. Nonetheless, there is equally important information that can be gained from assessing our everyday landscapes. The reasons as to why we have come to find meaning in the preservation of cultural landscapes are discussed below.

The first reason as to why we find significance in cultural landscapes is that they offer us a much richer and diverse history than can be found when only considering the high style and monumental structures of our nation. The second reason lies in the fact that cultural landscapes have been allowed to evolve according to the changing needs of a particular ethnic group, whereas monumental or high style structures are for the most part static as we attempt to grasp a certain point in time that the property is intended to represent.

Cultural landscapes often represent minorities and ethnic groups that are largely unacknowledged in

history. Although the imprint of ethnic groups on our nation is found in both rural and urban settings, the focus of this paper is their impact on the formation of urban landscapes. Urban landscapes represent multicultural sites where the reminders of the "struggle for political, economic, and social progress" of immigrant groups are found.[6] The Polish flat of Milwaukee, Wisconsin and the Portuguese three-decker tenement of New Bedford, Massachusetts, provide valuable case studies in order to better comprehend the struggles that immigrant groups faced when attempting to create a new home in an unfamiliar place. Both house types are particularly insightful regarding the development of urban working class neighborhoods in America's cities. Thus, the Polish flat and Portuguese three-decker tenement are significant to the study of cultural landscapes and their transformations over time.

When first observing the Polish flat of Milwaukee, one might wonder about the significance it offers regarding the development of American history. "These basic wooden buildings, consisting of several distinct house types, were neither new urban building types nor imported ethnic creations, but reflected preexisting American house forms and technology modified for dense urban environments during the second half of the nineteenth and early twentieth century."[7] However, although the Polish flat did not represent traditional Polish building practices, the houses in Milwaukee demonstrate cultural values of Polish Americans through their selective adoption of particular American cultural elements – a process known as *Americanization*.[8] When first arriving to America, Polish immigrants often inhabited a standard urban workers' cottage that can be found in cities across the United States (fig. 1). A typical workers' cottage is "a one-story (or story and one-half) wood frame structure with its gable and offset front door facing the street."[9] The standard plan of the workers' cottage consists of four rooms. One side contains the living room, or parlor, and kitchen, and on the other side are two smaller rooms, often used for bedrooms. They also often have two entries, a front porch, a basement and an attic.

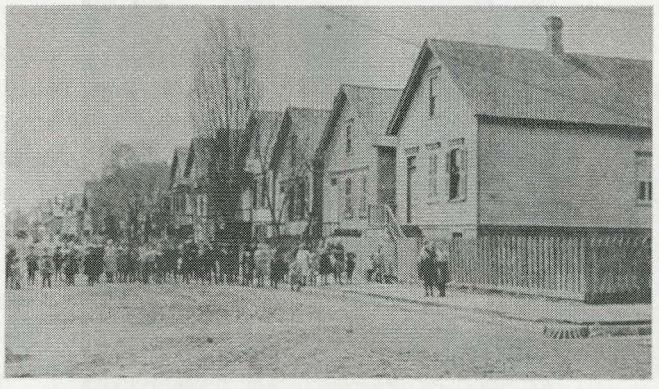


Figure 1: An unidentified housing block in Milwaukee (typical Polish workers' cottages); part of a 1905 study on the housing conditions in Milwaukee, WI.

The workers' cottage, in itself, is a prominent building type in American history because it "should be considered one of the first forms of fully industrialized housing for working class Americans," obvious in the standardization of parts, national distribution and production of materials and the introduction of speculative building processes.[10] By the end of the nineteenth century, it was typical to find workers' cottages in Milwaukee's working class neighborhoods being transformed into two-story, two-family duplexes. However, "this Milwaukee flat never achieved popularity [in Polish neighborhoods] because it was an expensive, larger structure, generally built at one time and thus beyond the means of most Poles."[11] Consequently, the Poles created their own version of the Milwaukee flat.

After paying off their four-room frame cottage, the Poles raised it on posts in order to construct a semi-basement dwelling below (fig. 2). The basement was rented out, and as soon as the family acquired enough money, brick walls were substituted for the timber in the basement.[12] Another common addition that Polish immigrants adapted to the workers' cottage was a rear, or alley house. Both the Polish flat and the rear house are exemplary of the Polish immigrant's desire to achieve the shared goal of homeownership.[13] Rather than attempting to rent a larger house, Poles, who put great value on the concept of homeownership, added onto their existing, smaller homes. In addition to their aspirations of owning a home, Poles worked hard to assimilate to their new country. Polish immigrants adopted a very standard housing type among the working class and remodeled it to fit their desires of assimilation. Alterations included the individualization of sleeping spaces, the separation of food preparation and dining areas, an increased attention to

sanitary practices through plumbing, and the exclusion or confinement of agrarian influences yard activities.[14] Through this building transformation, "it is clear that strongly held ethnic values as well as newly acquired American building technologies helped the Poles negotiate their transition to American life."[15] The adoption of the American workers' cottage as well as the alterations Poles made in order to Americanize their living space resulted in the loss of traditional Polish cultural practices. However, the progression of first acquiring the workers' cottage and then expanding upon the cottage to demonstrate the economic progress of the family was a distinctly Polish assimilation process. Thus, the study of the Polish flat presents us with further insight as to how immigrant groups responded to the challenges of a city in a new nation. This, in turn, provides us with broader notions regarding the assimilation of immigrant groups in America that are not revealed through the examination of monumental, high style architecture and landscapes.

The investigation of the Portuguese three-decker tenement in New Bedford offers similar insight into the collective change that occurred in the Polish flat in response to a new and unfamiliar place. In the late nineteenth century, New Bedford's economy changed from one of whaling trade to textile production.[16] Although the three-decker building type (fig. 3) was "designed in many sizes to fit various price ranges, building contexts, and stylistic expressions," it became a popular housing form for the urban working class because it "met the practical housing demands of the New England textile era."[17] However, by 1925, the three-decker building was no longer used because, like the Polish flat, it was seen as unsanitary and represented the poor living conditions of the immigrant population. With the wave of Portuguese immigrants to New Bedford between 1910 and 1920, three-decker tenements were inhabited and transformed to "reflect the new aesthetic expressions and social meanings than when the building form was first conceived."[18] Similar to the Polish workers' cottage, the three-decker tenement became the housing choice of Portuguese immigrants upon their arrival to America. However, the Portuguese were less willing to let go of traditional cultural practices than the Poles, which is expressed in the collective transformation that occurred in the three-decker tenement to meet the needs of a different culture. For example, "while the front hallway leading from the piazza was conceived of as a central feature of public performance and daily use in the original three-decker design scheme...it was effectively a ceremonial entrance for [Portuguese immigrants], used in conjunction with the front parlor."[19]

Additionally, the plans of three-decker tenements shifted according to the new organization of spaces that related to the traditional practices of the Portuguese. One would enter through what was initially the kitchen, a utilitarian space, rather than entering through the parlor, a more formal space, as originally organized. Lastly, outdoor spaces were transformed into social spaces. Yard spaces between tenements that were originally intended for firebreaks became

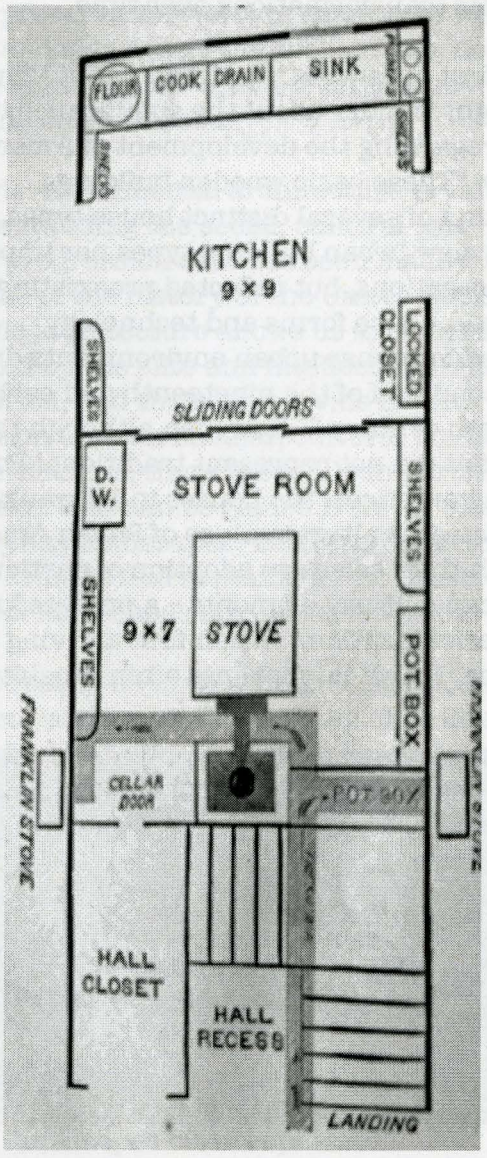


Figure 2: Diagram showing the transformation of the workers' cottage to the

Figure 3: Three-decker tenements on North St. in the North end of New Bedford, MA, circa 1910.

communal spaces (fig. 4).[20] The change that occurred to the three-decker tenement upon being inhabited by Portuguese immigrants in the early 1900s represented the Portuguese "commitment to a better way of life in their adopted home and a desire to maintain cultural and aesthetic ties with their native land."[21] Like the Polish flat, the Portuguese three-decker tenement provides an understanding as to how cultural landscapes are altered to fit the requirements and desires of various ethnic groups when responding to a new environment. In cities across America, housing styles were not particularly ethnic. Rather, the "signage and ethnic decorations on commercial and community buildings, as well as the street life itself, distinguished the national origins of residents."[22]

Similar to the information that the Polish flat and the Portuguese three-decker tenement offer regarding general experiences of ethnic groups in urban working neighborhoods, all cultural landscapes contain unique, public memories that cannot be found when only considering the structures that represent a minute percentage of our architectural heritage. Today, professional preservationists are aware of the "scenarios where the National Register criteria assign similar value to ordinary, everyday, representative properties as to unique, exceptional, extraordinary structures."[23] This heightened familiarity with the value the National Register assigns to vernacular architecture is a response to the "concern with the representative rather than the singular nature of buildings and landscapes."[24] Although high style structures, designed by architects, rather than builders, are important to understand the development and progression of architecture in America, vernacular, cultural landscapes must also be considered in order to grasp the majority of our nation's past.

Cultural landscapes are meaningful because they represent "multiple layers of time and cultural activity" that "are fundamental to our very existence."[25] High style structures are valued for their ability to depict a particular architectural style at its best, or a particular period of time that is tied to national heroes. This limits their capacity to change over time. In contrast, cultural landscapes "associated with specific groups of settlers represent not only their own practices, but also those of later immigrants who refashioned the natural and cultural resources to suit themselves."[26] For example, the three-decker tenement not only represents the need for adequate worker's housing in New Bedford with the introduction of textile factories, it demonstrates the changes that occurred when the later Portuguese immigrants inhabited them and adapted them according to their own cultural practices. Because the Portuguese three-decker tenement does not represent high style, American architecture, it has been allowed to change over time, providing us with better insight into the development of immigrant working class neighborhoods in America. The evolution of cultural landscapes enables the "combination of old, new and borrowed architectural ideas [that] provide much of the force of innovation in American architecture."[27]

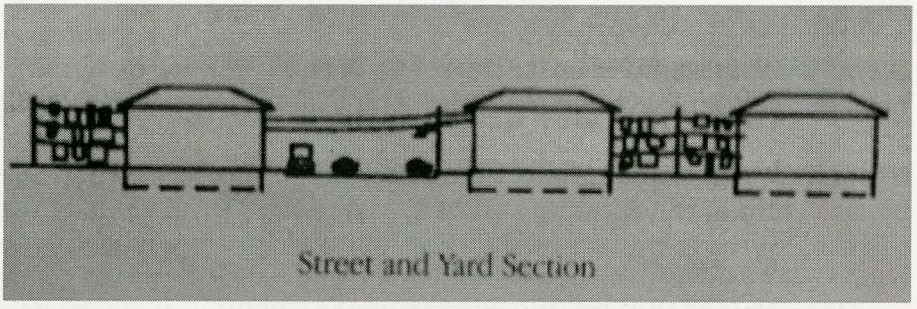


Figure 4: Diagram showing how the yard was used as a place for social experiences, coinciding with the transformation of spatial usages of the three-decker upon being inhabited by the Portuguese.

Unlike a Victorian mansion that is highly regarded for its stylistic purity and intellectual influence that has been maintained over time, the Polish flat is meaningful to our heritage because of its adjustments, alterations and combinations of house forms that demonstrate the Polish desire to assimilate within their means. This desire has further implications regarding the broader aspirations of other ethnic immigrant groups as well. Even when we study vernacular architecture, we tend to focus on the unaltered, the best preserved, or the most intricate of its physical type. However, when attempting to learn, for example, about building methods developed with "preindustrial material," greater possibilities lie in "urban types like the tenement, the public library, or the office building, to provide broad social interpretations of construction and habitation."[28] Therefore, it is not always the purest style or forms of architecture that provide the greatest benefits to our understanding of the past. We are able to gain tremendous knowledge through the study of cultural landscapes because they reveal the progress that America has made as a nation of numerous cultures and ethnicities.

We find historical significance in both elite and vernacular landscapes because they both provide us with information regarding the development of our nation's past. However, unlike high style properties, cultural landscapes provide us with broader knowledge regarding the everyday life of middle and working class society, the majority of the American population. Furthermore, cultural landscapes have been allowed to change throughout time, which also presents us with valuable information regarding the evolution of social structures, politics and economics in America. Through the study of immigrant housing such as the Polish flat and the Portuguese three-decker tenement, we are able to gain insight into the behavioral patterns, changing attitudes and cultural practices that result when immigrant groups are faced with the challenges of a new and unfamiliar place. These insights are much more valuable when studying working class society in urban areas than a single high style or monumental structure will ever be. The preservation movement has come to recognize the meaning that cultural landscapes such as immigrant housing offer, however we still have a ways to go.

Industrial Archaeology at the Shore Whaling Stations of South Georgia Island

John D. M. Arnold

In the late 1970s, not two decades past the final date of operation of the last of the land-based whaling stations on the remote sub-Antarctic island of South Georgia, reports of the poor and deteriorating condition of their remains began to surface, as did news of Argentinean scrap yards negotiating with their owners to begin salvage operations. This confluence of information began the crystallization of a project to survey and document the stations before it was too late to do so.

Given various limitations on the scope of the project, including available funding and the remoteness of the site, the aim of the project was to conduct what amounts to a gross survey of the components of the whaling stations, including the structures and machinery, and their spatial relationships, rather than a detailed survey of the minutiae of the sites (Basberg 2004:25).

HISTORY

While the positive economic and social role that commercial whaling played in the construction of nascent America is incontrovertible, the history of the industry is nevertheless an object lesson in natural resource overexploitation. However, commercial whaling was never an enterprise focused on long-term sustainability, but rather on short-term profitability, and was for bursts of time and at specific locations a roaring success.

Carl Anton Larsen, a Norwegian whaler and captain, with financial backing from his countryman, the capitalist Christian Christensen, conducted preliminary surveys of the virtually-untouched Antarctic whaling grounds in the final decade of the nineteenth century. In the southern winter of 1902, while on an unrelated Swedish-funded scientific expedition, he entered a newly-discovered cove in Cumberland East Bay, and found what he believed to be the perfect site to construct a land-based

protected bay, an expanse of level ground, and plenty of fresh and flowing water convinced Larsen to found a whaling company. Backed by Argentine capital, he returned to Grytviken (Swedish for "Pot Cove") in 1904 to establish his whaling station (Basberg 2004:31). Other companies followed, and by 1917, five additional shore stations had been established on South Georgia: Ocean Harbor (1909), Leith Harbor (1910), Husvik Harbor (1910), Stromness (1913), and Prince Olav Harbor (1917) (Basberg 2004:33).

Unlike many other whaling operations undertaken elsewhere in the world during this era, these were regulated; the waters of South Georgia and several nearby groups of islands, known collectively as the Dependencies of the Falkland Islands, were administered by the British government. The Governor of the territories had restricted the number of licenses granted in 1906, and in 1909 the appointed Magistrate (posted to King Edward Point, just across the harbor from Grytviken) mandated a policy of "full utilization," (Basberg 2004:34) of the captured whales, a requirement which at the time virtually demanded the presence of a shore-based station to be met. The stations expanded rapidly over the next decade, and the 1920s saw the greatest number of whales killed, with a peak of 7,825 over the 1925- 1926 season; declining stocks then began again to push the whalers further out to sea. The open waters of the Antarctic continent remained plentiful with whales, but there was no way to process them at sea, and hauling them back to the shore stations took too long - the body, and most notably the oil, would begin to decay to an unsalable quality within even a day of the animal's death. But the 1922 invention of a functioning stern slipway, a droppable gate which allowed entire whales to be hauled onto the deck of the factory whaling ship while at sea, birthed a new phase of modern whaling known as "pelagic whaling" (Basberg 2004:37). Whales could now be killed beyond British jurisdiction, and processed without the aid of shore stations. Thus began the long decline of the shore whaling stations of South Georgia.

Over the next twenty-five years, various stations were subject to intermittent closures for a variety of reasons, not least of which was World War II; the International Whaling Commission, started in 1946, introduced further regulation (including catch quotas) to the industry. Another fifteen years of diminishing returns convinced most operations to close down entirely, but a Japanese presence remained until the bitter end, with the closing of their leased stations of Grytviken and Leith in 1964 and 1965, respectively (Basberg 2004:39).

Caretakers of Leith and Grytviken boarded up and departed their stations in the subsequent years, and as there was no longer a need for governmental whaling oversight, the civil servants returned to Britain; for the next fifteen years, the only human presence at Grytviken were scientists with the British Antarctic Survey (BAS) who were stationed at King Edward Point, and periodic visits by fishing vessels. It was in this period of time that some consideration of the potential loss of artifactual history came to the attention of archaeologists in Europe, with news from the BAS on the deteriorating conditions of the remains and an Argentinean scrap yard positioning itself to harvest the steel for reuse. In 1982 the Falkland Islands War brought British military command to South Georgia, and with it a renewed European (and indeed global) awareness of and interest in the heritage of the island (Basberg 2004:46). Through the 1980s and 90s, tourism to the island steadily increased as did governmental concerns about the safety of the ruins to visitors, leading to locally intensive site clean-up (including asbestos and oil removal) and even the removal of some buildings deemed excessively hazardous. With a greater number of more deeply involved interests in the sites, discussion naturally ensued questioning how to treat the remains of human activity in this otherwise wild and fragile environment. The scope and scale of the several sites along the island further complicated management decisions, as not all resources at all locations could feasibly be preserved. It was in this context of a complex and unknown future that the project of survey and documentation of the remaining heritage resources, the Registration of Remains of Whaling at South Georgia, was undertaken (Basberg 2004:53).

