

## Rasa Island: What Industrialization To Remember and Forget

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**Abstract:** Rasa Island, a small, remote coral atoll of Okinawa, was once a robust company town of Rasa Phosphate Industry Inc. Now abandoned and forgotten, the barren island nonetheless tells a rich story of Japan’s industrialization, a counter-narrative to the problematically simplified and celebratory history provided at the Meiji Industrial Revolution Sites recently inscribed on the UNESCO World Heritage list. By using Rasa Island and critical heritage studies scholarship, this article examines the place of “industrial heritage” in post-industrial societies and what kind of heritage is performed at Japan’s World Heritage sites.

**Keywords:** Rasa Island, fertilizer, industrialization, World Heritage

Unlike the sites discussed in the other articles in this special issue, my site, Rasa Island, is a forgotten one. In fact, it is a site of abandonment. Because of that, it raises the issue of what is and should be “heritage,” and what kind of narrative of industrial development gets mobilized for “industrial heritage” for Japan. I present the story of Rasa Island here as a historical counter-inquiry into the fixated meanings the official industrial heritage sites attempt to attach to industrial

ruins, such as Japan’s Meiji Revolution Sites recently inscribed on the list of World Heritage Sites.

### Rasa Island

Rasa Island — also known as Oki Daitōjima— is a coral atoll, located 220 miles southeast of Okinawa. Only 0.44 square miles, it is the smallest of the Daitō Islands group (with Kita Daitōjima and Minami Daitōjima). It is a deserted island with no tree, no inhabitant, and virtually no topsoil left.



Okidaitōjima

The island’s history is intimately tied to colonial expansion over centuries. Its first recorded sighting was by the Spanish navigator Bernardo

de la Torre, on September 25, 1543 during his mission to find a return route for the Spanish military and trade ships from the Philippines to New Spain. After that, Portuguese, Dutch, French, and other Spanish traders and navigators sighted and charted the island and gave it various names on their maps. In 1815, the last Manila Galleon, the Spanish frigate *San Fernando de Magallanes* charted the island as ‘Isla Rasa’ [the flat island], and the name stayed.<sup>1</sup> While recognizing the existence of the island on their maps, however, the Europeans did not take any measures to claim the island.

It was Okinawa prefecture that put the first flag on Daitō Islands. In 1885, the Meiji government ordered the newly created Okinawa prefectural government to survey the three Daito islands. Six researchers were dispatched, along with the prefectural governor, who erected a flag. Private businessmen flocked to the Okinawa governor, pleading for the right to explore the islands. After fierce competition, a businessman and explorer named Tamaoki Han’emon won the privilege.<sup>2</sup> Rasa Island was officially incorporated into Japanese territory in 1900.

Why were these islands of such great interest? It was because of seabirds, the short-tailed albatross called “fool birds” [ahōdori] in Japanese as they are extremely easy to capture. Some entrepreneurial Japanese discovered, as soon as Japanese ports were opened up for trade with the West, that short-tailed albatross feathers could be

sold for a high price to Westerners who fetishized feather bedding and adored decorative feather ornaments and stuffed birds. Tamaoki was one of them. He made a fortune out of the Hachijōshima islands, Torishima, and other small islands in the 1890s, where the birds were hunted in the scale of millions, to the point of near extinction within a few decades.<sup>3</sup> Tamaoki developed sugarcane plantations on Minami Daitōjima and Kita Daitōjima for Tōyō Seito 東洋製糖/Dai Nippon Seitō 大日本製糖. Dai Nippon Seito later also extracted alumina for aluminum production, using its byproduct, ammonia sulphate, for chemical fertilizer for its sugar plantations in Okinawa and Taiwan. Rasa Island did not become a settler colony. As a result of fierce competition among explorer profiteers, a different kind of entrepreneur eventually won the privilege of monopolizing Rasa Island. This was not for seabirds; it was for something else that the island had — high-quality phosphate deposits called Guano, made of seabirds’ fossilized excrement.

