

Occupational heritage and landscape at the Hallstatt and Iwami World Heritage sites

ハルシュタットと石見銀山世界遺産における作業遺産と景観

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Abstract: This paper develops an analysis of occupational heritage and landscape based on field-work at two World Heritage sites, Hallstatt in Austria and Iwami in Japan. These are both mining sites with long histories of mining salt and silver, respectively. While remains and exhibits at both of these sites leave no doubt as to the hard labor and exploitation involved in this mining activity, we argue that these sites can be seen as “valued landscapes” whose value derives in part from this testimony to human occupational heritage. The paper concludes with a discussion of the concept of “occupational heritage” as a useful way of looking at cultural heritage sites.

要旨: 本稿では、オーストリアのハルシュタットと島根県の石見銀山の両者の現地調査を踏まえて、世界遺産における作業的遺産と景観の関係を分析した。ハルシュタットと石見銀山は塩山および銀山の歴史があり、遺跡や展示から鉱山としての重労働と搾取の現実を読み取れた。しかし、分析の結果、この歴史にも関わらず両方の世界遺産を「価値ある景観」(valued landscapes)として評価した。この景観の「価値」の一部は、そこで行われた歴史的作業遺産から生まれたと結論した。

Key words: Cultural heritage (文化遺産), occupationscape (作業景観), premodern mining (前近代の鉱山)

Introduction

A growing literature in the geography of health explores the nature of the important relationships between landscape and human well-being. A starting point for this research was the concept of “therapeutic landscapes” introduced by Gesler (1991). Therapeutic landscapes are “places that have achieved lasting reputations for providing physical, mental, and spiritual healing” (Kearns and Gesler 1998: 8). Early studies of

therapeutic landscapes concentrated on well-known spas or healing sites such as Lourdes (Gesler 1996), Bath (Gesler 1998), and Hot Springs, South Dakota (Geores 1998), but later work has extended this concept to a range of other cultural and natural landscapes (Palka 2000).

In previous work we have attempted to develop an occupational perspective on landscape (Aoyama and Hudson 2010; Hudson et al. 2011; Hudson and

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Aoyama 2011). These papers showed that (mis)representations of the occupational histories of places can have significant influences on the way such landscapes are perceived by both residents and visitors. Both Wilson (2003: 83) and Wakefield and McMullan (2005: 299) have noted that most research on therapeutic landscapes has focused on “extraordinary events in peoples lives”, such as visiting spas or shrines. Linking landscapes with occupation marks a shift in viewpoint towards more mundane, everyday activities. In a paper on the occupationscape of the “Iceman” glacier mummy in the South Tyrol, Hudson et al (2011) analyzed museum exhibits and other depictions of the daily life and occupations of this prehistoric individual. In this present article we examine the links between landscape and occupations that are by no means everyday or mundane from a contemporary perspective: in fact they involve hard and dangerous labor, often under extreme conditions. The two landscapes discussed here are not directly associated with healing or health; their initial associations are rather with the struggles and exploitation of work. In our analysis, however, we show that these places also possess other, complex associations that give them resonance as “valued landscapes” (Palka 2000) associated with the heritage of particular occupational histories. The paper concludes that the reconstructions and exhibits of the mining work conducted at these two sites tie the heritage of this work into their broader landscapes and associated cultural values.

Materials and Methods

The two sites analyzed here are the Iwami silver mine in Japan and the Hallstatt salt mine in Austria. These are both World Heritage sites: the “Iwami Ginzan Silver Mine and its Cultural Landscape” (inscribed 2007) and the “Hallstatt-Dachstein-Salzkammergut Cultural Landscape” (inscribed 1997). Both are mountain landscapes. This article represents a preliminary study based on fieldwork conducted at Iwami by Diab in March 2004 and at Hallstatt by Hudson and Aoyama in September 2007. The following descriptions of the two sites are based on this fieldwork and on the UNESCO World Heritage listing descriptions (Iwami:

<http://whc.unesco.org/en/list/1246> and Hallstatt: <http://whc.unesco.org/en/list/806>).