SURVEY

Ultimately, three survey trips were made during the 1990s. The first, based in Husvik, was undertaken over the 1989- 1990 field season, funded by the Norwegian Antarctic Research Expedition (NARE). While it was clear from the

inception of the enterprise that it was to be in essence a survey and documentation project, the question remained as to how to survey something as large and complex as a whaling station within a short period of time and on a limited budget with only two surveyors. Clearly, it would not be possible to survey to the same level of detail that was developed by the Norwegian Agency for Cultural Heritage (analogous to our Historic American Buildings Survey) for detailed surveys of individual houses in Norway. An abundance of existing documentation on the technological history of the whaling stations, including patents and construction drawings, served as an excellent basis for the survey, and freed the surveyors to flesh out lacunae and confirm the accuracy of the existing documentation. Further, as the social and practical functioning of the active stations was not well understood, it was determined that the survey would focus on the functional relationships of the extant features rather than artifacts or building and construction details (Basberg 2004:16). The priorities for recordation were to draft accurate as-built station maps and building plans, and to photographically record interior and exteriors of the buildings (including several stereoscopic series at Husvik, to be used in photogrammetry), all of which would later be augmented by reference to existing documentation and the incorporation of oral histories of former South Georgia whalers. The existing maps of the original planning and construction of the whaling stations were updated with data collected, and also with the dimensioned layout of interior rooms which were not located or indicated in the original drawings. Again, as there was at the time no sense of any possibility for the researchers to return to the island, all attempts were made to be both thorough and judicious (Basberg 2004:17). Yet the possibility came. The field season 1992- 1993 saw the return to South Georgia; this survey was able to focus entirely on one station.

Grytviken was relatively bustling with activity in comparison to the previously surveyed stations, with many year-round residents; the researchers were comfortably housed at the garrison at King Edward Point. As with the previous visit to South Georgia, time was very limited - and at this visit, the documentation was limited to mapping and photographing the exteriors and interiors of the remaining buildings, but not revising the existing station maps (Basberg 2004:20).

The final survey expedition undertaken by the researchers focused on the Leith Harbor station, the largest and most complex of all of the whaling stations on South Georgia. The survey of this station followed closely the techniques employed at the previously visited sites, with the novel addition of the creation of section drawings of the processing plant (Basberg 2004:21).

FINDINGS

A primary purpose of the site visits was to investigate the construction and architecture of the remaining buildings on South Georgia; however, as with so much undertaken in these expeditions, only an abbreviated study was possible given budget and time constraints. That is, while commonly used materials and their roles were noted, detailed dimensions of framing members (for example) were not. In general, it can be said that without exception all buildings were roofed in corrugated iron, and a great many clad in the same. A smaller number of buildings were either sheathed in wooden planking or cast in place with concrete. The foundations of virtually all of the buildings were brick, but many also were of concrete. The frames of the newer buildings were steel, but the older buildings were timber. Interestingly, many of the frames appear to have been at least partially pre-fabricated in Norway (the ends of many timbers are machine-notched) and at least one building, the church in Grytviken, was entirely pre-fabricated, disassembled, and shipped from Norway for reassembly on South Georgia (Basberg 2004:74).

Figure 1. Grytviken c. 1960 (Basberg 2004: 57).

It was the primary focus of the researchers to supplement and clarify the wealth of available documentation on the shore whaling stations of South Georgia with information collected during the several site visits, and to manage the almost overwhelming size and scope of the sites to an intelligible scale; following their lead of abbreviated clarification, the following is a general overview of features common to the shore stations, with short elaborations on the particularities of the station at Grytviken. While the processing of the whales was the primary function of these stations, the success of the industry required an extensive support structure. Indeed, these isolated communities approached the idealized "total institution" (Basberg 2004:77). In addition to the primary activities of the whaling station - the processing of the whales - the researchers recognized three additional classes of buildings as workshops and ancillary functions, stores, and accommodation and recreation (Basberg 2004:56).

The essence of the production process was to transform the intricacy of a whale into just two simple products: whale oil and whale meal. The path to these final products is reflected by the complexity of the remains surveyed at the stations. A simplified overview follows.

Whales killed at sea were towed back to the shore station, and winched up the slipway to the flensing platform. There, the blubber of the whale was removed from the carcass and sent to be rendered into oil at the blubber cookers. The flesh of the whale was then stripped from the bones and sent to the aptly-named meat cookers. Finally, the skeleton and associated remains were sent to the (yes) bone cookers. These three types of cookers addressed the differing qualities of the blubber, meat, and bone and subjected the remains to appropriate temperature and pressure for a prescribed duration to optimize the quality of oil produced. The products of the cookers consisted of mixed oil and water (called "glue-water"), and solids that required isolation; these outputs were sent to a series of separator plants for purification before storage. The extracted oil was collected and distributed to on-site storage tanks by grade (Basberg 2004:83).

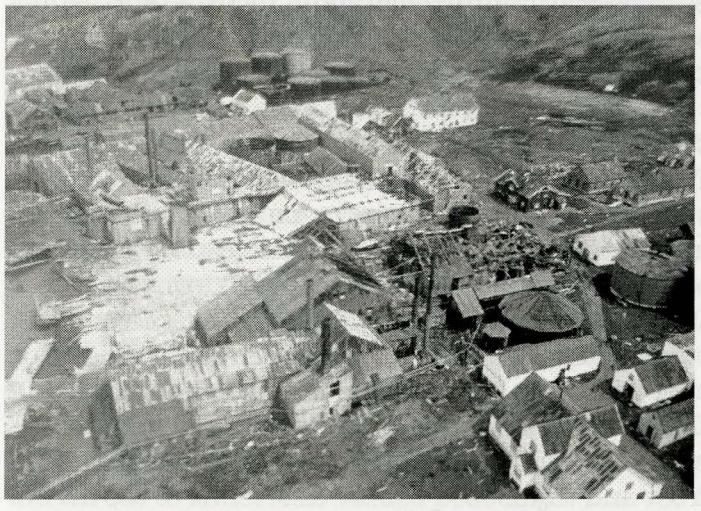


Figure 2. Grytviken 1990 (Basberg 2004:58). 1990

While the blubber was reduced to oil and non-oil liquids, both the meat and bone processing stages resulted in solids as well; these solid remains were shuttled to the whale-meal plant to be dried, ground, and bagged (Basberg 2004:84). The meat-meal was of a higher protein content and was generally used for animal feed, while the bone meal was used for fertilizer. In their later years, virtually all of the stations added fairly sophisticated laboratories which focused predominantly on quality control of the oil and meal products leaving the factory (Basberg 2004:113). The buildings housing these functions varied somewhat it their layout by station, but always clustered about the central flensing platform.

The factories and their supporting enterprises required steam and electricity, and most stations had both a boiler house for the production of steam, and an electrical power station; initially, these plants were coal-fired, but fuel-oil replaced coal in the later years of operation. Steam was used both in the whale cookers and to heat the worker housing; electricity similarly was used by the factory and for domestic purposes. An ample supply of flowing fresh water was a requirement for the siting of the stations, but it was predominantly for the production of steam and for human use, not for the creation of electricity by hydropower. The exception is the station at Grytviken, which did have a three-turbine plant that provided more than a supplement to the electrical needs of the station (Basberg 2004:121).

Given the dramatic isolation of the stations and the seasonal nature of their employ, it is no surprise that a number of workshops became, as the stations proved themselves operationally viable, a necessity at these remote bases.

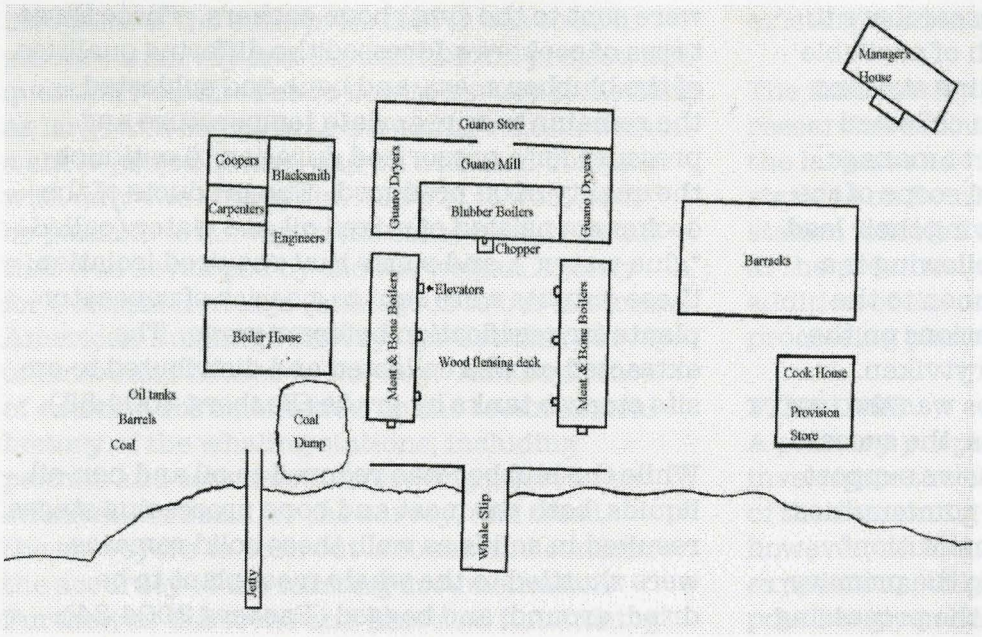


Figure 3. Schematic whaling station (Basberg 2004:70).

The "engineering workshop" at Grytviken, for example, contained a blacksmith shop, a foundry, tinsmith shop, plumber's workshop, and engineering studios; a separate carpenter's workshop nearby complemented these functions for woodwares. Additionally, Grytviken and the other electrified stations had electrician's workshops, radio houses, and radar workshops. Further, all stations had a number of stores – reserve materials and supplies depots- to buffer the functioning of the stations and reduce nonproductive time spent awaiting supply drops from South Africa, South America, or the Falkland Islands. (Basberg 2004:136).

The accommodations at a station corresponded to its workforce and activity; Grytviken was in essence a village of three hundred men, with a continual flux of returning and departing whalers. The "villa" was a feature of every station, housing the manager and his family, as well as the other functionaries of the station (at Grytviken, this included the doctor, the chemist, the chief steward, the priest, the secretary, the workmaster, and the villa cook). This separate house was of a higher construction standard than the barracks, and generally possessed greater architectural styling and detailing (Basberg 2004:143). The barracks buildings varied in size from station to station, and might accommodate anywhere from six to one hundred beds, arranged in single rooms, doubles, or as bunkrooms. Individual bathrooms were not common, and facilities varied widely from a shared toilet room to a large central facility to an entirely separate bathhouse (Basberg 2004:159).

As virtually all of the food consumed on South Georgia was brought from elsewhere, each whaling station had extensive storage facilities for both live animals and provisions. Though various livestock (sheep, pigs, cattle, chickens, and reindeer) were kept at the stations over the years, pigs proved the most important; the pigsty at Grytviken, for example, held up to 250 animals. All stations kept hens, and the two-room henhouse at Grytviken was as big as 145 square feet. Each station had at least one mess and kitchen; at Grytviken, these were near its main barracks. In addition, each station had a bakery and a butcher. The only extant coffee-roasting house is at Grytviken (Basberg 2004:174).

Finally, there were support functions for the workers of these remote outposts. There were four well-appointed hospitals on the island, and, though the men worked long hours, opportunities for diversion did exist. All the whaling stations (except Ocean Harbor) had cinemas, and libraries have been located on Grytviken, Leith, and Husvik. The only church on all of South Georgia was built in Grytviken in 1913, but each station had its own cemetery (Basberg 2004:188).

CONCLUSION

The history of polar commercial shore whaling stations is the perfect storm for anyone interested in industrial archaeology: the injection of civilization into the rawest of wilderness, the enormous fortunes built by the dramatic overexploitation of the largest sentient beings to ever roam the earth, the ultimate exhaustion of the resource base, and the utter abandonment of industry and homestead to the wind and ice and frost and time.

The Women of America, in Whose Hands Rest the Real Destinies of the Republic: Catharine Beecher and Domesticity in the Age of Industrialization

Anna Borthwick

Industrialization fundamentally changed America in the latter half of the nineteenth-century. Factories and growing cities served as a stark contrast to the traditionally agricultural landscapes of the country while demographic shifts further augmented the American landscape. As the economic base of the country increasingly depended upon cheap labor to feed the machine of capitalism, waves of laborers from Europe and Asia immigrated to the cities of the United States. White Protestant Americans, the face of the growing middle class, felt their values were being threatened. In their perception, the very essence of America was at stake in these times of quick paced change. Christianity, democracy, and the white American family were in jeopardy and had to be saved, and popular author of the time, Catharine Beecher, proposed an answer.

The center of industrialization, the city, posed an imminent threat to middle class by undermining traditional American values. Immigrants providing labor brought new belief systems, while increasing population densities. Feeling crowded in the "chaotic" new industrialized landscape, the middle class set out to preserve American democracy, American families, and Protestant Christianity from the changing values of American industrialization in the years between 1840-1890.[1] The solution arrived upon was an immediate relocation to the suburbs. These allowed an easy commute into the city for work, while separating the family from the evil influence of the city. Men earned money in the city, while women created a space in which Christian values flourished, simultaneously preserving the family and protestant values in the home. Furthermore, the very act of owning a home in the suburbs represented and preserved American democracy.

Therefore, a move to the suburbs solved the threat to American values posed by industrialization. Families followed the advice of the numerous prescriptive texts of the time calling for suburban homes which structurally represented democracy, Christianity, and each family member's proper place in a civilized society. Yet, once in the suburbs, women found their place in society degraded not only due to the relocation to the suburbs, but to the manner in which the value of labor was fundamentally changed in the age of capitalism. A popular prescriptive author of the time, Catharine Beecher, promulgated a way to reverse this trend, while maintaining the ideals invested in the suburbs. Beecher proved that the middle class woman was, in fact, the backbone that upheld the values of democracy and Christianity in the latter half of the nineteenth-century. A suburban home was not the final answer in upholding American values in facing the threats of industrialization; it was the middle class woman.

During the period of 1840-1890, the emergence of a well defined middle class altered economic expectations and the way in which democracy was defined.[2] The characteristics of this emerging class were their ability to purchase a home, while the male head of the family retained a job in the city. Middle class professions ranged from clerks to lawyers.[3] The demographics of this middle class in the east consisted mainly of white protestant Christians.[4] It was this group of Americans who feared that their fundamental values were challenged in the age of American industrialization. Industrialization and capitalism forced a shift in how the middle class defined democracy. The ideals of an agricultural society as the basis of democracy of the early republic had to be recast in a "commercial and urbanizing society."[5]

Middle class men saw a move to the suburbs as the saving grace to American values at risk. Beginning in the 1840s, suburban homes in the Gothic Revival style provided the answer for the middle class looking to preserve their traditions

and values. Owning a home in the suburbs became the symbol of democracy, replacing the Jeffersonian ideal of an agricultural society.[6] Industrialization required this shift, and the ideal of the time became "if a man could not be a farmer, he could at least be close to nature, on his own plot of ground, in his own house."[7] Thus, owning a house was the first step in upholding American values. Once established in a suburban home, white Protestant Christian families could flourish, despite the affects of industrialization. This simplified alternative masks the complex ways in which industrialization forever altered American society, such as the value of labor, and gender status.

Women of the middle class likewise feared the changes wrought by industrialization and immigration. Yet, the solutions arrived at by men of the middle class did not support middle class women. The movement of the middle class to the suburbs altered the value of labor in America, which adversely affected the status of women during this period. Wealth and status came from outside the home, while women of the middle class were delegated to specific spaces in the home. Industrialization caused domestic work, the work of women, to be downgraded. The cult of domesticity sought to redefine the status of women and elevate it. Catharine Beecher, a popular contemporary author, pursued this goal through her instructive texts *A Treatise on Domestic Economy* and *The American Woman's Home*. In order to re-appropriate value to women's work she described domestic work as the foundation of a democratic Christian society. Beecher proposed to combat the threats to middle class American values through domestic work. She responded to the same perceived threats to Christianity, democracy, and the American family that middle class men were responding to, yet her answer differed by placing high value on domestic endeavors and the space in which a majority of women's work centered, the kitchen.

The pursuit of elevating the value of domestic work was a difficult one due to the manner in which the value of labor was shifting. Industrial capitalism created a split between domestic life and public life.[8] Work and home became entirely different spheres in which work was defined as "wage earning done away from home."[9] Consequently, the home became a refuge

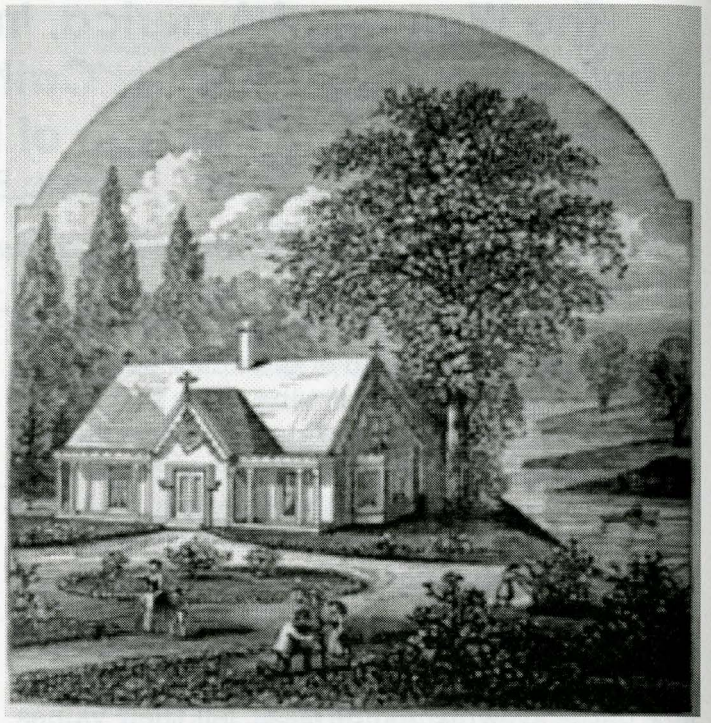


Figure 1. An ideal of the gothic revival style suburban home. Source: Beecher, *An American Woman's Home*, 23.

from work and the city, a "calm retreat, where husbands and children were protected from the outside world."[10] The home was then seen as an "island of stability" and the suburbs were a "protected retreat where the family could be safe."[11] Value came from outside the home, and work performed inside the home was devalued due to this separation which could not have been possible without modern mechanization. Though the suburbs served middle class men as an escape from modernism, it was the modern railroad system that made this separation possible.