Rich in all three essential soil nutrients — nitrogen (N), potassium (K), and phosphorus (P) — Guano had been a well-recognized fertilizer throughout human history but came to be especially valued in the 19<sup>th</sup> century. As such, seabird droppings were a powerful historical agent. It moved the US Congress to establish a law, the Guano Islands Act of 1856, resulting in what Jimmy Skaggs called “The Great Guano

Rush”: a large number of Americans raced across the Pacific and claimed more than 100 islands as US territories under the 1856 Act, creating a new type of territory termed the “insular area.”<sup>4</sup> Guano also caused a war between Spain and the Peruvian-Chilean alliance (the Chincha Islands War, 1864-1866) and the War of the Pacific (1879-1883) between Peru and Chile. After this war, Chile, the winner, became the world’s largest exporter of nitrate.<sup>5</sup>

Meiji Japan too relied on Chile for nitrate (Chile saltpeter/*salitre*), and its import was costing the nation as much as 5 million yen a year. In order to find a domestic alternative, the Meiji government established the Fertilizer Mineral Research Institute in 1901 and searched for phosphate ore all over the country. Its first director, Tsunetō Norikata (1857-1939), discovered that Rasa Island was a “gold” mine for phosphate. Tsunetō was one of the first recipients of a doctorate in agricultural sciences in Japan. A graduate of Komaba Agriculture College, Tsunetō had collaborated with Max Fesca, a German agronomist, in surveying soil and geology in Japan.<sup>6</sup> When the Fertilizer Mineral Research Institute was closed only two years later, Tsunetō decided not to seek another position and instead to “devote my own meager savings to find phosphate ore in southern islands (南方諸島) for the future of Japanese agriculture.”<sup>7</sup> “Imagine if and when phosphorous imports are terminated for whatever reason. Our

farmers would forever suffer from the lack of fertilizer,” Tsunetō reasoned.<sup>8</sup> One of the first things Tsunetō did was to send a team of researchers to Rasa Island. The 1907 expedition came back with a good report: Rasa Island had exceptionally good quality phosphorus rocks that contained more than 30% phosphate. After fierce competition and negotiation over the right to explore the island, Tsunetō and one of his competitors, Kuki Monshichi, agreed to jointly invest in the development of the island. Kuki, an affluent merchant who ran a fertilizer and vegetable oil business in Yokkaichi, had earlier attempted but failed to claim the island. In 1911, Rasa Island Phosphate Company was launched, with Tsunetō as the president and Kuki as the largest investor (it changed the name to Rasa Industry Inc., in 1934). This was a big deal, as Rasa Island was virtually the only place in Japan proper that had phosphorus rocks whose quality was good enough to compete against imported phosphate.<sup>9</sup>

Development of the island was slow and difficult. Frequent typhoons and steep, rocky shorelines made the voyage dangerous and sometimes impossible to berth. When they first reached the island, it was covered with thick trees, its surface buried under layers of fallen leaves. Clearing for roads was a laborious task requiring setting fire and burning trees. Transporting equipment, food, and other necessary items by ship and on the island took

time. The island produced no drinkable water, which also made settlement extremely challenging. Rails, a simple pier, housing facilities, and storage spaces were eventually built, and phosphate rocks began to be dynamited, extracted, and transported to the storage facility in Osaka, but the company encountered an obstacle. Mitsui, which was the major distributor of imported phosphate, attempted to obstruct the business of the newcomer in the industry, by orchestrating a boycott.<sup>10</sup> The Rasa Phosphate Company's early days were, in the words of Tsunetō, "utterly miserable, as if we were destined for a tragedy."<sup>11</sup>

After tenacious toiling on the island and persistent negotiation with the fertilizer companies, things began to take a turn for better soon. By 1913, Rasa Phosphate Company was selling phosphate to major fertilizer producers such as Japan Artificial Fertilizer Company and operated its own small fertilizer factory in Tokyo. With the prospect of sustainable business in sight, the company expanded infrastructure on the island. The 1919 publication by Rasa Phosphate Company, *The Authentic View of Rasa Island*, lists an impressive array of facilities: pit railways and roads that extended in multiple directions, four piers, a water tank, a hospital, a Shinto shrine, a police station, a bath and bathrooms, several housing complexes for workers, miners, and farmers, an agricultural field large enough to be self-sufficient, and