This analysis is primarily concerned with how people perceive the occupational histories of places *where they are not themselves engaged in those occupations*. Thus we are not specifically concerned with the actual experiences of occupation of the historic mining populations. Nor do we attempt an ethnography of the occupations of local residents currently living the near to the World Heritage sites. Instead, we approach the two landscapes as visitors and present qualitative descriptions of our experiences of landscape and the occupations represented or hidden in those landscapes. Since these descriptions are based on site visits and information presented at the sites, we have not attempted to include extensive references to the academic literature about the two landscapes.

The Cultural and Historical Landscapes of Iwami and Hallstatt

The Iwami landscape

The Iwami Ginzan 岩見銀山 silver mine is located in Ohda 大田 City, Shimane Prefecture. Home to over 200,000 people in its heyday in the mid-late 16th century, Iwami was one of the world’s most lucrative and prolific silver mines. Though the site of the mine is now an unassuming, rather isolated mountain hamlet, the story of Iwami is one with a diversity of interconnected themes: links with Europe and South America; a relationship to the world of industrial archaeology and mining technology; and a dramatic reminder of the unyielding spirit of human endeavor and ambition.

The silver mountain of Sennoyama 背ノ山 (elevation 537m), overlooking the modern town of Ōmori 大森 and the Sea of Japan, was the focal point of mining activity at Iwami. The mountain is literally a tribute to the back-breaking efforts of the miners’ labor. It is a veritable cultural landscape of human manufactured terracing, from its peak to its base, with 600 walkways and steps, and open cast mine shafts. The legacy of the silver miners can be seen in the many shafts, tunnels, circular wells, ponds, stone walls, trails and roads, and even graves, alongside the terraces

where the miners also set up makeshift dwellings. Virtually every building in the Ginzan Preservation District of Ōmori town is a historic landmark. The people and officials of Ohda city are proud of this history and status; indeed, it is a living shrine to Tokugawa period history as several converted samurai dwellings, historic mining officials' residences, Buddhist temples and Shinto shrines can be found while walking the narrow streets.

Today this cultural landscape blends discretely with the forest and the mountain. The area exploited comprises a total of 300 hectares (2.2 km east-west by 2.5 km from north-south) and had four shipping ports stretching from a connecting road. The historic Ginzan Kaidō Silver Mine Road linked the town, mining mountains and extraction shafts to the largest shipping and supply port town of Yunotsu 温泉津 (and three other smaller ports up the coast). The Ginzan shipping road carried the refined silver roughly 30km, a full 1-2 days overland travel from the Iwami mine site. During the early 1500s the silver was transported south to Kyushu and from there to the waiting world courtesy of Portuguese, Chinese, and Korean merchant ships. However, by the 1560s when the silver rush was in full swing Yunotsu became the primary port town. Castles were built on mountain tops to guard the region from bandits.

Archaeological excavations in 1993 recovered evidence of dwellings built at extraction sites near mine shafts, furnace ruins, digging tools and bellows, graves of miners, as well as Chinese and Southeast Asian porcelain. Many surviving documents and picture scrolls document the mining extraction process, smelting techniques, and even daily life in the mines. These are valuable sources that paint a vibrant picture of this important point in time.

As you drive up Mt. Sennoyama and look down upon the small town with its narrow roads, the remoteness of the area becomes clear. Upon walking down the steep mountain, the impressive scale of the mining operations 500 years ago begins to become clear to the visitor. The entire mountain has been reshaped through hundreds of years of mining. At first you walk on flat grassy trails worn into the land from hun-

dreds of years of use. Then the trail begins a steep 60 degree drop through bamboo forests and rocky mountainsides. To the sides, the rock and the earth have been leveled off to work the hot spots where mine shafts resembling miniature wedges, 1 metre high and 50-70 cm wide, in the solid rock can snake for 100 meters of back-bowing walking, as miners chased veins of ore within the mountain. One section has a 20 meter long staircase built out of the rock leading up to a huge bald carved section of the rock face about 7 metres high and 12 metres long, containing several mine shafts. It would have been extremely difficult to carry supplies up these steep, bamboo-forested trails. Thus, the miners lived on-site; their make-shift dwellings have been excavated by Ohda city archaeologists.