The railroad system transformed transportation and communication in America in the years 1840-1890. The new mode of transportation facilitated middle class families moving from the city to the suburbs.[12] Railroad lines were built from city centers to the emerging suburbs thus creating more space between the middle class family and the city. Men would take the train into the city everyday to work, and then at the end of the day they could escape the chaotic city to the refuge of their own house.[13] For middle class men the suburbs were a complete escape from the modernism of the city, and the place where wealth and success were created. The railroad provided an easy commute to their jobs in the city, while their homes and families

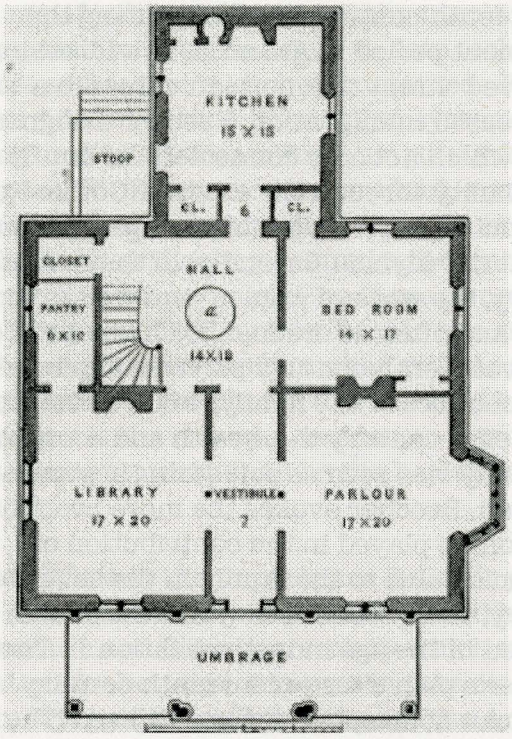


Figure 2. Gothic revival style floor plan by Downing.

were separate, and therefore, actively preserved democratic and Christian beliefs. Wives and mothers were an active ingredient in this refuge; their place was merely to be in the home, not economically contributing, which could only be attained in the city. The domestic work they performed in the home and the kitchen was not seen as valued labor, much less supporting the cause of preserving democratic and Christian beliefs. The decision to move away from the city, as well as the changes in the value of labor influenced women of the middle class very differently than it had men.

Much of the fear caused by immigration surrounding the American family and children centered on middle class women. Nativist fears of declining birth rate in white protestant women added to the pressure to move to the suburbs.[14] Women had many reasons to prefer the city. Not least of all was the access to services, schools, and society. The city had the potential to assist women in their domestic duties by providing a setting which facilitated the purchase goods such as bed linens, cheese, and bread which women may have had to make themselves.[15] Canned and processed food was also more readily available in the city setting, as were laundry facilities.[16] Furthermore the city often provided increased access to schools, and childcare.[17] Ultimately, the city contained services which made a woman's life easier in the latter half of the nineteenth-century which created a certain amount of free time not experienced by women before this period. Woman's societies and causes sprung up such as, the vote, temperance, and abolition.[18] Women's involvement in politics added to middle class men's perceived threat to the American family and democracy; the city jeopardized the traditional role of women. In order to perpetuate the American Christian family, women had to be segregated from the city and into the appropriate spaces in the suburban home.

The suburban home addressed the issues of the preservation of middle class women's role, owning a plot of land, and separating labor from the home. It also protected the Christian beliefs of the middle class. Catharine Beecher, and her contemporary, the landscape architect and designer, Andrew Jackson Downing, identified the Gothic Revival style as the most appropriate for the middle class suburban home. The style was chosen for its ability to accommodate modern functionality while providing an association with churches constructed in the Gothic style.[19] Figure 1 shows an illustration from Beecher's *An American Woman's Home*, representing the Gothic Revival ideal: a side gable, central chimney home, with Gothic decorations on the bargeboards, and piazzas to either side of the front door. Its setting represents access to open air and communion with nature, truly an escape from the city, and a place to safely raise children with strong Christian morals. The popular Gothic style suburban homes of this period revealed the changing attitudes in societal norms.

The codifier of the Gothic Revival movement, Andrew Jackson Downing, published guidebooks beginning 1842 which set forth the ideal Gothic Revival home.[20] As a symbol of middle class protestant Christianity, the facade of the home immediately told the viewer that the owner was a Christian, and promoted Christian beliefs in his home and in all aspects of his life. Once inside it was apparent that the plan of the house meant to instruct family members of their place in the family and society.

Figure 2 displays a floor plan by Downing which clearly represents the gendered spaces of this period. The library, the man's space, and the parlor, the social space, are prominently in the

front of the house. The kitchen appears as a closed off space in the back of the house, where a woman's work centered. The placement of the kitchen, then, serves to isolate and minimize the value of the work done by women in support of the social places in the home. In this popular suburban plan, women's work was hidden from the public.[21]

Beecher and Downing agreed that the Gothic Revival style was the most appropriate style for the American home, and both authors created interior designs which represented their idea of how family members should interact within the home and American society. It was the manner in which interior designs controlled gender status that Downing and Beecher differed. Figure 3 displays a floor plan by Catharine Beecher found in 1869's *The American Woman's Home*. Though the kitchen remains to the back of the house, it is not closed off from the main social rooms of the house. As Beecher explains in 1856's *A Treatise on Domestic Economy*, the kitchen and sitting parlor must be on the same floor and in easy access to each other to facilitate service.[22] Furthermore, Beecher's plan harkens back to the seventeenth-century hall and parlor plan, which featured two main rooms on each side of a central chimney.[23] Beecher's hall and parlor plan contained modern the components of the time, but followed the same program.

The design served two purposes. First, it immediately associated the plan with the seventeenth-century Puritans during the settlement period in America. In addressing the perceived threat to American values in a time of increased immigration, Beecher designed a house which not only connected the family to Christianity through the exterior Gothic Revival style, but to America's Christian past through the interior layout. Secondly, in the seventeenth-century, the work of women centered in the home, and often so did men's. The home in the seventeenth-century played a key role in the economics of the family, while in the late nineteenth-century the wealth and economy of the family was seen as something separate. With this plan, Beecher evokes the more prominent role women played in the contribution of economic value to the family in the seventeenth-century, and questions how much this role really changed in the age industrialization.[24] Though Beecher's plan cites seventeenth-century American homes, her designs utilized "the most advanced technologies."[25] According to Beecher in *A Treatise on Domestic Economy*, the kitchen was "where most labor is to be performed."[26] It served as the center of the woman's workplace, the center of her profession. In *The American Woman's Home*, she notes that during the age of industrialization the tasks of childcare and providing "the food of a family by labor is deemed the lowest of all positions in honor and profit."[27] She then proposed to combat this opinion by elevating these tasks to the level of a profession much like a man would have in the city.

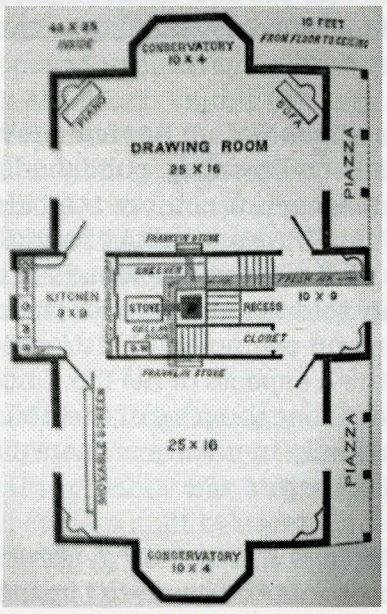


Figure 3. Gothic revival style floor plan by Beecher.

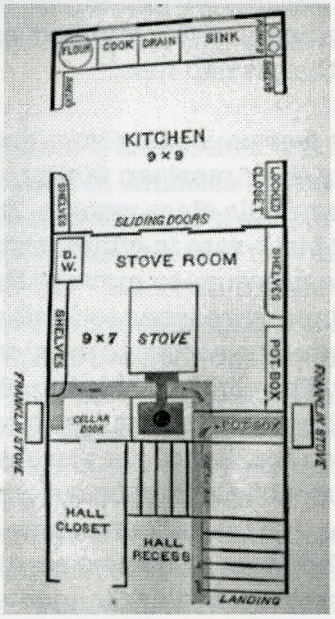


Figure 4. Detail of Beecher's kitchen design.

In the age of industrialization many men's professions dealt with the most up to date technologies, just as Beecher's kitchen contained. Figure 4 shows a detail of the kitchen plan systematically laid out as a "streamlined, single surface, workspace."[28] Every modern product, such as the stove and sink, had its distinct place in order to facilitate the efficiency promulgated by the specific instructions on kitchen management and cooking espoused by Beecher. As she states it is "the person who decides what shall be the food and drink of the family, and the modes of preparation is the one who decides, to a greater or lesser extent, what shall be the health of the family."[29]

Ultimately, it was the importance Beecher placed on the American family as the center and basis of a democratic and Christian society which was the foundation for her aim of improving the status of women. The health and happiness of the American family would, in Beecher's opinion, preserve American values in the face of industrialization. The burden placed on middle class women was to foster a Christian family who would, in turn, defend democracy. This process began by ensuring the families health, thus the emphasis upon the methods and processes that took place in the kitchen. In this context woman's work in the home, specifically the kitchen became the first defense against the evils of the capitalist city. In the 1856 printing of A Treatise on Domestic Economy, Beecher dedicated the text to "American Mothers."[30] However, the popular 1869 *The American Woman's Home*, an expanded version of *A Treatise on Domestic Economy*, was dedicated to "to the women of America, in whose hands rest the real destinations of the republic."[31] The years between 1856 and 1869 clearly served to solidify Beecher's belief that it was the women of the middle class that preserved American values of democracy and Christianity in the age of industrialization. The perception of labor as something that took place outside of the home devalued domestic work at a time in which the middle class was struggling to confront perceived threats of immigration and industrialization to their values. Due to access to the railroad system, and separation from the city, men chose the suburban home as the response to the changes in the city. The Gothic Revival style was chosen as the appropriate house to embody democracy and Christianity. But the suburban home was not the answer, domesticity was. Through her texts, Catherine Beecher shows that it was the woman's work of raising the American family and ensuring their health that would ultimately protect American values in the age of Industrialization.

The Watson-Price Barn: An Analysis of Oregon Settlement Period Barn Construction and Development

Lindsay Jones

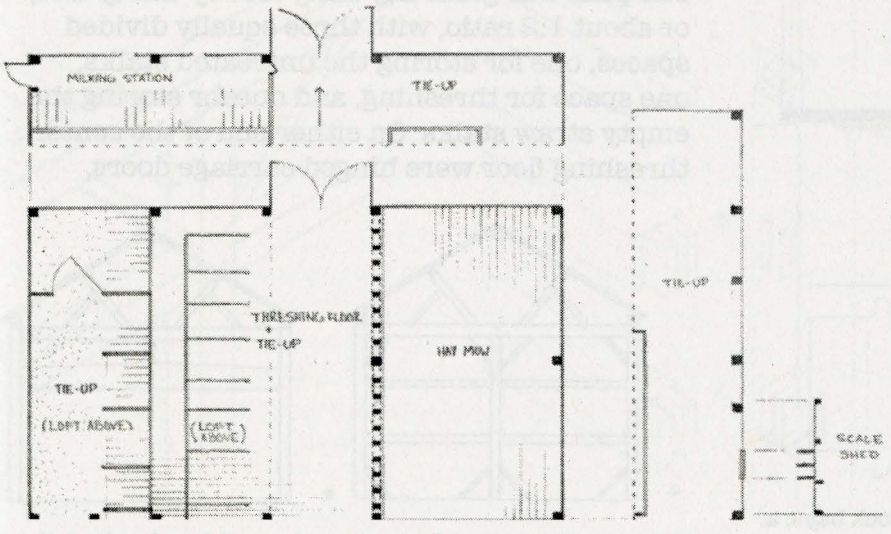


Figure 1 Watson-Price Barn floor plan with exploded additions

The Watson-Price farmstead outside of Philomath, Oregon stands today much as it did over one hundred years ago. Entering the barn through the main double doors on the east side, first impressions are of wide floor planks supporting thick posts and beams of almost unimaginable proportions. Those assembled timbers begin to form distinct spaces and passageways, a loft and animal pens. Moving through the barn, one easily feels the purpose and necessary utility of this structure, even as the western wall of the barn appears to bow and crumble before the eyes. History stands

visible to everyone who steps inside, of a time before any now can remember. It recalls things about the founding people of Benton County, about their lives and work, and even a little about their history before they came to Oregon and how it shaped their lives here.

This analysis of the Watson-Price Barn will be a focus on the building type and construction processes used by those families in order to understand the history and purpose behind it. The physical remains of the barn and the other structures on the farmstead are the greatest record we have of the lives and day-to-day activities of early Oregon settlers. Nothing can compare to seeing the barn in person, but this article aims to help create a visual experience for those that cannot visit, and to show them how it speaks to us today about the beginnings of the Benton County community.

James and Mary Watson established the Watson-Price farmstead in 1848 near the town of Philomath in Benton County, Oregon. James Watson was born in Kentucky in 1808, married Mary Ridgeway in Illinois in 1833, and moved to Benton county Oregon in 1847, completing the construction of their barn the following year.[1] The Watsons were some of the first settlers in the area after the King family, for whom the valley has been named. In the history of Benton County it was said that Nahmun King "brought with him a number of short-horn cows... [which] were added to by James Watson in the following year."[2]

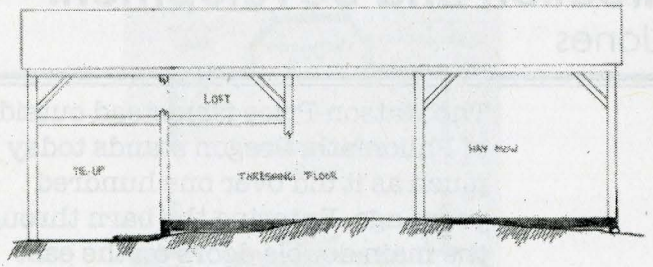


Figure 2 Longitudinal section spatial layout

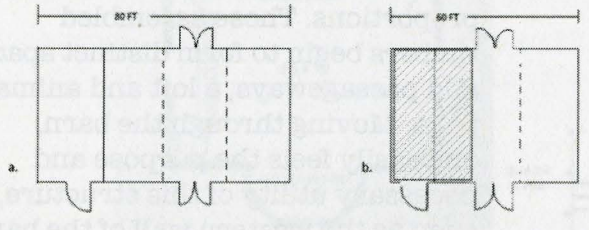


Figure 3 Threshing barns with attached livestock bays: a. Hubka's simplified example, and b. the Watson-Price Barn with smaller plan and lofted storage space.

Coming from Kentucky and Illinois where wheat was a staple crop, the Watsons focused on farming the grain and in contemporary Midwestern style proceeded to build a modified English threshing barn following their first winter. The barn builder was John Ridgeway, who may or may not have been a relative, as he shared Mary's maiden name and lived in both Kentucky and Illinois before moving to Oregon in 1845.[3] Then in 1852 the Watson's contracted William Pitman to build their house.[4] In 1909 the farm was sold to Willard Price and has stayed in the Price family since that time.[5] Structures were added to the property over time, such as the chicken coop, cold cellar, and machine shop, and were kept even after they became obsolete, making the Watson-Price farmstead one of the best examples of a pioneer farmstead still standing in Oregon today. When the farmstead was surveyed for the National Register in 2005 there were nine surviving structures.[6]

The barn itself has been modified several times since it was built (Fig 1). Though the property has stayed a farm since the Watson's acquired it, the needs of the families have changed, leading to a number of additions, modified floor plans, and the need for greater storage space. While the overall footprint of the structure has not changed greatly, the use of the structure has; the most obvious alteration being the insertion of animal stalls on what was once designed as the threshing floor. To be truly honest though, even the original design was a modification.

A true side-opening English three-bay barn is designed specifically for the processing of wheat. The plan was generally sixty feet by thirty feet, or about 1:2 ratio, with three equally divided spaces, one for storing the untreated stalks, one space for threshing, and one for storing the empty straw stalks. On either end of the center threshing floor were hinged carriage doors,

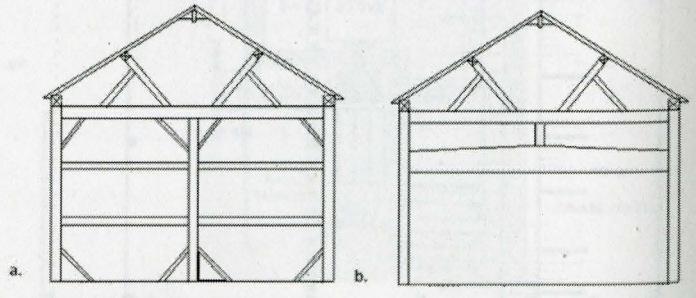


Figure 4 Structural Systems: a. the wall framing from the North facade and b. the

big enough to allow for loading and unloading into wagons, and to create a breezeway for the winnowing process.[7] In the Watson-Price barn, as in the Midwest where the Watsons and Ridgeway originated, the modification of a stable bay on one gable end was a preferable variation on the traditional form.[8] We can tell they decided on this prior to construction for several reasons.

Although the original barn construction spans sixty feet, it contains four bays instead of three. This was managed by shifting the carriage doors to one side, lofting the storage space for the unthreshed hay over the stable bay and threshing floor, and combining what would have been the storage space on the ground with the passageway threshing floor to make one larger threshing floor. In Figure 2 you can see the separation of spaces inside the original barn form. You also see that the tie-up space is not on the foundation that the hay mow and threshing floor share. While this would normally lead one to believe that the stable was an addition, we know that it was original because of the continuous plates and purlins that run the length of the barn. Rather than being an afterthought, this was more likely a matter of saving resources. The threshing process has specific needs, primarily the thick abutting floor boards. The animals have no need of such a floor, so by minimizing the foundation size, it would save the builder time shaping and aging the extra flooring materials needed, as well as the time required to fasten a larger floor together.