more.<sup>12</sup> A radio mast and a weather observation tower were added (built by the government), after two company ships were sunk by typhoons. Many buildings and facilities on the island were repeatedly destroyed by typhoons as well, but the company managed to rebuild them each time and made them stronger. With this expanded infrastructure, phosphate production and sales dramatically increased. In 1911, Rasa Island had shipped out 10,000 tons of phosphate rocks.<sup>13</sup> By 1918, the annual sale of phosphate reached 182,624 tons.<sup>14</sup> It was soon shipping out 200,000 tons of phosphorus rocks annually at this time, providing one third of Japan's domestic needs.<sup>15</sup> Rasa Phosphate Company also diversified its business by absorbing Osaka Sulfuric Acid Company and selling chlorine, sulfuric acid, and soda. Its growth was so remarkable that a 1920 stock advice book listed Rasa Phosphate as one of "the twenty seven company stocks one should buy."<sup>16</sup>

Much of this growth had to do with WWI. When the Great War broke out in Europe, Japan's fertilizer imports ceased and its need for domestically produced fertilizers increased. The rice riots of 1918, triggered by the Siberian Intervention, caused domestic fertilizer needs to soar even higher. As the phosphate business grew so large and lucrative, Rasa Phosphate sent five expedition teams to the Spratly Islands in the South China Sea in search of more phosphate ores and began digging in Itu Aba Island.<sup>17</sup> The

so-called “fertilizer boom,” however, ended abruptly at the end of 1920. With the return of European companies, the fertilizer market became too competitive and collapsed suddenly. Rasa Phosphate went into debt, and mining at the island stopped in 1922.

It was another war that boosted its business again. After drastic structural and managerial adjustment, the company finally freed itself of debt and changed its name to Rasa Industry in 1934. The following year, it resumed Rasa mining. But with the war in China, it grew to be a major, multifaceted chemical company. In 1939, it built a large refinery in Miyako City, Iwate Prefecture, where the tall chimney became — and remains to this day — the city’s signature. Metals and coals from Tagawa Coal Mines, Taiei Gold Mine (Korea), Kera Mine (Okinawa), Taio Mine (Sado), and Tarō Mine (Iwate) that Rasa Industry acquired over these years were transported to the Miyako factory.<sup>18</sup>

Rasa Island was (and still is) owned by Rasa Industry. It was a company town on an island. As many as 2000 people — all employees and laborers shipped by the company — lived on this island of rocks at one time. The small minority were company employees —men and women — sent from the Tokyo and Osaka offices and their families. The majority were miners. Initially, all miners were recruited from inner prefectures. However, they all “complained and demanded a return home” after bad weather and high ocean

waves destroyed the supply of drinking water and food. The company therefore recruited a second group from coastal areas of Shikoku, Kyûshû, Ogawasara Islands, and Izu Oshima Island, assuming they would be better accustomed to life on an island.<sup>19</sup> From 1913 onward, however, the company adapted a policy of recruiting miners from Okinawa and opened a recruitment office in Naha. While Tsunetô explained the reason to be “their excellent work performance,” most likely it was because of cost.<sup>20</sup> The company not only transported new recruits by ship to the island but also needed to evacuate them and bring them back in time of emergency, such as an unusually long spell of no rain that dried up the island’s drinking water supply completely.<sup>21</sup> As Tsunetô repeatedly claims in the 1919 company publication, such measures were very costly. It is also likely that Okinawan miners were paid less than Japanese counterparts. The 1919 publication does not mention specific wages and describes labor relations on the island as rather peaceful, but we can detect signs of dissatisfaction, such as the 1914 revolt by Okinawan laborers against Japanese office workers and police.<sup>22</sup>

Number of miners on Rasa Island<sup>23</sup>

	Okinawan	Japanese from <i>naichi</i>
1911	0	160
1912	290	120
1913	320	120
1914	384	120
1915	750	170