There are over 500 mine shafts, (called *mabu* in Japanese) around Iwami Ginzan, including the huge *Ryūgenji Mabu*, the only shaft open to the public. *Ryūgenji* is an experience of damp, cold, darkness, conjuring an almost satanic image with the miners as slaves destined to break rocks for an eternity of pain. Lights set up inside the mine show exploratory openings in the rock walls, the end products of gritty Iwami miners chasing veins of silver-containing ore, some fizzling out (along with the miners themselves) and some continuing for several meters.

After a three minute walk down the main tunnel (barely high enough to stand) the visitor encounters a large map and then a string of dioramas, from historic scrolls, documenting the entire mining process at Iwami; this finally leads to the welcoming exit. It is welcome only insofar as it reassures us that we will not be held prisoner in time to repeat the terror of the excruciating labors of this task; the experience is quite palpable, and the light upon emerging from the shaft tunnel is a relief from the seemingly narrowing tunnel and the image of the miners aching, cold bodies imprinting on your own.

Iwami silver and the world economy

The pursuit of silver at Iwami Ginzan occurred during the fluorescence of the first international market economy and the East Asian World System. The silver of Iwami Ginzan was first mentioned in a chronicle called

the *Ginzan Kyūki* during the Kamakura period in A.D. 1309. It was not until 1526 that the Japanese merchant Kamiya Jūtei rediscovered it. We do know that the West was familiar with Iwami Ginzan as the Portuguese cartographer Fernan Drad penned the title “The Silver Mine Kingdom” on his famous 1568 map of the world drawn in Goa, India. On his map, the region lies in the same location today as the Iwami landscape. Other mapmakers of the time also emblazoned their works with the location of the Silver Island, such as in Valho’s 1561 “Map of the World” and Luiz’s 1563 “Map of East Asia”, though this was more in reference to the islands of Japan as a whole, testimony to the importance of silver as a exchange commodity.

From the voyages of Frederici in the 16th century, we learn that, “... the boats originally headed for China filled with spices from the South Sea Islands of Malabar and medicine from Cambaia, India ... (and would later) ... travel to Japan for their primary purpose of collecting silver...”, and thus acquired the name “silver ships”. The first silver rush occurred from 1532-1555. Between Iwami and Potosi in Bolivia, the world’s silver was provided through two remote regions separated by a large ocean but connected through intoxicating Iberian greed and terror, resoluteness, appalling means of submission, and entrepreneurial conquest. The link between Potosi and Iwami Ginzan has not heretofore been appreciated. However, together they reveal the space-time connection within this very significant period in human economic history that established a veritable global economy.

So important was this silver and Iwami Ginzan that there is an oil painting in a cathedral in Coimbra, Portugal of Xavier conducting an exchange with the developer of Iwami Ginzan, the daimyō Ōuchi Yoshitaka, whose family first sparked the proliferation of the mine. However, Portugal in no way had a monopoly on Iwami silver as Korea capitalized on its proximity to Japan and Iwami by importing a fortune in Iwami silver to the Asian continent. Indeed, this was a major north Asian trade route at the time as the Korean chronicle, the *Chōsen Chūsho Jitsuroku*, informs us that, “the Chinese from Fujian heading for Japan to buy silver found themselves in Korea as they were

swept off course by wind.”