Thomas Hubka also wrote that even though the formal plan of the threshing barn in England was designed for a singular purpose, by the early 1800s the modified version with the attached livestock bay had become mainstream in New England.[9] This simplified form is evident in Figure 3a. Each of the bays is equal in size, including the livestock bay addition. As a barn builder from Kentucky, Ridgeway would have been familiar with this trend, and because Watson already had livestock with him when he arrived in Oregon, it would not have made sense to wait until after the barn was completed to put a roof over his animals. Therefore, Ridgeway included it in the his design as seen in Figure 3b, keeping the same sixty foot plan from the traditional threshing barn footprint, only building a foundation under two-thirds of it for the purpose of processing wheat, keeping a dirt floor for the animal pen, and saving space by lofting the storage space for the untreated wheat over the livestock bay and what would have been the storage bay.

The loft becomes a supremely integral feature of the Watson-Price design. Since the breezeway and left side storage bay were reduced, there was a need to reinvent the work space and the storage space. Ridgeway chose to loft the storage space for the unthreshed wheat, and then combined the breezeway and old storage space to create one larger space for threshing. The particular genius of his plan was the use of a "sway brace" or "swing beam."[10] The problem with combining the two adjacent spaces involved the removal of large structural posts that initially were the basic form of partition

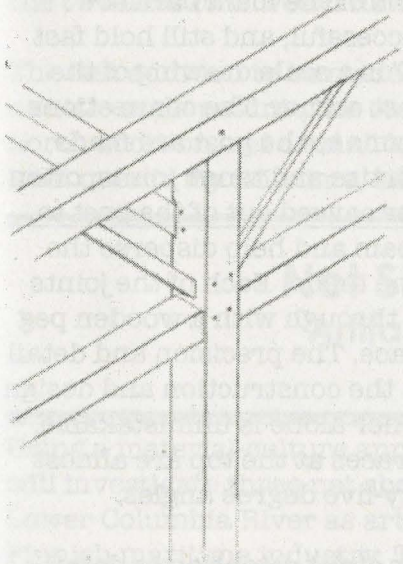


Figure 5 Gunstock connection

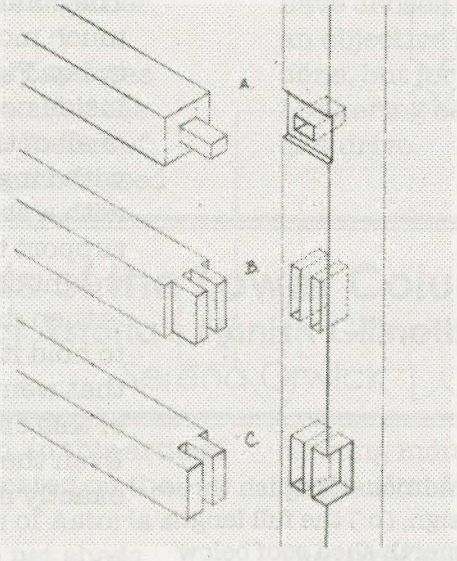


Figure 6 Joinery found in the Watson-Price Barn

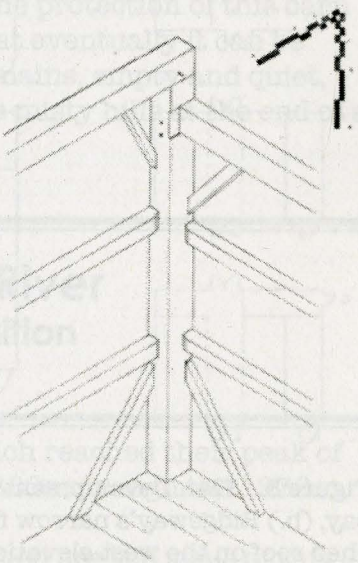


Figure 7 Inside NW corner drawing from Watson-Price

between the bays as well as the structural system for support of the roof. The solution was the swing beam, a large girt, substantial enough to support the weight of the loft and hold up the rafter system. Seen in Figure 4b, the swing beam in the Watson-Price barn was located under the beam that supported the queen posts for the roof system. It spans the distance between the two sides of the barn, which is in itself impressive, but it is also very thick, speculated to be the largest historically hewn beam in the state. At eleven inches by nineteen inches on each end, and tapering to twenty-two inches at mid-span, the girth of the beam is much more than required. But what may have been simply a basic overbuilding on the part of Ridgeway to ensure the reliability of the loft could also be the reason that the Watson-Price barn is still standing today.

While the swing beam may not seem such an architectural feat in comparison to our modern designs, it is actually part of a highly complicated and specialized building process. Just to think of the weight of the beam itself, and how it would need to be lifted into place, in a time when muscle and well placed leverage were the primary tools of the trade, is amazing. Additionally there is not a single metal fastener in the entire beam, but only hand-cut joints and wooden pegs, each one made individually to fit elsewhere in the barn are instances where five or six eight inch square beams need to attach to one eleven inch post all at the same place (such as in a gunstock connection - Fig. 5). One can imagine the skill and specialized knowledge that would need to go into building such a structure.

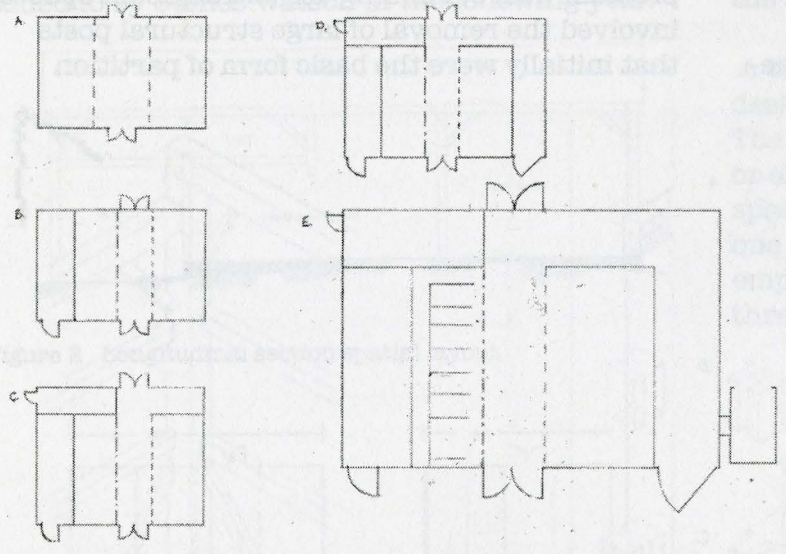


Figure 8. Plan Development: (a.) The traditional English three-bay, (b.) Ridgeway's narrow four-bay design, (c.) the full length shed roof on the west elevation, (d.) the north shed roof below the gable, and (e.) as it is today with the north side scale shed and animal stalls in place of the threshing floor.

The process of building the barn started with the selection of thick old growth fir trees. After they were hewn down, the builder had to know the plan of the barn exactly before he could start cutting joints and lengths. Three types of joints were found in the Watson-Price barn (Fig. 6). The primary joint was a basic mortise and tenon joint, just as with most timber frame structures. Because the swing beam was so large, two tenons were fashioned on each end that went completely through the mortised support posts and could be seen on the other side. The third joint, found on the western addition, is a modified two-tenon joint. Instead of being two equally spaced tenons on an overlarge beam, they are found on a thinner post, one tenon sitting entirely to the outer edge, and the other just off center. It was only found in two locations within the addition, but few of the connections in any of the additions seem completely consistent with one another. This helps to support the idea that these were not only additions built onto the original framework, but also that they were built by someone not trained as a builder. They copied the idea of the mortise and tenon joints, but they were not as well executed or even always used in the correct context. For example, in the instance of the modified two-tenon in the west addition, the joint was placed at the top of the post, connecting to a shed roof rafter with no shoulder for support.

The connections of the main barn are much more successful, and still hold fast today. Figure 7 is a scale drawing of the inside northeast corner. The connections of all of the beams to the post are made with single mortise and tenon joints, often with a shoulder carved out of the post to support the beam and help disperse the weight off of the tenon. Each of the joints is then driven through with a wooden peg to hold it in place. The precision and detail that went into the construction and design of this one corner alone is unmistakable. Even the up-braces at the top are almost exactly at forty-five degree angles.

Because of this strict attention to detail, it is easy to see the original structure in

comparison to the later additions. By looking at the joinery, the size of the wood planks and beams, weathering, and many other details, it has been determined that there were three phases of additions to the barn. In Figure 8, you can see the barn's development over time, including the original modification of the traditional three-bay into the design built by Watson. The first addition was the shed roof lean-to on the western elevation. This section included a milking station and more space for livestock. The full length lean-to was a common modification for threshing barns in the Midwest, so it would have made sense for Watson himself to have built it.[11] Also, gold fever happened about the same time the Watsons moved to Oregon, meaning there was less available labor to help cultivate crops, which some say made raising cattle the more profitable option for the time.[12] And since they kept some milking cows, which they could not send out into the hills like the rest of the cattle, they would have needed the extra barn space to stable the cows. By 1870, many agricultural innovations had been developed, meaning there was less need for threshing floors, and dairying had developed as an economic foothold in the region.[13] Whether for more dairy cows, or for some other animal needed on a budding farmstead, another addition was added on the north façade, and the threshing floor below the loft was sectioned off into animal stalls. We can tell that the western addition and the north addition were separate due to the discovery of two empty mortises on the western face of the original northwest corner post, and also the difference in weathering and thickness of the visible waney boards above the rafters where the two additions would have come together.

The last addition to be made to the barn was a cattle scale put into the outside wall of the north addition and a small lean-to shed roof built over it. By this time, all the lumber used had been milled and machine made nails were present. In the two earlier additions, hand hewn timbers were used for all structural members, and milled wood and machined nails are found sparingly where later fenestration was adapted into the siding. There were multiple lumber mills in and around the Philomath area as early as 1850,[14] making the lumber difficult to date. Even though travel was more difficult at the time, the wood was cheap and people were likely to travel twelve to fifteen miles to get it.[15] It is hard to say exactly when the additions were built, apart from in relation to one another and by the dates of developing needs on the farm. However, due to their form, method of construction, and intended functions, it is likely that they were all built in the late nineteenth or early twentieth century.

A physical standing structure is a living monument to our past. It tells the most accurate stories, without opinion or personal gain, through visual cues and physical elaborations. The Watson-Price barn is one of the last physical remnants left of farm life and agriculture from the early settlement of Oregon. The fact that it was the type of structure meant to be built as a flexible growing entity, encompassing the developing needs of the farmstead - including agriculture, storage, workspace, and animal husbandry - makes it that much more applicable as an historic model. Now that the Watson-Price farmstead is no longer in working order, the barn lingers, consigned to remain as a relic of a bygone era. Until resources are found to help stabilize and protect it, the barn remains vulnerable, and very nearly forgotten. A select few who have chosen to make the protection of this barn an objective believe that eventually it can be done, but for now it remains, empty and quiet, hunkering between the misty hills at the end of a dirt drive.

Net Sheds of the Lower Columbia River

Artifacts of Astoria's Finnish Gillnetting Tradition

Serena Orwick

Using a material-culture approach, in this articleI will investigate three net sheds located on the Lower Columbia River as artifacts of Astoria's Finnish maritime industry. These net sheds served as a part of a system of production in the gillnetting and canning industries which reached their peak of production from the 1880s through the 1930s.

The three net sheds which are the focus of this paper include the Uppertown Station Net Shed (circa 1900), the Alderbrook Station

(circa 1908) and the Brownsmead Station Net Shed (1928). These three buildings were chosen because they are some of the few extant examples left of this building type in the region. All three of these buildings were constructed by the Union Fishermen's Cooperative Packing Company as satellite stations for their fishermen.[1]

Finnish Immigrants and Their Traditions

In Susan Hardwick's "Inscribing Ethnicity on the Land," she lists four factors which influence the longevity and depth of an ethnic imprint on the landscape. These include the volume of immigration that occurs in relation to time and place, the formation of congregated clusters of immigrants in districts, the economic success of these immigrant groups, and the cohesive bond within an immigrant group, cemented by shared values and common backgrounds.[2]

Finnish immigrants arrived in Astoria at a relatively large volume, congregated in tightly-knit clusters, found success in the logging and fishing industries, and formed a cohesive bond along their shared values of cooperation and a unique character trait they refer to as *sisu*. *Sisu* is a Finnish word which is difficult to translate, but it roughly means fortitude or determination. It is widely believed that Finlanders have an extraordinary ability to sustain effort against heavy odds, and this is a trait that is highly respected among Finns.

Finnish and Swedish architecture are very similar along Finland's coast and the southern end of the Gulf of Bothnia. This area, called Ostrobothnia, contributed over sixty percent of all emigrants who left Finland for America from 1893-1920.[3] The Ostrobothnian farmhouse is usually two-stories tall and built so that it can be expanded in either direction. These were often painted Falu red (a paint formula original to Sweden) with white windows, like Swedish farmhouses.[4] Finns arriving on the shores of the United States brought with them a cultural knowledge of traditional folkways including fishing processes and building construction. They exhibited a great propensity toward cooperative and nationalistic movements and social reform.[5]

Economic and Social Context: Industry of Gillnetting on the Columbia River

The ethnic origin of most fishermen in Astoria in 1880 was Scandinavian. The 1880 census listed 224 Swedes, 142 Norwegians, 140 Finns, and 49 Danes in the fishing trade.[6] The fishing trade itself was set up according to ethnic group, with each group using the type of fishing gear associated with their ethnic background. For example, Finns were generally gillnetters.

The salmon canning industry was one of the region's earliest commercial successes. This industry was introduced to Astoria in 1866 and by 1884 there were thirty-nine plants in production on the Columbia River.[7] But the market reached its peak in the mid-1880s and canneries ended up so flooded with fish that entire catches were thrown back in the river.[8]

In order to withstand competition and make the most of their fishing time, gillnetting fishermen worked to clear the bottom of their fishing channels. This helped to prevent their nets from snagging and improved the quantity of fish caught. Clearing the channels of logs and debris took a lot of time and effort. Quickly, fishermen banded together to form snag unions or drift associations who would work together to clear the river bottom. In return for their labor, each member of the group would be entitled access to this fishing ground in the form of a "drift right." These rights could be bought, sold and

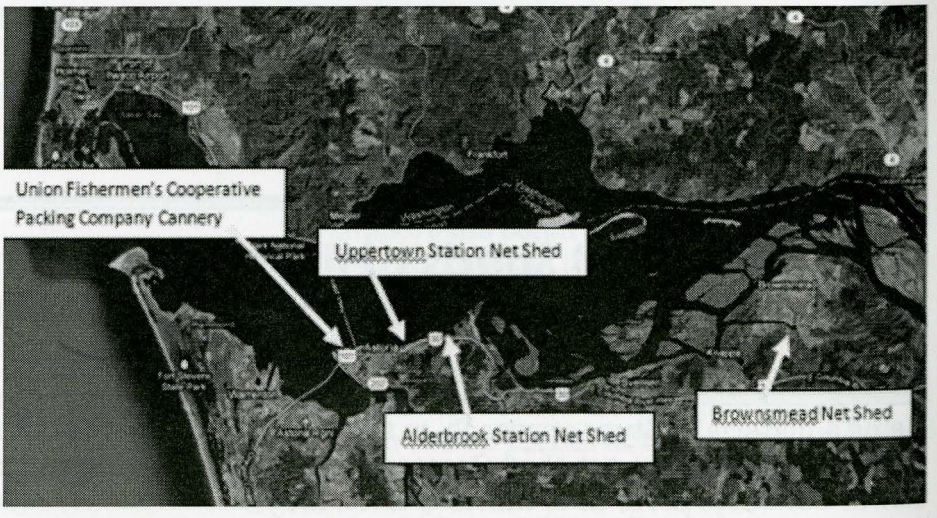


Figure 1: Map depicting the locations of Union Fishermen's Cooperative Packing Company Cannery, and three of its satellite stations: Uppertown, Alderbrook and Brownsmead.

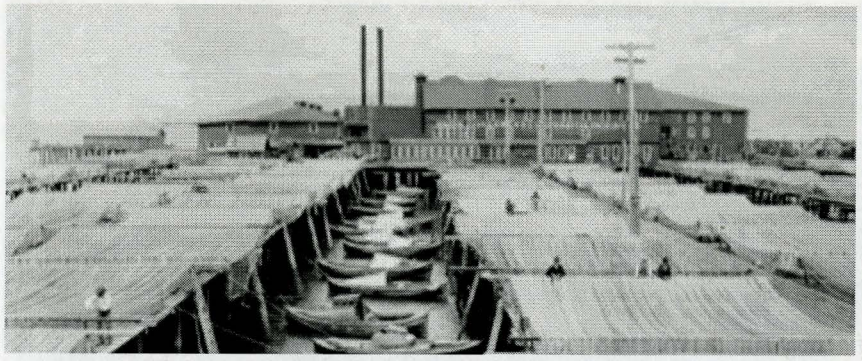


Figure 2: Union Fishermen's Cooperative Packing Company Cannery. Photo from University of Oregon Special Collections.

inherited, depending on the rules set by the drift association.[9]

The Columbia River Fishermen's Protective Union was formed in 1879. It was composed of gillnetters only. The union worked to bargain with the canneries for good fish prices, helped to organize access to fishing grounds according to drift rights, and functioned as a social center.[10] It is significant that the fishermen chose to unionize not according to ethnic lines, or state boundaries, but according to the equipment they used to fish. Being a Columbia River gillnetter conferred status, "like being on a winning basketball team."[11] Gillnetter became a sort of "supra-ethnicity" and a tight community formed around this common tradition and knowledge.[12]

Cooperative Beginnings: Union Fishermen's Cooperative Packing Company (Union Fish)

Union Fish was unique in that it was owned and operated by its fishermen. It was originally organized by a group of Lower Columbia River gillnetters who were not satisfied with the prices they received for their fish, their working conditions, and the quality of the canned fish produced. To start their own cannery, these gillnetters raised $30,000 in capital stock by purchasing shares for $100 each. Finlanders bought 172 of the 200 shares.[13] According to the principles of the cooperative, each owner had one vote regardless of how many shares he owned. On January 16, 1897, land was purchased to build the cannery.[14] Frans Kankkonen was designated architect and builder for the company's cannery and would later become the first manager. Frans is also listed as the design/builder for the Alderbrook Station. Presumably, he worked on the Uppertown Station and his designs may have been used for the Brownsmead net shed. The cannery was a large complex located on the end of five net rack wharves. The cannery was made up of seven two to three story, gable-roofed, rectangular structures that each served a different function. These structures included a can factory, a canning room, butchering, salting, cleaning, cold storage, a net and boat warehouse, and a canned salmon storage warehouse. A machine shop, a boat building shop, and a cooper shop were scattered around in small buildings on the dock. All of these buildings had vertical board siding and were painted red with white trim.[15] The net racks were used to stretch out nets for repair and drying. The nets were first soaked in a copper sulfate solution to remove algae and prevent the linen fibers of the net from rotting. This process was referred to as "tanning" and was done in bluestone net tanks.

Union Fish Net Sheds on the Lower Columbia

The net sheds of the Lower Columbia River have these key distinguishing features:

1. They are built on pilings over the water which allows for fishermen to conveniently drop off their fish and net and use the station.
2. They are multistory buildings. The inconvenience of hauling equipment upstairs is offset by the expense and labor required to drive more pilings to increase the footprint of the building.
3. They are of simple, utilitarian construction and most often clad with board and batten siding.
4. They do not contain internal walls. This allows for a flexible, open space to lay out nets, store and work on equipment. This also allows for natural lighting and for the buildings to be added onto as resources become available and need arises.
5. They contain net racks for storing nets. Here nets were hung with lead-line and cork-line which kept the net at the proper height in the river.[16] Nets are generally blue-stoned and dried outside the net sheds on net rack wharves.
6. They were associated with a cluster of other buildings and structures including the net rack wharves, boat shops, boat storage sheds, and fishermen's bunkhouses.

Union Fish Uppertown Station

Union Fish Uppertown Station, referred to as "Big Red" by locals, is located on the waterfront of the Columbia River east of downtown Astoria, Oregon at 100 31st Street. This building was constructed by the Union Fish to serve its members who lived in Uppertown Astoria, as the cannery was located at the other end of town. The date of its construction is uncertain, but the Oregon Inventory of Historic Properties lists a circa 1900 construction date. Uppertown Station is situated 318 feet from the bank of the river, facing the end of 31st Street. Historically, there was a wide pier connecting the building to the shore. The remains of the pier pilings can still be observed. The piling grid for this building measures ten feet by an average of twelve feet. The building has a monitor roof. There is a two-and-a-half-story center section with a shallow hip roof which is flanked by two two-story shed-roof lean-tos. The vertical wall separating the shed-roofed sides from the center hip-roofed section is fenestrated to provide natural light to the interior. Like other Union Fish buildings, the station is built from old-growth Douglas fir. The station's windows are all symmetrically-arranged six-over-six double-hung wood sashes except for the top story which has fixed wood sashes with six lights in each. As with all Union Fish buildings, Uppertown Station was painted red with white trim. The interior of the building had no interior walls and is painted white.

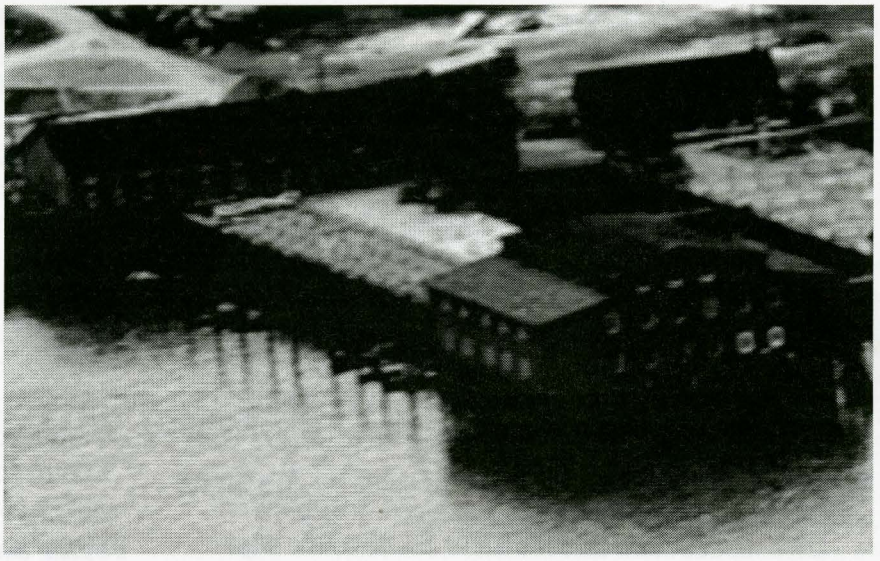


Figure 3: Uppertown Station, date unknown. Clatsop County Historical Society Archives #6867-909c.

Uppertown Station was used as a transfer station for fish and as a warehouse to store and repair nets and boats. The net rack wharves outside the structure were used to dry nets. According to the 1908 Sandborn map, the first floor of the station was used to store nets and the second and third floors were used to store and repair nets. A row of five net tanning vats are shown on the southwest end of the access pier on the Sanborn maps. At an unknown date, a boat hoist was added to the southwest corner of the building to facilitate getting boats in and out of the building for repair and dry docking.[17] Fishermen were also able to navigate their boats under the building where a hoist would lift their nets through a hole in the floor to get them inside for storage and repair. Uppertown Station was associated with a fish transfer station, a net and boat storage and repair warehouse on the shore-side of its access dock with a row of five bluestone tanks next to it, a boat shop, two large net rack wharfs, and a gas and oil station for boats.[18]

Union Fish Alderbrook Station

The Union Fishermen's Cooperative Packing Company Alderbrook Station is located on the waterfront of the Columbia River in at 4910 Ash Street in Alderbrook, the easternmost neighborhood of Astoria. The National Register nomination form lists the construction date of the station as 1903, but the 1908 map only shows a cabin and a relatively small net drying wharf on the net shed site. This station was built for the convenience of Union Fish fishermen who lived in Uppertown Astoria and Alderbrook. A twenty foot long approach dock is used to reach the net shed. The net shed measures one hundred feet by sixty feet, seven and one-quarter inches. The station is two-and-a-half stories tall with a low-pitched gable roof running approximately east-west. The station was built of old-growth Douglas fir with a cedar shingle roof. The net shed's windows are double-hung six-over-six wood sashes arranged symmetrically, with simple white trim. The building was left open without interior interruptions except for the wood post and beam system laid out on a ten foot grid. The interior of the building was white-washed with a mixture of sour milk and lime. This wash acted as a very effective insect repellant and helped to reflect light in the building.[19]

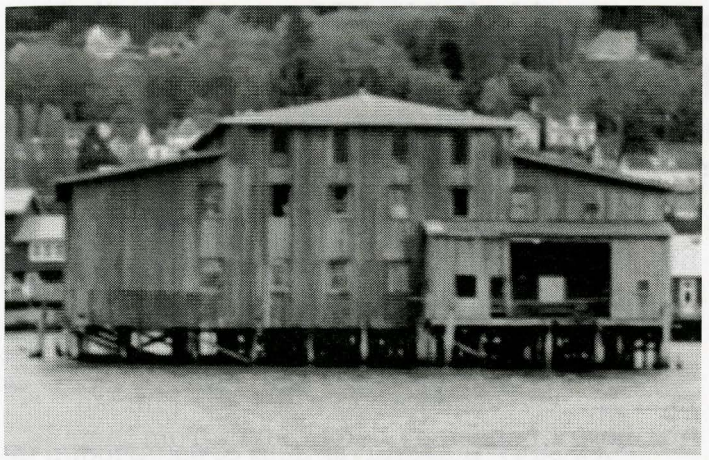


Figure 4: Uppertown Station before storm of 2007. http://historicfishing.smugmug.com/

The first two floors of the net shed were used to store the fishermen's gear, knit, hang up and repair nets, and repair or even store gillnet boats. Evidence of someone doing "net math" is still present on an interior wall of Alderbrook net shed. The building was used as a fishermen's warehouse into the 1980s.[20] The large net rack wharves outside the net shed were used to dry nets after they were treated in the blue stone tanks. Each fisherman had his unofficially assigned rack. The planks of the net rack wharves had an extreme bullnose milled into them, presumably to keep the nets from snagging on the dock and to prolong its life.[21] Alderbrook Station included a thirty-six foot by thirty-six foot boat repair shop with the same vertical board siding and window pattern as the net shed, an office, a couple of cabins and bunkhouses, two large net drying wharves, a fish receiving station with another net rack wharf, and the net shed with an attached boat lift.

Brownsmead Fishermen's Warehouse

Brownsmead Fishermen's Warehouse is located on the waterfront of Gnat Creek near the intersection of Aldrich Point Road and Sylvandale Lane. The warehouse was built by the Union Fishermen's Cooperative Packing Company in 1928 for the members of the Kaboth Drift who fished for Union Fish Cannery. When the fishing industry was at its peak this Drift had thirty-two drift right shares. At its peak the warehouse had about twenty-five fishermen storing their nets and working out of it. It was built on pilings which were laid on mudsills. Essentially, logs were laid down horizontally into the creek and leveled, and then pilings were driven down to sit perpendicularly on the sills. A dock to the east allows access from Aldrich Point Road.

The warehouse is one-and-one-half stories tall with a front-facing gable roof. The approach dock continues along the front of the building where it is covered with a shed roof. The center of this shed roof is interrupted by a gable roof for the boat hoist. The building is sheathed in board-and-batten siding and was never painted. The building was constructed using old-growth Douglas fir lumber from Larken and Green Lumber Company, a local mill which was in operation until the 1930s. The original roofing was cedar shingles. Most of the windows are six-over-six double-hung wood sashes. Two windows at the top of the gable are fixed sashes of six lights each. The interior walls were never painted. The first floor of the warehouse has large dollies on steel wheels to cradle boats when they are hauled in. Inside, boats are repaired and maintained. The second floor is filled with long poles used as nets racks and the space is mainly used for net repair and storage.

Conclusion

The Finnish imprint on the landscape of the Lower Columbia region is deep and long-lasting. As previously mentioned in this article, a large volume of Finnish immigrants settled in the Astoria area in tightly-knit enclave communities. While most of these immigrants were not wealthy, their Finnish traditions of *sisu*, and pride in hard work led them to a high average of home ownership. This ethnic group gained power through the formation unions and cooperatives which stood up for the rights of individual gillnetters. The "supra-ethnicity" of being a Columbia River gillnetter was something these fishermen were proud of and loyal to. Through

Figure 5: Northeast corner of Alderbrook net shed Photo by author, February 2012.

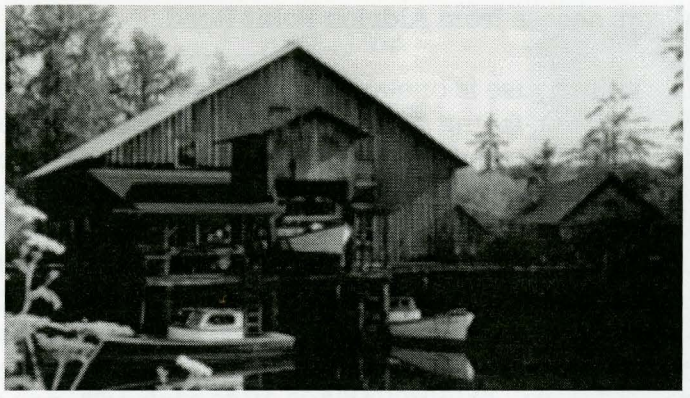


Figure 6: Undated photo of the Brownsmead net shed. Note the boat hoist in use.

their common backgrounds of gillnetting and their shared values of cooperation and fairness these Finnish fishermen made an imprint on Astoria.

Union Fishermen's Cooperative Packing Company (Union Fish) built numerous fish receiving stations along the Columbia River in the beginning of the twentieth century. Buildings were designed to maximize the work space, natural light, and strength and durability. Union Fish buildings were distinct from other cannery's structures in several ways. Union Fish generally built larger buildings, which were three stories high and wider than surrounding cannery buildings. Union Fish also tended to paint its buildings red, which contrasted with the general use of white paint of other canneries.[22] As mentioned earlier, the Ostrobothnian region of Finland was known for its larger farmhouses, relative to those in other regions. They are stereotyped for building this way to show their "greatness" to their neighbors.[23]

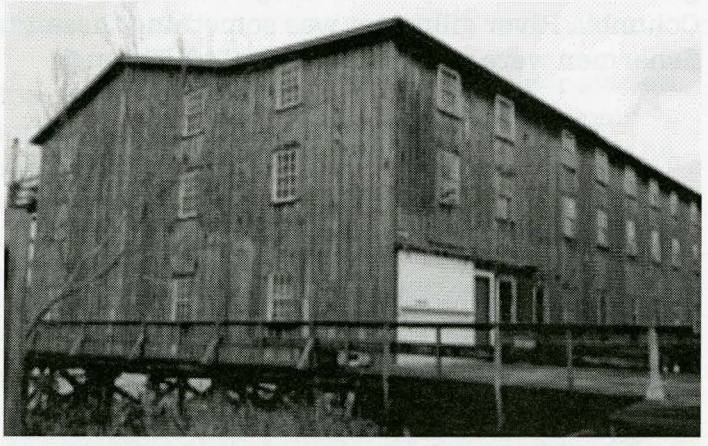


Figure 7: Southwest corner of Alderbrook net shed. Photo by author, February 2012.

The three net sheds detailed in this paper are Finnish in their utilitarian and organic design and their use of red paint with white trim, but their Finnish origins are really illustrated by how they were built, maintained, utilized in a cooperative manner. These buildings are egalitarian, cooperative spaces which reflected and reinforced the values of community, industry, and cooperation which the Finnish immigrant fishermen had brought from their homelands. A saying which the early Finnish gillnetter was often heard to say goes like this: "Beginning is always difficult, work is our joy, and industry overcomes bad luck."[24] The even ten- foot by ten-foot or ten-foot by twelve-foot interior grids created by the support posts in the net sheds created equally sized work spaces so no man was put above another while working on his fishing equipment.[25] The cooperative work environment was the solution these fishermen created to the competitive environment of Astoria's fishing industry. The co-op allowed them to afford to retain their boats and their methods of fishing (gillnetting on drifts) and to compete with other canneries.

The ingredients necessary for a region of the United States to become a homeland are identity, territoriality and loyalty.[26] The development of the cooperative cannery and its satellite stations allowed for the Finnish gillnetters of the Lower Columbia to establish their homeland. Their identity with their community was reinforced by belonging to the cooperative and the union; these institutions helped them to defend their fishing territories or "drifts;" and they were rewarded for their loyalty to the industry and these groups with the peace of mind that their community would support them and their family in times of hardship.

The Hidatsa Earthlodge: Establishing Cultural Identity through Architectural Interpretation

Lauren Rieke

For nearly five hundred years, from the thirteenth century until the early twentieth century the Hidatsa tribe was a dominant presence in the Northern Great Plains. Their principal dwelling, the earthlodge stood as the most constant and stable form of material culture throughout this period, underscoring its importance to their civilization[1] (Fig. 1). As "the basic institution of village society," it can be interpreted as both a repository for the spiritual and social customs of the people as well as a means for their continued perpetuation.[2] Because these two important facets of Hidatsa culture united in this one location, the earthlodge provides the proper setting for analysis of the ethnic culture. By examining personal accounts of both Hidatsa tribal members and early ethnographers, along with archaeological evidence, this article will illustrate the role the earthlodge played in reinforcing their cultural values and customs.

The Hidatsa's origins begin around 1100 AD when they split with the Mandan tribe to form their own ethnic group. They lived along the upper Missouri and Knife Rivers in what is today North Dakota at three main village sites, Big Hidatsa, Sakakawea and Amahami.[3] Their economy was primarily based on agriculture with corn, squash, beans, sunflowers and tobacco as the principal crops. This was supplemented with buffalo hunting that provided both meat and raw materials. In addition, they engaged in a widespread organization of intertribal trade, which only increased in importance after European contact.[4]

They followed a matrilineal kinship structure and practiced polygyny, ideally sororal. A typical household consisted of a man and his wives and any unmarried children, along with daughters and sons-in-law and grandchildren, totaling about ten people.[5] They also obeyed a strict age-grade system in which members gained status and authority through act and rituals one performed at different stages in life. These customs served to increase familial ties and community bonds among both individual households and the village as a whole.[6] The Hidatsa held strong religious beliefs, as well. In addition to numerous sacred symbols and gods, their most important spiritual objects were medicine bundles. Primarily owned by men, these represented "a covenant between an individual and his guardian spirit" and "housed supernatural powers."[7]

The size of each village varied, but the estimated population at the beginning of the nineteenth century was approximately 4,000 to 5,500.[8] The arrangement of the earthlodges followed no particular order within the villages. However, defense was a strong motivation in selecting a village site for the tribes were constantly at war with one another and susceptible to raids. The tribe settled on high bluffs or along rivers, creating natural barriers and high vantage points and constructed tall palisades surrounding the open sides of the village.[9] The Hidatsa practiced seasonal migration though they considered the earthlodge their permanent dwelling, which they occupied from April to October. In the colder months, they resided in smaller, more conical shaped earthlodges that were rebuilt every year at a new site. In addition, they also utilized tepees when embarking on extended periods of travel or hunting expeditions.

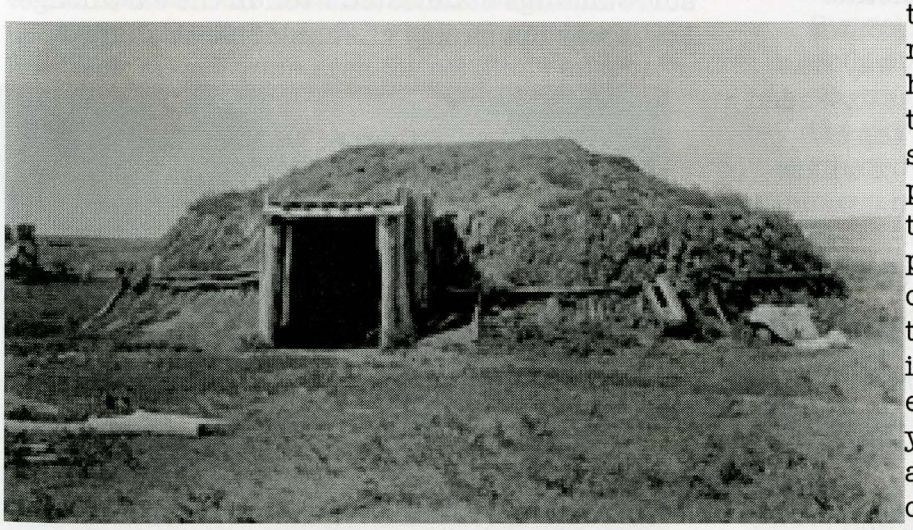


Figure 1. Reid Russell, Hidatsa Earth lodge, south of Van Hook, ND, 1928.