Mining technology originally came from China and Korea 2000 years ago. The refining method known as “cupellation”, or *haifuku* (in Japanese), was a Korean invention brought to Japan in 1533, by men named Keiju and Soutan, at the behest of the entrepreneurial Japanese merchant Kamiya Jūtei, the rediscoverer of Iwami. The method involved the absorption of lead (by ash) from the ore leaving only the silver to be extracted. This smelting technique is extremely significant as it increased production exponentially and led to the proliferation of Iwami silver in such high quantities.

Iwami officially closed its mines in 1923, but it now enjoys renewed fame due to the World Heritage inscription. Around 810,000 visitors are estimated to have visited Iwami in 2008 after the inscription (San’in Chūō Shinpō 2010). Although (like most other World Heritage sites in Japan) the number of tourists has declined since that peak, Iwami is still an important tourist destination in western Japan.

Hallstatt

The second World Heritage site to be considered here is Hallstatt in Upper Austria. The center of the Hallstatt World Heritage site is the famous salt mine from which salt was first extracted as early as the 2nd millennium BC. Although this mine is still in use, long sections of the ancient mine shafts are now open to visitors. Other attractions of the area include the natural landscape with mountains surrounding the Hallstattsee Lake and the traditional architecture of the small town of Hallstatt itself. Hallstatt is one of the most well-known tourist sites in Europe attracting over half a million visitors each year.

Salt production at Hallstatt using pottery vessels began in the Middle Bronze Age. Underground mining for salt dates to the Late Bronze Age. By the Iron Age around 800 BC, the area was home to a flourishing culture with long-range relationships across Europe. Archaeologists term this the Hallstatt culture after early discoveries in the area. Salt mining continued under the control of the Roman empire and then again in the 14th century. The construction of the salt

mines and the evaporation of the salt required large quantities of timber taken from the surrounding mountains. Transhumant pastoralism and farming were also important activities in the Hallstatt area in premodern times. The name of the town, first recorded in a deed of 1305, and derived from West German *hal* (“salt”) and Old High German *stat* (“settlement”) shows the primary function of the town.

Hallstatt was inscribed as a World Heritage on the basis of criteria (iii) (“bears a unique or exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared”) and (iv) (“outstanding example of a type of building, architectural, or technological ensemble or landscape which illustrates a significant stage in human history”). The description for criterion (iii) notes that, “Humankind has inhabited the valleys between huge mountains for over three millennia. It is the mining and processing of salt, a natural resource essential to human and animal life, which has given this area its prosperity and individuality as a result of a profound association between intensive human activity in the midst of a largely untamed landscape.”

Tourism and Hallstatt

Hallstatt became well known as a tourist destination in the 19th century due to its natural beauty and historical connections. The first hotel was built in 1855 and the first public brine baths opened in the 1860s. Today the town remains one of the most famous tourist sites in Europe. Many visitors arrive by boat across the Hallstattsee Lake and stay in the old town, which was rebuilt in Late Baroque style after a fire in 1750 (Fig. 1). The town itself contains many attractions including the St. Michael chapel and charnel house (Fig. 2). The skulls in the charnel house, many with the inscribed names of the deceased, are a major draw for visitors and appear in many publications and brochures on Hallstatt.

From the Hallstatt town visitors can walk or take a cable car up to the salt mine mountain, which has spectacular views over the lake, when the weather is fine. (During our visit in mid-September the weather was poor and it snowed at higher elevations on the day



Fig. 1. Hallstatt town from the lake.



Fig. 2. St. Michael's church.



Fig. 3. Cable car station and area of archaeological sites above Lake Hallstatt.

of our departure). A restaurant at the top of the cable car provides a gateway to the salt mine area. Burial urns and other archaeological sites here testify to the long history of settlement in the area (Fig. 3). The ac-



Fig. 4. Salt mining diorama.



Fig. 5. Salt mining diorama.

tual salt mine is a huge network of tunnels and caverns that visitors tour with official guides. The guides explain the history of salt mining and several dioramas within the tunnels flesh out this history (Figs. 4-5). As well as the historical explanations, visitors can enjoy a ride on a long wooden slide used by miners to move quickly between tunnels.