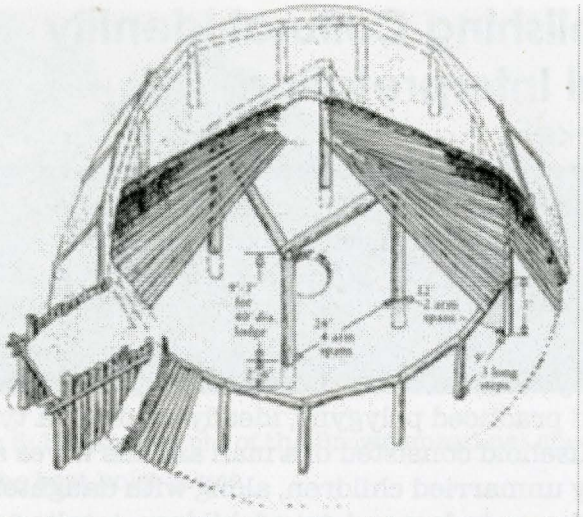


Figure 2. Drawing of the structural framework of an earthlodge.

Preparations for constructing and earthlodge began in the summer, and were completed the following spring. Women would traverse the woods searching for suitable trees, ideally cottonwood or oak which were then brought into the village and left to cure, improving the strength and longevity of the timber. Next, the site for the lodge, anywhere from thirty to sixty feet in diameter, was cleared of brush and small trees, then leveled and prepared for construction.[10]

The core structure for the lodges typically consisted of four forked central posts approximately twelve to fifteen feet tall, set in a ten foot square and braced at the top with stringers. About ten to fifteen feet beyond this was another circle of approximately twelve posts, five to six feet tall, similarly joined at the top with beams. Rafters connected the inner framework to the outer circle, while another set of angled rafters extended from the outer circle to the ground (Fig. 2). The entryway was located between two exterior posts that extended about ten feet from the outer wall. On top of this structural framework was a layer of willow branches topped with grasses, then finished with a final two to three foot layer of sod or packed earth.[11] Earthlodges lasted ten to twelve years, at which time they were deconstructed. Because men and children often spent time on the roofs of the homes, it was necessary to perform this task regularly before the structure became dangerous.

Hidatsa arranged the interiors of the earthlodges according to very particular functions and moved about the space in a specifically counter-clockwise manner. Immediately beyond the entrance was the *wida-daksuti*, a fire screen made of a row of puncheons set directly into the ground. This was a climatic barrier meant to block the cold and wind, while also offering protection for the food storage platform located behind it.[12] To the right of the entrance was the essential sweatlodge, storage pits, a stationary pestle and the corral, meant to protect horses from inclement weather and theft by Sioux warriors.[13] The center of the lodge, both spatially and functionally, was the hearth (Fig. 3). It was a circular pit lined with stones at the center of the four posts, around which much daily activity such as cooking and socializing took place. At one side of the fire was the *atuka*, a special mat reserved for honored guests. Closest to the fire, directly behind the *wida-daksuti*, was a special bed reserved for the household elders, usually the oldest male. Around the outer support circle of the lodge were placed the other beds, screened with canopies of buffalo hide. Between this circle and the outer perimeter wall was the *atuish* or *atuti*, another storage space. At the rear of the lodge was a special place reserved for the sacred medicine bundles. Throughout the house were the vitally important cache pits used to store food such as boiled corn and squash.[14]

In order to fully analyze the social and spatial roles within the earthlodge, it is vital to first understand the spiritual lives of the Hidatsa. "To them the natural and supernatural worlds were not separate and distinct. These two worlds were so well integrated because the image of the universe which their mythology offered them was in accord with the world they lived in."[15] This spiritual veneration towards their physical surroundings manifested itself in the earthlodge. For it was not simply an inanimate dwelling

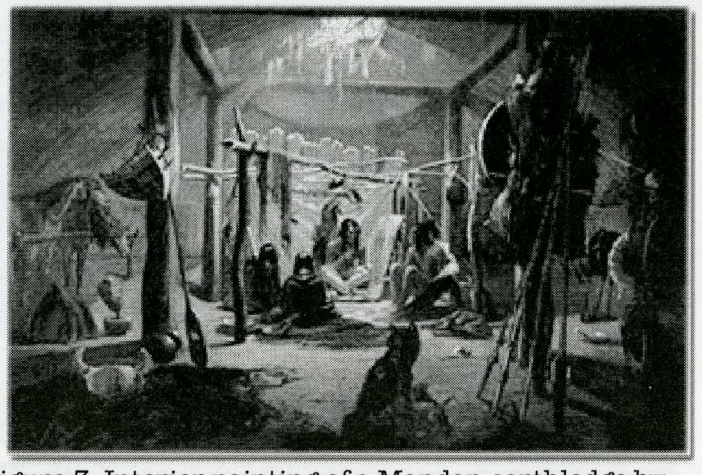


Figure 3. Interior painting of a Mandan earthlodge by Karl Bodmer.

in service to its occupants, but a living, sacred object deserving of respect and reverence (Fig 4).

The ultimate spiritual significance of the earthlodge is represented through birth legends, for if it is the origin of their physical being, then it can be inferred that it represents the origin of their cultural existence. According to the Hidatsa, a woman became pregnant when a spirit entered her body and began to develop into a child. These spirits "were believed to inhabit certain hills... Each hill was believed to be an earthlodge in which babies lived and were cared for by an old man ... Children desiring to leave the hill and be born must crawl across a ditch within this earthlodge on to an ash pole."[16] Thus the earthlodge served as the home in both the natural and spiritual realms.

The four center posts most pointedly represented the living spirit of the house. "We Hidatsa believed that an earthlodge was alive, and that the lodge's spirit, or soul, dwelt in the four posts."[17] Around each one, at about six feet high, they tied a large piece of calf skin, or in later years, calico cloth. This act paid homage to Buffalo Woman, a supernatural being who regulated the herds of buffalo, a vital element of the Hidatsa livelihood. In addition to these physical tributes, they directed special prayers and offerings toward the posts.[18] Because of their religious importance to the culture, these posts received special attention when being raised. Only select women, who held a spiritual role in the community, were allowed to raise these posts during house construction.[19]

These spaces were communal and available for use by most members of the household; they did, however, reserve one area for religious purposes. The most sacred area of the earthlodge was the shrine which held the sacred medicine bundle, typically located between any two of the four rear posts. However, the sacred nature of the bundle extended beyond this area toward the fire and was not to be entered or used unless for ceremonial purposes.[20]

While the Hidatsa arranged the lodges in no particular order at early village sites, they did give divine consideration to their orientation. However, at one later village, Like-A-Fishhook, they gave more thought and spiritual meaning to the layout of the earthlodges. According to

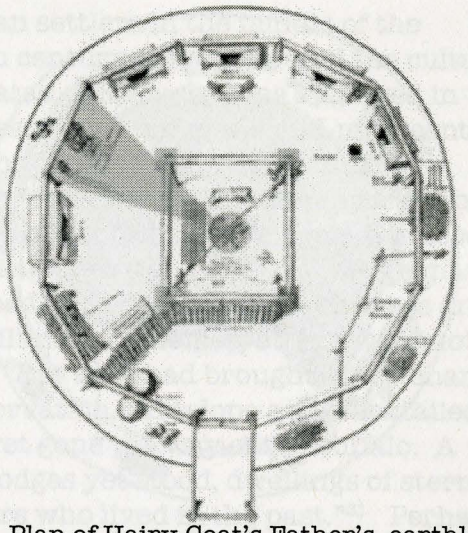


Figure 4. Plan of Hairy-Coat's Father's earthlodge at Old Ft. Berthold. Sacred areas are highlighted.

Goodbird the Indian, the men first turned to the most powerful medicine man, Missouri River, to determine the best way to arrange the village. "He walked around in a wide circle, returning again to the place where he had started. 'We will leave this circle open, in the center of our village,' he said. 'So shall we plan it!'"[21]

From this point the other medicine men then proceeded to orient and arrange their earthlodges around this circle according to the dictates of their gods:

> The door shall face west, for my gods are eagles that send thunder, and eagles and thunders come from the west [...] My god is Sunset Woman. I want my lodge to face the sunset, that the Sunset Woman may remember me, and I will pray to her that the village may have plenty and enemies may never take it, and I think Sunset Woman will hear me [...] My gods are bears, and bears always make the mouths of their dens open toward the north. I want my lodge door to open toward the north, that my bear gods may remember me. And I will pray to them that this village may stand many years![22]

Thus, through this means of physical praise, the earthlodge brought shelter and protection not just to its immediate occupants, but to the entire village, which served to strengthen its prominence in Hidatsa culture. In addition to this spiritual position within the culture, the earthlodge also represented and reinforced clear gender and social practices.

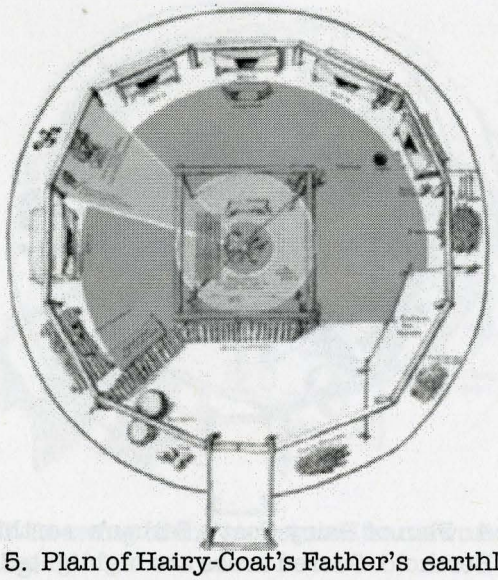


Figure 5. Plan of Hairy-Coat's Father's earthlodge at Old Ft. Berthold showing areas of gender use.

As in most cultures, gender roles within a Hidatsa community were clearly defined and enforced beginning in early childhood. Female roles tended toward more stationary tasks of agricultural and production- oriented endeavors, while men performed more nomadic hunting and defensive tasks. Both played very important parts in the ceremonial life of the village, such as performing rituals or embarking on vision quests.[23] Daily practices and lessons imposed these gender roles upon the tribe, while the walls of the earthlodge further solidified them.

In the summer, female tasks related more toward sustenance and production. Their chores, such as cultivating, preparing and storing food, nurturing their children and maintaining the home were associated with the creation of life, both physically and spiritually. Because many of these activities occurred within the lodge, or among household members, female ties to both the earthlodge and their immediate clan were strong. Furthermore, women shared the closest bonds with their daughters and impressed their strong connection with the earthlodge onto them, thus perpetuating the values of the dwelling.[24] Men, on the other hand, had fewer but more dangerous responsibilities in the summer. Except for one large hunting expedition, men's hunting exploits were kept to a minimum at this time, though their war activities were at their peak. They spent much of their time outside the lodge and even the village engaged in trade and defense. This required interaction with various members of the tribe, thus, their bonds tended to be broader and not as strongly associated with the earthlodge.[25]

Because the earthlodge was the location of a woman's domestic functions, it was seen as her possession. As owners women were responsible for the construction and maintenance of the lodge, its furnishings, as well as any other tools necessary for her work. Women performed the majority of the preparation and construction, while men assisted with the more strenuous tasks. Additionally, women played a very important role in the spiritual aspects of construction. They closely oversaw the erection of the central supports and also sang songs and gave blessings when construction was complete. Additionally, one woman held the role of master architect for the village and oversaw construction of the houses.[26] But it was not just a choice of power, for if granted this important role, the architect was obligated to oversee the earthlodge construction within the village. Buffalo Bird Woman, one such architect, recalls receiving payment for her labor, usually with a buffalo skin.[27]

In addition to construction and ownership, the very use of the earthlodge followed strict gender rules. As occupiers of the house who spent little productive time there, men were required to ask permission to enter them, even if it belonged to their wife.[28] Consequently, men spent much of their time congregating on the roofs of earthlodges socializing and observing the surrounding plains, while younger men took the opportunity to show off to prospective wives.[29]

Because many female chores took place within the lodge, this is where they spent the majority of their time when not working the fields. As Elizabeth Pauls describes, use of the earthlodge can be divided into a series of concentric circles (Fig. 5). At the center is the hearth, about which the women cooked and prepared food. Around the hearth members of the household gathered to commune and eat with one another. Beyond this was another area for women's work- processing hides, making tools, etc. But bisecting all three layers was the men's area devoted to the sacred bundle. Thus the lodge had different meanings to both men and women. To women it represented protection for their labor and status, while to men it meant protection for their spiritual power.

Thus we can see that the earthlodge was not

simply a static form of material culture used for shelter and service, but a vital part of the communal and spiritual lives of the Hidatsa. The two main aspects of their culture, social and ritual beliefs, converged in this single location that all members of a household utilized in different ways. It represents the devout spiritual and religious practices of the tribe and the supernatural meaning that enveloped all aspects of their lives. It also demonstrates the social roles that men and women learned from birth and sought to imbue in their children and grandchildren. "The preservation of this cultural identity has, no doubt, been possible because [of]...the matrilineal lodges, housing strong extended families which gave discipline and security."[30]

However, although the Hidatsa tribe is still an active nation (as part of the Three Affiliated Tribes with the Mandan and Arikara), earthlodges no longer remain.The invasion of European settlers in the middle of the eighteenth century forever altered the culture of the Hidatsa. Although some still lived in earthlodges, beginning in the mid-nineteenth century, they were steadily encouraged to conform to "civilization" and occupy log cabins while laboring according to European precedent and following Christian religions. While many such as Goodbird accepted these changes and readily built new log homes, others were not so tolerable. "But time had brought many changes to our reservation. Antelope and blacktailed deer had yet gone the way of the buffalo. A few earthlodges yet stood, dwellings of stern old warriors who lived in the past."[31] Perhaps they recognized that the earthlodge was not simply a dwelling, but that it encompassed and perpetuated all that was essential to their tribe. Hence, with the discontinued use of the earthlodge, the social and spiritual aspects of Hidasta culture that had converged in their most stable cultural resource were uprooted.[32]

Rising Sap, Sloping Ground: The Shaping of Maple Sugaring In Northern New England's Rural Landscapes

Noah Kerr

As the steam from the year's first pan of maple syrup curls up across Erwin Hutchins's furrowed brow, a small gleam appears in his eye. The casual observer would attribute this reaction to pride in a job well done, or even anticipation of the singularly pleasing flavors he has coaxed at the turning of the seasons. While these could certainly be true enough for him, nearly ninety years of life in the Maine woods have shown that the rich significance of this early springtime ritual extends further yet.

In the popular imagination, a vision of New England's rural past inevitably includes some variation on the theme of handsomely crafted homes, freshly painted barns, fastidiously ordered farmyards, and, perhaps in the early spring, a copse of stately maple trees with white buckets hanging from their trunks. However this conception of the farm's contained nature takes shape, it often tends to neglect maple sugaring's wider spatial reaches – those that stretch out beyond the farm's immediate huddle of timber and masonry, and farther still beyond our preconceived boundaries. The extent to which the landscape and process of maple sugaring apprise biology and anthropology is no mere trifle, but their role within New England's built landscapes illuminates a significant facet of agricultural lifeways and heritage.

Maple sugaring, or harvesting the sap of the sugar maple (*Accer saccharinum*)[1] by means of a shallow cut into the trunks of mature trees, or "tapping," is a practice that has spanned the colonial and modern life of the region's rural areas, evolving amidst many local agricultural traditions. Although the native range of these trees reaches as far south as Tennessee and west into Missouri, the concentration of the tapping practice has remained a largely regional phenomenon.[2] This selective regional response to natural resources in Colonial agricultural life addressed the challenges of maximizing subsistence farming in a woodland economy. As Charles Brooks points out, sugaring provided both a vital food resource and a useful complement to subsistence farming's seasonal labor rhythms. [3] Additionally, the daily rise and fall of early spring temperatures that supports daytime tapping throughout the maple grove, or sugar bush, meant that the boiling process could then be carried out after dark,

daylight responsibilities. Brooks notes that this unique nocturnal setting provided a unique opportunity for socializing, as families and neighbors gathered to share in the task.[4] The early use of small, specially constructed wooden troughs (called taps, or spiles) to channel rising sap into elongated wooden buckets suggests the development of a specialized tool for a specialized process amidst the maturation of regional farming traditions.

A great deal of evidence exists to suggest that an early version of sugaring was well established in North America well in advance of European settlement. The Franciscan scribe André Thévet recorded the first known European encounter with the practice in 1557, citing the pleasant and nutritive qualities in "the abundance of this liquor" as particularly admirable.[5] That many Native American tribes held a strong affinity for their surrounding natural resources is fairly well-known, but there exists a telling specificity in those groups who moved through and lived in the sugar bush. Helen Nearing suggests that the Ojibway placed a high enough value on the trees herein to call it *Ninakut* ("our tree"), further naming sugar maples explicitly for the sap-harvesting process - *Sheesheegummawis*, or "sap flows fast."[6] Andrew Beahrs points out that the Abenaki language directly associates the change of seasons with the opportunity to harvest sap, in that they knew the first full spring moon as the "sugar maker's moon," or *Sogalikas*.[7] Consequently, the role of ethnography and its potential to inform preservation narratives inclusive of Native American foodways may very well serve to enrich the study and interpretation of these traditions.

Likewise, the methods used by Abenaki peoples to harvest and produce maple syrup and sugar remain uniquely informative to the sugaring narrative. A variety of sources provide accounts of tools they used, perhaps best reviewed by Andrew Beahrs: a basalt axe was used to cut a slit in the tree's trunk, which was shaped by a flint knife or awl to receive a trough split from a two-foot piece of Forsythia. This guide, in turn, directed the resulting flow of sap into a birch-bark box sealed with pitch, or mocuck. Once gathered, the contents of multiple mocucks were gradually added to a trough carved in a chestnut log and boiled down through the addition of heated stones.[8] This practice was undoubtedly carried out with varying degrees of consistency and success, but their survival encourages a more comprehensive understanding of the significance of the sugar bush to the region's agricultural history and prehistory.

If many Anglo-Americans didn't share their Native American predecessors' interwoven cosmology regarding the sugaring practice, they certainly focused on its innovation and, by extension, commercial potential. Europeans' introduction of the auger and iron kettle comprised by far the most immediate technological shift from their predecessors' reliance on moistened clay pots and bark boxes. The later replacement of colonial axe gashes and wide wooden spiles with the comparatively clean bore of an auger and narrow metal spiles by the mid-nineteenth century reduced long-term damage to the trees of the sugar bush while maintaining efficient sap collection. According to the U.S. Forest Service, these improved methods also enhanced the production of nearly six million pounds of maple sugar by mid-century in Vermont alone.[9] Not surprisingly, syrup and sugar gained a worth beyond that of a local subsistence resource, eventually attaining a regional market value that more than doubled between the turn of the century and 1874, then recorded at twenty-two cents per pound.[10] Furthermore, in the early years of colonial infrastructure, the cost and difficulty of transporting cane sugar from the West Indies inland to rural areas enhanced the appeal of the maple sugaring process.[11]

While maple sugar sustained hopes for a local market competitor with imported cane products, it was also a potent fuel for abolitionist ideologies. The inland countryside of New England's

Figure 1. D.M. Cook's "Portable Evaporator"

colonies had long been a cultural and economic foil for the slavery-supported plantations of its southern counterparts, underlining a division that did not narrow with the arrival of American independence. Correspondence between Benjamin Rush and Thomas Jefferson in particular illustrates a growing hope that the maple sugaring process might effectively supersede the immoral and commercial influence of slavery. In a letter dated August 19, 1791, Rush writes,

> I cannot help contemplating a Sugar Maple Tree...for I have persuaded myself to behold it in the happy means of rendering the commerce and slavery of our African brethren in the sugar islands, as unnecessary as it has always been inhuman and unjust.[12]

The eighteenth-century author M. Bonnet echoes the sentiment in his own writing: "[The sugar maple] tree is the best argument that can be given in favor of the freedom of the negroes."[13] The abolitionist Robert B. Thomas, along with the 1803 Farmer's Almanack, the 1840 Walton's Vermont Register and Farmer's Almanac, and a variety of other voices all went so far as to claim that maple sugar was not only more ideologically palatable, but sweeter tasting for its untainted source in free labor.[14] Although the spatial and seasonal limitations of maple sugaring significantly undercut its abilities to seriously compete with, let alone displace, the mercantilist might of its Caribbean counterpart, the sentiment remains unmistakable. The contemporary author of the appropriately titled *Acer Saccharinum*, E.P. Jones, suggested, rather prophetically, that the sugar maple "is not subject to political revolutions, but the cane is."[15]

While having spread across a sizeable strip of northeastern North America – from the Atlantic to the Great Lakes, southern Quebec to northern Ohio – the basic form of the sugarhouse remains a significant vestige of New England's heritage. In that the sap was for centuries boiled down outdoors in iron kettles above open fires, a great deal of variation in control and quality of the resulting syrup (or hard sugar, depending on cooking duration) was inherent. The outdoor boiling kettle may have been guaranteed free from the taint of slavery, but not from natural detritus. In the March 1870 publication of New England Farmer, a maker in Hardwick, Massachusetts describes the difficulties of an unsheltered operation:

> I have made sugar out-doors with only a few stones laid up to set the boilers on, and to make a place for the fire, where the wind would blow dust and ashes into the syrup, and have had my hair and eyebrows scorched by a flame suddenly blown into my face by a gust of wind, and from my own experience would advise all sugar makers to have some kind of sugar house.[16]

The natural impermanence and regular alterations implicit within this type of operation creates significant uncertainty for the preservationist, considering the difficulty of determining and interpreting authentic spaces amidst such seasonal transience. Reassuringly, the historical advancement of the practice into an easily constructed, fixed location offers scholars a more accessible form, albeit with preservation challenges of its own.

Throughout the mid-nineteenth century, the development of the modern evaporator vastly improved the efficiency of sugaring, confirming the need for the sugarhouse as more than a basic means of sheltering the boiling process and the sugarer throughout the duration of the task. The 1858 patent issued to D.M. Cook for his "Portable Sugar Evaporator" shows advancement in this direction (Fig. 1). Its curved frame and adjustable pan are particularly interesting, as a subtle indicator of the off-level tilt required to evenly cover the steel evaporating pan's heated surface area. Cook's inclusions of a vertical chimney and steam hood to manage the by-products of boiling also stand out. This was a keen step in the direction of a built form, albeit one which effectively failed to balance the flexibility of mobility with the environmentally responsive pragmatism of a dedicated indoor structure. By the 1870s, however, as Thomas Visser has observed, the sugarhouse had become:

> a common sight on farms in the maple-forested areas of New England, especially as sugarers adopted large metal evaporator pans. These pans are supported over the fire by an 'arch,' typically constructed of hard bricks and

mortar on a stone base. Iron fire doors are usually fitted at the end of the arch.[17] (Fig. 2)

The evaporating pan's increased surface area and subsequent leap in design efficiency signaled a corresponding need for dry, nearby storage space for wood fuel in quantity, as well as shelter for its users for longer periods of time. Equally, the ability to process greater volumes of syrup demanded the constant, ready supply of fresh sap to fill the evaporating pans' surface area, as the inclusion of a nine- by sixteen-foot storage tank room suggests in Byron Halstead's 1904 *Barn Plans and Outbuildings*.[18] The alteration of the more typical rectangular floor plan for this layout, however, appears to be more of an exception than a standard. On the whole, such tanks were more often housed within the building's frame.

Other variations in the form's basic wood construction responded to the implementation of the evaporator as well, including the frequent inclusion of an elongated ventilator straddling the ridgeline of the common gabled roof. A key feature – perhaps suggesting a character-defining element of integrity for many sugarhouses – can be found in the topographic orientation of the structure as a whole. Many sugarhouses rest on visibly uneven ground. An odd feature from a distance, perhaps, but intentionally practical nonetheless: in their field survey of North American agricultural structures, Allen Noble and Richard Cleek assert, "The ideal location for a sugarhouse is at the foot of a small slope, thus allowing gravity to feed sap into the evaporator."[19] Just as often, initial construction was carried out with any available lumber, vastly diversifying builders' approaches framing, roofing, and cladding, according to their respective locales and traditions. In addition to addressing human comfort issues and safety through ventilation, the addition of strategically placed windows (Fig. 3) helped provide much-needed light to offset decreased visibility – a byproduct of the copious steam created through the cycle of evaporating sap and condensing syrup, which was a constant part of the sugaring season.

Although it contributed heavily to the development of the sugarhouse as a recognizable built form, the evaporator's increased heat

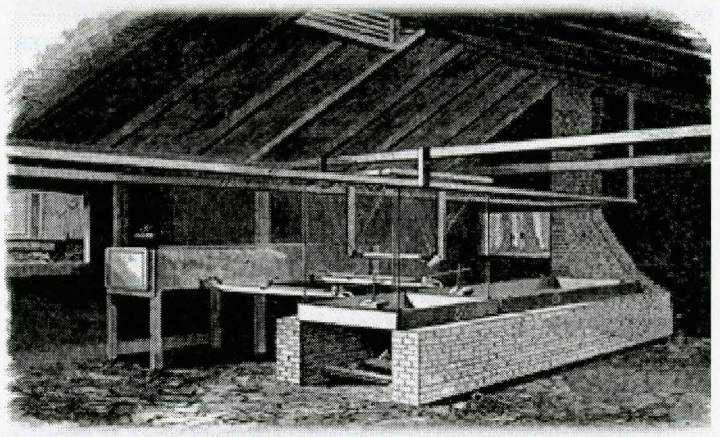


Figure 2. Interior illustration of a sugarhouse, 1870. Note the enlarged evaporating pans resting above insulating brick arches, with storage tanks for consistent evaporation, as well as louvered ridgeline ventilator in the roof above.

output and expanded boiling surface area also greatly amplified the risk of fire damage, weighing into a fine balance between the sugarhouse's potential for creation and destruction of material culture.[20] Visser links the rarity of surviving examples to this risk, further asserting that the use of recycled materials in constructing and repairing sugarhouses often challenges the confidence of dating methods.[21] Yet this utilitarian approach to maintenance also suggests its own clue to cultural identity, in that such thrift is not uncommon in agricultural landscapes. Hutchins's own sugarhouse, standing today in Waldoboro, Maine, exhibits such cultural weathering, containing incremental changes from the gradual accretions of a double-hung window salvaged from a transfer station on Cape Elizabeth, a casement window from a cabin on Matinicus Isle, and decades-old pressure-treated lumber from his children's sandbox.[22] The motley patina that results from this low-cost response to the dynamic wear of New England's climate cannot reasonably be dismissed as inauthentic, nor is it a facet of a standardized design. Instead it forms an intrinsic part of the sugarhouse's identity. Both building and process, then, are inextricably linked as products of the region's human culture.

Here, especially, the advent of the sugarhouse anchors its spatial orientation to the immediate rural landscape – the location of the sugar bush itself – in contrast to the long-standing European method of clearing and subjugating a planned space and resources to the order of furrows, pastures, and integrated buildings. Rather, the

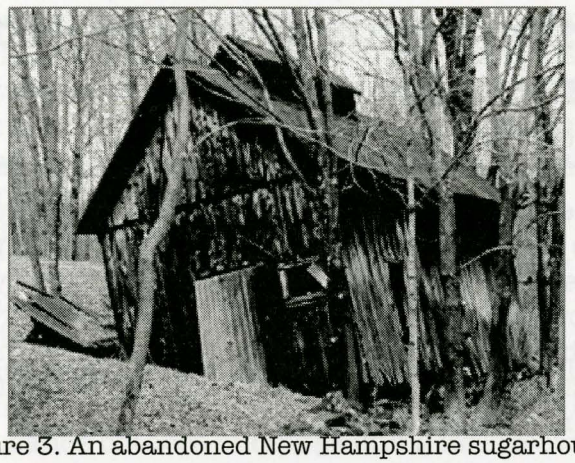


Figure 3. An abandoned New Hampshire sugarhouse. Note ridgeline ventilator, collapsed lean-to (for firewood storage), and exposed stone footings.

emphasis rests on the centrality of the trees themselves, imparting a different spatial focus altogether from many other farming processes and rituals. As Hutchins points out, it is not uncommon to find the sugarhouse a fair distance from the rest of the farm; in the case of his 1920s childhood farm in New Portland, Maine, as well as its neighbors, the chosen location for boiling sap was on the very edge of the sugar bush, approximately one-quarter mile from the rest of the farm.[23] Accordingly, Noble and Cleek primarily characterize the average sugarhouse as "located in the sugar bush, and not in the farm itself."[24]

The reason for this is evident enough when one considers that the ratio of "forty-to-one" (forty gallons of sap are needed to create a single gallon of syrup) implies significant volume, weight, and fuel considerations to maintain efficiency in even the smallest operation. Hutchins recalled that in his experience the heat needed to render four gallons of finished syrup from a handful of trees often required nearly two full cords of firewood.[25] A U.S. Tariff Commission report from approximately this same time period estimates the average cost of fuel per gallon of finished syrup at about thirty cents.[26] Moreover, with the sugaring season arriving on the tail end of winter temperatures, the necessity of good, seasoned firewood for heating the farmhouse itself signals a premium on efficiency in the sugaring operation.

The extreme vitality of the sugar maple, however, according to a 1905 report by the U.S. Department of Agriculture, necessitated the periodic thinning of the region's healthy maple groves. The implicit result is essentially two-fold, echoing the balance that had continued to fill and fuel pots and evaporators for centuries: the sugarbush retains healthy airflow and nutrient distribution to mature trees, while providing the farmer with up to twelve cords of firewood per acre.[27] As a result, a pattern of the maple grove as a self-sustaining landscape, independent of other farming spaces, emerges further. The attentive, seasonal harvest of fuel and sap corresponds with the natural health of the sugar bush in a symbiotic cycle – maintenance precipitates harvest, and harvest maintains the spatial integrity of the sugar bush. The sugarhouse, again, serves as an important, built focal point for the labor and perpetuation of the cycle. The fact that the structure's building components and fuel often both originated in or near the sugar bush adds a significant layer to its contextual identity.

As its modest, utilitarian design sets it apart from much of New England's grander buildings, the sugarhouse presents a fascinating challenge for the preservationist. Having developed around an enduring path of American foodways in response to environmental, topographical, and economic forces, it can still be found across parts of the northern United States, as well as southern Quebec and Ontario, ranging from the Atlantic coast to the western edge of the Great Lakes. Yet historical examples of the form are becoming increasingly scarce with the natural passage of time. Moreover, the valuable accounts and firsthand knowledge (oral history) associated with sugaring's modern evolution also continue to disappear as its rural keepers age. This potential loss is, unfortunately, not unique to the sugarhouse, but the space and practices that surround it speak significantly of a people and a place. As the seasons continue to pass, they too, may rise with the steam.

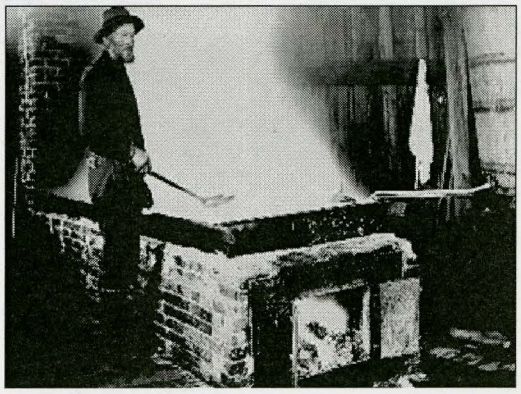


Figure 4. Charles Trow tends the evaporator pan and brick arches in a sugar house in Southern New Hampshire, c. 1890.

The Row House of Third Ward, Houston, Texas: A Typological Analysis and Preservation

Jobie Hill, Selected Professions Fellowship from AAUW

Minority Preservation an Emerging Field of Study

The mission of the historic preservation movement is to preserve our nation's heritage through documentation and interpretation that relies heavily on our understanding of our collective cultural heritage. In the beginning only nationally significant structures were considered worthy of study. Today we know that this approach greatly limits a multitudinous historical record. The emerging field of minority preservation focuses its studies on the lives of the people that were intentionally left out of earlier historical records. These studies shed new light on the past and allow the previously silenced an opportunity to be heard. It is only through a collaborative effort that a collective cultural heritage narrative can be told.

Each historical narrative is unique and deserving of study. The same building form will have a different narrative at each geographic locale that it is found and through each interpretive lens. The subject of this paper is the row house in Third Ward, Houston, Texas. This paper will first establish a typology for this building form that is specific to Third Ward, Houston, Texas and based on the row house when it was at the peak of its existence in the 1950s. This selected time period will provide a greater sample selection and, therefore, offer a more accurate typology. The paper will then look at a case study of 731 houses in the Greater Third Ward. This area is defined by Interstate 45 to the north, Highway 59 to the west, the University of Houston campus to the east, and the Texas Southern University campus to the south. The goal of the case study is to bring awareness to the rapid decline of the Houston row house and its importance to the field of minority preservation.

Geographic Boundaries

In the early nineteenth century, cities were often divided into wards as a political tool. Houston, Texas was one of these cities. It was first split into four wards in 1839 and then subdivided twice more to eventually have a total of six wards (Fig. 2). The common corner for all six wards is the intersection of Congress Street and Main Street. The outward limits follow natural boundaries such as the Buffalo Bayou. The ward system was abandoned in the early 1900s, but Houstonians are still familiar with this structure. The wards that have remained are all primarily residential; Second Ward, Third Ward, and Fifth Ward are seen as culturally significant neighborhoods[1]. This paper focuses on the Third Ward, one of Houston's surviving residential neighborhoods that is full of cultural heritage.

Methodology

The row house, more commonly known as the shotgun house, is not an unknown building form; in fact, it is one of the most widely recognized forms in New Orleans, Louisiana. The houses found in New Orleans have received much

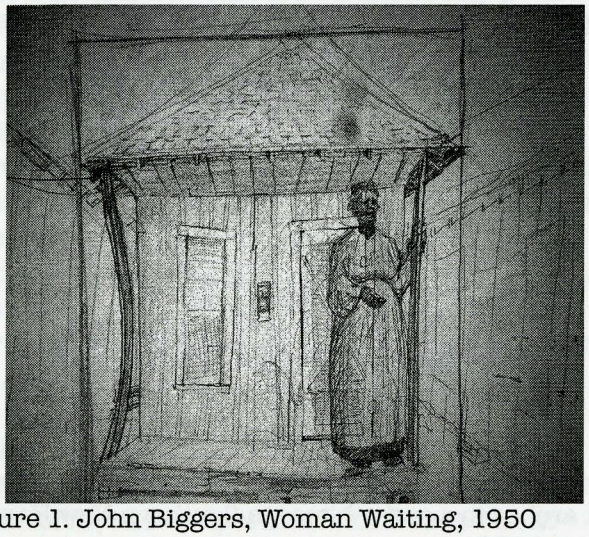


Figure 1. John Biggers, Woman Waiting, 1950

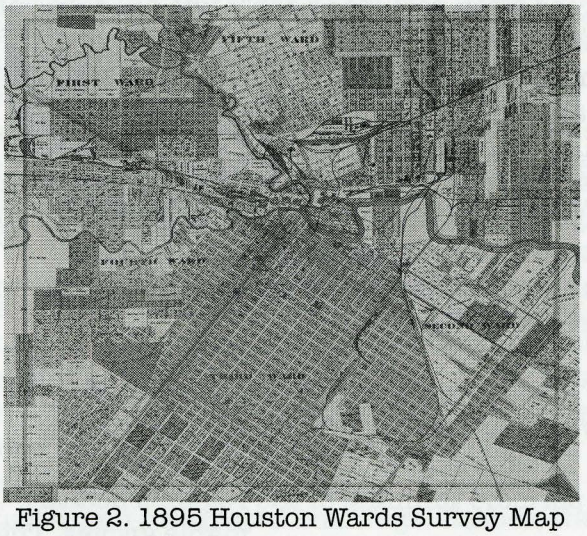


Figure 2. 1895 Houston Wards Survey Map

attention over the decades, in both the academic world and in popular culture. John Vlach has written about the origins of this building type and he has done extensive documentation on ones found in New Orleans. After hurricane Katrina, people from all over the world collaborated to find efficient ways to rebuild and restore this distinctive vernacular form. What many people do not realize is that the row house is not unique to New Orleans. At the peak of its existence in the 1950s it was the most ubiquitous vernacular form in Houston, Texas. The city had thousands of these buildings lining its streets. Unfortunately, the Houston row house has never been thought of as a worthwhile subject for research. This lack of interest is evident in the very limited number of available resources discussing the house form.

In Houston the row house has a social stigma of low income African-American housing, which tends to exclude it from most media and other forms of attention. The primary sources of information for this paper come from fieldwork, Sanborn maps, and the Harris County Appraisal District website and are used to develop a typological study.

Sanborn Maps
Sanborn maps for Houston, Texas exist for the years 1885, 1890, 1896, 1907, 1924-1929, and 1950-1951. These maps were used to establish the total number of houses for each given date range. The row house has such a distinctive floor plan it is easily recognizable on the maps. They were also used to establish approximate dates for when variations of the row house plan came into use, such as the camelback and double row house.