Discussion

In a recent book on the Tlingit, anthropologist Thomas Thornton (2008) has emphasized the importance of human activity and production in forming a sense of place. In the two examples examined here, the mining of salt and silver and related activities would have been important elements in the formation of such a sense of place and of what we term an “occupationscape”. Although some salt mining still continues at Hallstatt, in this paper we have chosen to focus on the landscapes

experienced by contemporary visitors rather than by inhabitants actually engaged in the occupations representative of the two World Heritage sites. Notwithstanding the preliminary nature of the above descriptions of Iwami and Hallstatt, it is clear that mining and associated occupations are central to the experience of visitors to these sites. During our fieldwork, we felt that the most poignant aspect of the Iwami Ginzan cultural landscape is its function as a tribute to the individuals who created it with their ambitions, dreams of a better life, and a work ethic that satiated the European, Chinese, and Korean “silver ships”. These ships brought Iwami remarkably widespread, but fleeting fame, during an ever-expanding economic world system. Similar themes are clear at Hallstatt where prehistoric salt mines testify to the labor and ingenuity of Bronze and Iron Age peoples and to their links across early Celtic Europe, although economic cycles of “boom and bust” are less obvious here than at Iwami Ginzan.

In trying to understand the links between occupation and landscape at the two sites, we suggest that a concept of “occupational heritage” may be useful. “Occupational heritage” is a term sometimes used by sociologists to refer to the jobs or type of work followed by a family or other group of individuals, but here it is taken to mean the general heritage of occupations (in the sense used in occupational science) historically associated with a particular landscape or place. The occupational heritage of the Hallstatt and Iwami World Heritage sites is one factor that gives these places resonance and meaning as “valued landscapes”.

The “value” of Hallstatt and Iwami as cultural landscapes can also be linked to Foucault’s (1986) ideas about changing (Western) perceptions of space. For Foucault, the modern era is characterized by “the space of extension” where spaces are inextricably tied into wider networks and structures and where the outside *connections* of places are thus of great significance. Both Hallstatt and, especially, Iwami are good examples of the significance of such outside connections. Iwami Ginzan is one of a suite of World Heritage sites that link *geographically* unconnected individual sites/places/landscapes together, based on a

shared *historical* interconnectedness, that represents a similarity of function, purpose, and cultural-historical trajectory. Displays and exhibits at both Iwami and Hallstatt emphasize the outside connections of the occupations historically performed at both sites.

The occupational heritage of Iwami and Hallstatt may support their role as “valued landscapes”, but can they also be seen as “therapeutic landscapes” in the sense discussed by Gesler (1991) and others? Much of the mountain and lake scenery around both sites could undeniably be regarded as therapeutic in this sense, but can the salt and silver mines also be seen in this way? Alternatively, do visitors “bracket out” (Giddens 1991) unpleasant aspects of these landscapes in order to maintain a feeling of well-being in a way similar to the residents of the industrial city of Hamilton, Ontario studied by Wakefield and McMullan (2005)? From an occupational perspective this is an extremely difficult problem. If even relatively “simple” occupations, such as putting golf, can possess a huge range of complex meanings for any individual (cf. Aoyama 2012), then it is a nearly impossible task to try and present on site all of the historical meanings of the salt and silver mining occupations carried out at Hallstatt and Iwami. Visitors will therefore develop their own interpretations of those occupations and it can be assumed that those interpretations could both simplify the actual occupations and also overlook many occupational injustices associated with the occupational heritage of the landscape. These assumptions are, however, just that—assumptions that require further examination. It could also be that many visitors somehow develop a view of a landscape that is meaningful and valued because it contains both positive and negative aspects of an occupational heritage as part of a shared human heritage in labor and occupation. These are specific questions that need to be addressed by visitor interviews in future fieldwork.

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