Fieldwork
In 2004 a reconnaissance level survey was conducted by the author. This survey included Greater Third Ward, totaling 731 houses, and is the area addressed in the Case Study. The information collected during the survey included: address, date, plan type, building features, relationship to neighboring houses, and photographic documentation.

Harris County Appraisal District Record Search
A record search was conducted for each of the 731 houses identified during the reconnaissance level survey on the Harris County Appraisal District website. This search provided new information such as construction date, demolition date, base area of livable space, total number of rooms and the function, and which addresses are associated with the same property lot. Information that was verified and updated against the 2004 survey included foundation type and ownership.

GIS Mapping
GIS mapping software was used to create maps that show how specific features of the row house are dispersed within the neighborhood. Patterns and clusters begin to emerge when one is able to view the entire area at once.

The Houston Row House as a Type
Lumber and railroad companies of the late nineteenth century found the row house to be the favorable type of construction for its workers. It required minimal materials and could be erected and broken down quickly[2]. The railroad lines dominated the Houston landscape through the 1900s; therefore, one would expect to find clusters of row houses also dominating the landscape.

Building Types
The Third Ward row house is a narrow one-story dwelling with a front facing gable roof (Fig. 3). Houston has examples of row houses with hip roofs, but this is rare (Fig. 4). The houses are wood framed structures with lap siding and shingle roofs. The house is approximately fourteen feet wide and thirty-six feet long. These dimensions can vary significantly from house to house, but to be considered a row house the length should be at least twice the width. Row houses are typically categorized as a single, a double or a camelback row house.

The plan of a single row house is rectangular and

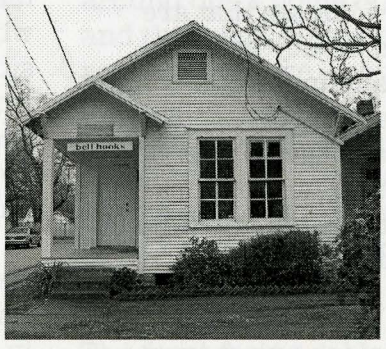


Figure 3. Gabled Roof Row House

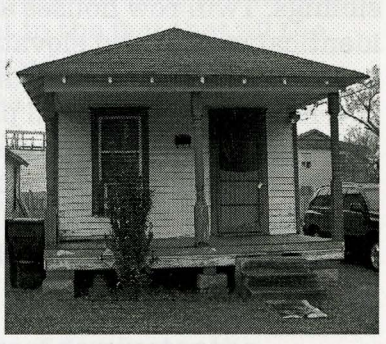


Figure 4. Hipped Roof Row House

the interior spaces are arranged so that there is one circulation hallway along the long side of the house and the rooms are on the other side. The front door is on a gabled end and opens into the hallway. The rear door is at the opposite end of the house and is in line with the front door (Fig. 5). A variation of the interior plan is one in which there is no hallway and the doors of the successive rooms do not line up.

The rectangular shape of the plan has three common variations in the Third Ward (Fig. 5). Variation A has a recessed front porch on one end of the primary façade. Variation B has a recessed front and rear porch on same or opposite sides of the house. Variation C has a recessed front porch and bay projection on the primary façade. When a row house has one of these plan variations it tends to be wider, up to thirty feet. These plan variations are not an anomaly in this area and show up early and frequently on the Sanborn maps. During the first thirty years (1890-1920s) of the row house's existence in Third Ward they make up approximately twenty-five percent of the row house housing stock, and by the 1950s they make up almost half.

The double row house functions as a duplex. Two row houses are built right next to each other and share a wall and a roof. The camelback has a partial second story space on the rear of the house (Fig. 5). The double row house appears on early maps of Houston and is still widely seen today. The camelback, on the other hand, appears only a few times on historic maps and none were found during the reconnaissance survey in 2004 (Fig 7).

A row house's identity is often established by its relationship to its neighbors. Two relationships are prominent in the Third Ward, twins and siblings. Twin row houses are houses that are identical in plan and elevation. They have the same dimensions, openings and materials. Sibling row houses are similar in plan and elevation, and often they are mirror images of each other. They will more than likely have the same dimensions and materials, but there will be slight variations in the size and location of the openings.

Porches

The majority of the row houses in Third Ward have front porches. They are either full or half

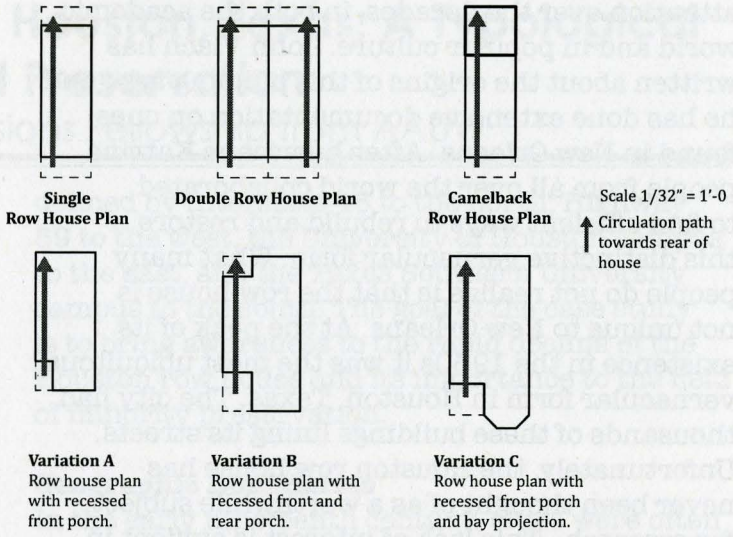


Figure 5. Row House Plans

width. A full width porch spans the entire width of the house. A half porch spans only the width of the entry way. The porches are both recessed and projecting.

Foundation Type

The most common foundation type in Third Ward is a block foundation. The house is raised off the ground and rests on concrete blocks. On the Sanborn maps this foundation type was identified by the letters "O.U.," meaning open under. Slab foundations are also found in the area but are uncommon.

Construction Dates

The row house first appeared in Third Ward sometime between 1885 and 1890. There are five house forms on the 1890 Sanborn map, and none on the 1885 map. Six years later, the 1896 map shows fifty-eight row houses. Eleven years later, 1907, the row house stock has more than quadrupled to 258 houses. By 1929 the row house housing stock has increased to 1,058 houses. In 1951 the row house peaks in Third Ward with 1,584 houses. (Calculations are limited by the extents of the Sanborn surveys, which are not much of a factor because the surveys appear to keep up with the rate of Houston sprawl.) Between 1890 and 1896 the first double row house was built (Fig. 6) and between 1896 and 1907 the first camelback was built (Fig. 7).

Reading the Landscape

The row house, as the name suggests, was built in rows and groups. The long narrow form of the house allows multiple buildings on one property. It was not uncommon

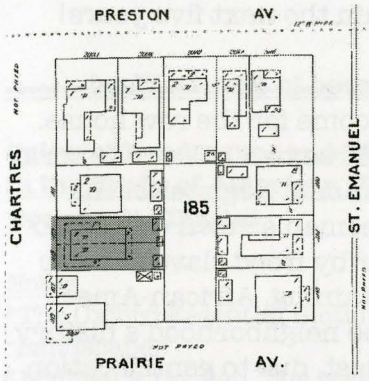


Figure 6. Double Row House on 1896 Sanborn Map

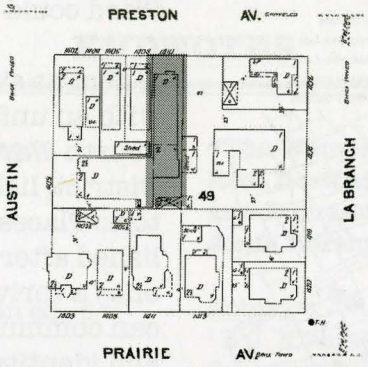


Figure 7. Camelback Row House on 1907 Sanborn Map

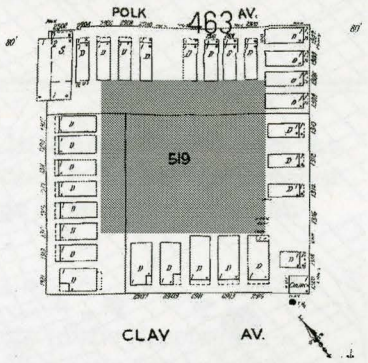


Figure 9. Shared Backyard on 1924 Sanborn Map

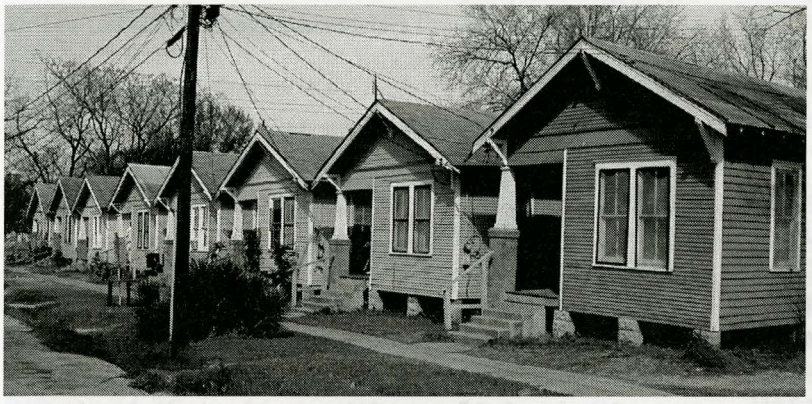


Figure 8. Residential Block Lined with Row Houses

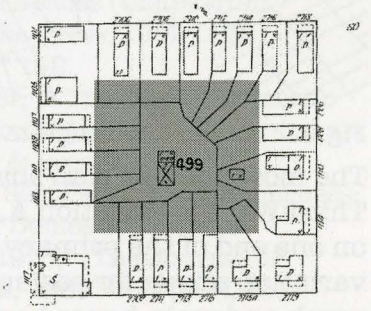


Figure 10. Shared Backyard on 1924 Sanborn Map

with identical houses (Fig. 8). Typically, the spacing between the houses ranges from 4 feet to 20 feet, leaving little or no room for a side yard. If there is a yard it is typically at the rear of the house. In a few cases this grouping created an interesting phenomenon. When rows of row houses lined all four sides of the block a private, shared backyard was created (Figs. 9 & 10). This yard formation would have provided a private community space for the residents on the block. Having to live only four feet from your neighbor on either side, together with the idea of the backyard as a communal gathering spot, leads one to believe that the idea of family extended beyond the immediate walls of one's house and there was a greater sense of solidarity within the neighborhood. This aspect of row house living deserves further research and will be a future subject of study.

The Greater Third Ward: A Case Study

The interstate and highway system has always been seen as a blessing and as a curse. This is the case in Greater Third Ward. Interstate 45 to the north and Highway 59 to the west wiped out many of the row houses to allow for construction in the 1960s, but on the other hand, after the roads were built, it created natural boundaries. These boundaries have played a part in protecting the neighborhood and the row houses from the threat of Houston sprawl.

Building Type

The single row house is by far the most dominant surviving type of row house seen in the Greater Third Ward. It makes up ninety-six percent of the row house housing stock. Double row houses make up the remaining four percent. There are no camelback houses surviving in the area today. The houses are wood framed structures with lap siding and shingle roofs. Ninety percent of the houses have block foundations. Creating shading around one's home is a must in Houston, Texas, and this need is evident in the fact that all the row houses have a covered entryway. Sixteen percent of the houses have only a covered step, not a true porch. A porch must have enough depth to it that the space within the porch is usable space. Sixty-seven percent of the homes have a front porch and seventeen percent have a front and rear porch.

The front facing gable roof dominates the landscape, but on occasion one can find a row house with a hip roof. Fifty-seven

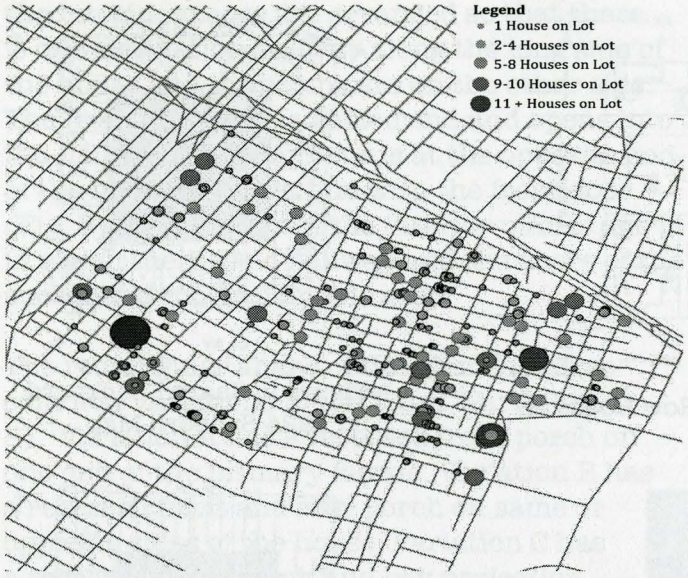


Fig. 11. Lot Density Diagram for Greater Third Ward

The most popular plan shape seen in Greater Third Ward is Variation A, a recessed front porch on one end of the primary facade (Fig. 5). This variation allows for easier construction with the porch and main house having the same roof. The Harris County Appraisal District records show that the row houses typically have four to five rooms with at least one being a bathroom and one being a bedroom.

Neighborly Relationships

Over half, sixty-seven percent, of the row houses in Greater Third Ward possess a twin relationship with their neighbor and appear in groups of three or more. Each grouping typically reflects a single property lot. The lots with a large numbers of buildings tend to appear around the peripheral boundaries of Greater Third Ward; while lots with only two or three houses are clustered near the center of the neighborhood (Fig. 11).

Construction Date

The surviving row houses in Greater Third Ward were constructed between 1920 and 1963. The most active construction period was between 1930 and 1938 at which time 218 row houses were built.

Rate of Disappearance

In 2004 Greater Third Ward had 731 row houses, today there are only 605. According to city records sixty-two houses were demolished in 2005, thirty-four houses in 2008, eighteen houses in 2009, six houses in 2010, and five houses in 2011. Although the demolition rate has slowed down the last two years, if there is another spike all the row houses in Greater Third Ward could be gone within the next five years!

A similar situation occurred in Fourth Ward, with an unfavorable outcome for the row house. Fourth Ward is home to Freeman's Town Historic District, listed on the National Register of Historic Places in 1985. Freeman's Town was established after the Civil War by freed slaves. It was once a thriving, self-sustaining, African-American community.[3] Now the neighborhood's history and identity are all but lost, due to gentrification and "Houston's notoriously weak historic preservation ordinance, as well as its historically developer-friendly government."[4] Today only about thirty of the original 530 contributing National Register properties exist.

If this type of irresponsible demolition can happen in a National Register Historic District there will be no limits to the annihilation in a non-listed, low income neighborhood.

Importance to the Field of Minority Preservation

Greater Third Ward is the largest, intact, row house community in Houston, Texas and is the last of its kind. Many of the residents living in the community are descendants of the original freed slave settlers. These families know the history of the neighborhood and can remember what it was like before, during and after its prime. Oral histories from these families need to be collected and an intensive survey of the row houses needs to be completed before it is too late. The narratives and the structures are important pieces of the African-American past.

Preservation Possibilities

In order for Greater Third Ward to continue to resist gentrification, a preservation plan needs to be created and carried out; if not, sprawling Houston will devour it just like it did to the Fourth Ward. The people living in the neighborhood are the ones that will be able to recognize the potential of the community; therefore, they need to be directly involved in the preservation plan. Community involved efforts have already been put into place by Project Row Houses. This non-profit organization has found ways to unite the local community, the artist community and the historic preservation community. It is now time to follow in Project Row Houses steps and make sure that the ubiquitous Greater Third Ward row house does not become scarce.

ENDNOTES

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Evanne St. Charles

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"The Women of America, in Whose Hands Rest the Real Destinies of the Republic" Catharine Beecher and Domesticity in the Age of Industrialization
Anna Borthwick

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The Watson-Price Barn: Analysis of Oregon Settlement Period Barn Construction and Development
Lindsay Jones

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The Hidatsa Earthlodge: Establishing Cultural Identity through Architectural Interpretation
Lauren Rieke

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Rising Sap, Sloping Ground: The Shaping of Maple Sugaring In Northern New England's Rural Landscapes
Noah Kerr

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[7] Andrew Beahrs, Twain's Feast: Searching for America's Lost Foods in the Footsteps of Samuel Clemens (New York: Penguin, 2010): 261.
[8] Beahrs, 260-2.
[9] U.S. Department of Agriculture, Bureau of Forestry, The Maple Sugar Industry, 6-11.
[10] Nearing, 230.
[11] U.S. Department of Agriculture, Bureau of Forestry, 8.
[12] Nearing, 20.
[13] Ibid.
[14] Beahrs, 266.
[15] Nearing, 20.
[16] As quoted in Thomas Durant Visser, Field Guide to New England Barns and Farm Buildings (Hanover, NH: University Press of New England, 1997): 179.
[17] Visser, 177.
[18] Byron David Halstead, Barn Plans and Outbuildings (New York: Orange Judd, 1904): 370.
[19] Allen G. Noble and Richard K. Cleek, The Old Barn Book: A Field Guide to North American Barns and Other Farm Structures (New Brunswick, NJ: Rutgers University Press, 1997): 153.
[20] Considering that the materials used to construct the sugarhouse itself often mirrored those used to fuel the evaporator's seasonal appetite and supply the sap which fed it, this balance seems somehow appropriate.
[21] Visser, 180.
[22] Erwin F. Hutchins, telephone interview by author, Waldoboro, ME, November 21, 2011.
[23] Hutchins, interview.
[24] Noble and Cleek, 153.
[25] Hutchins, interview.
[26] U.S. Tariff Commission, Maple Sugar and Maple Sirup (Washington DC: Government Printing Office, 1930): 24.
[27] U.S. Department of Agriculture, Bureau of Forestry, The Maple Sugar Industry, 30-33.

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Notes

[1] Jeannie Kever, "Pride Lives on in Houston's Six Historical Wards," Houston Chronicle, (September 7, 2004)
[2] Yvonne Phillips, "The Shotgun House," Louisiana Studies 2 (Summer, 1963): 178.
[3] Carol McDavid, "When is 'Gone' Gone? Archaeology, Gentrification, and Competing Narratives about Freedmen's Town, Houston," Historical Archaeology 45(3) (2011): 75.
[4] McDavid, 78.