1916 1370 180  
 1917 1500 190

As late as winter 1944, about three hundred Rasa Industry employees and miners were mining what little was left on the island. By then, the island, once covered by lush greens, was reduced to “a skeleton, left over, that is ghostly.”<sup>24</sup> It is hard to believe the Imperial Army and Navy in April 1944 sent 220 officers and soldiers to this small island with little phosphate deposit left, with the “gyokusai” military order to commit suicide rather than surrender in the event of battle. Seeing the island on the map helps to understand why. It is located between Okinawa and Iwo Jima, on the route along which US ships were expected to advance. Evacuation of miners and office workers began in April 1944, but it was as late as January 22, 1945 that all civilian residents were evacuated to Amami Island. A memoire written by then Lieutenant Morita Yoshio, commander of the Rasa garrison, describes in detail the difficult lives of his troops on the isolated island with virtually no communication from Okinawa or Tokyo while facing repeated attacks by the US Navy. The garrison unit survived the war and handed the island peacefully to the US on October 12, 1945.<sup>25</sup>

While Rasa Island is unique, the company’s trajectory is a typical one for Japanese chemical fertilizer producers — established in the 1910s,

became profitable during WWI, and expanded through colonial development and war economy in the 1930s and early 1940s. Rasa Industry was a phosphate fertilizer company, but nitrogenous fertilizer companies such as Nihon Chisso fit this trajectory as well.

Despite its peripheral location, Rasa Island has witnessed, experienced, and enabled Japan’s rapid industrialization contingent on the expansion of Japanese capital and territorial acquisition in the context of empire building. After 1945, it experienced the rise of another empire. Rasa Island, together with Okinawa and other surrounding islands, were placed under the American rule. The island has been and still is a training site for the US Navy for large force exercises, enduring the latest bomb and anti-sub technology. That is, the island is also a witness to important postwar changes: the development of military expansion of what Chalmers Johnson called the American garrison empire, and Japan’s joint military training with the US, as well as Okinawa’s sacrifice in exchange for Japan’s economic prosperity.

## WHAT INDUSTRIALIZATION?

In other words, Rasa Island is a site of Japan’s industrialization as powerful as — and in many ways richer than — the “Sites of Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining,” inscribed on the UNESCO World Heritage List in the summer of 2015. Composed

of 23 sites in Kyushu, Iwate, and Shizuoka, these sites, according to the UNESCO web page, “represent the first successful transfer of industrialization from the West to a non-Western nation.”<sup>26</sup> They include Yawata Steel Works, a few oyatoi (foreign advisor) engineers’ houses, Mitsubishi shipbuilding yards, and Miike and Hashima coalmines. Controversy surrounding this World Heritage inscription is still fresh in our memories: South Korea criticized the inclusion of Hashima and six other sites, where some 60,000 Koreans were forced to work during wartime. The Japanese government defended its nomination by insisting that the World Heritage inscription only concerned the period from the 1850s to 1910, not the 1940s. At the end, the Korean government conceded when Japan promised to include a description of wartime Korean forced labor at the site, and UNESCO officially inscribed the industrial ruins as World Heritage Sites.

As previously discussed by Takazane Yasunori and William Underwood at *Japan Focus* the periodization singling out the 1850s to 1910, is awkward and problematic. Awkward because the Meiji period did not end in 1910. Problematic, not only because the year 1910 seems to have been chosen to prevent the 1910 Annexation of Korea from entering the picture, but also because it does not represent Hashima’s development adequately. As Takazane points out:

“the very fact that Hashima began to resemble a

battleship from afar – and thus acquired its famous nickname of Gunkanjima or Battleship Island – was due to the high-rise buildings on the island, even the oldest of which was built only in 1916. There are no pre-1910 buildings on the island today that could be added to the World Heritage Register.”<sup>27</sup>

Koreans were not the only victims of wartime forced labor. Underwood reminds us that nearly 40,000 Chinese men and boys, and 35,000 Allied POWs, were forced to work in 1943-1945; the majority labored in Kyūshū, such as Moji port facilities, also part of the Meiji Industrialization World Heritage sites.<sup>28</sup>

What is also intriguing is the inclusion of Hagi Castle Town and Shōkasonjuku as industrial heritage sites. If the time frame of the 1850s to 1910 is as definitive as the Japanese government insisted, Hagi Castle Town has little to do with the Meiji Industrial Revolution. The castle town flourished as the political and commercial center of the Chōshū domain during the Tokugawa period. Hagi Castle, built in 1608, was taken down after the Meiji Restoration, like many other castles throughout Japan, as useless remnants of the feudal time and has never been rebuilt. Designated as a national historic heritage site and well preserved, the town attracts many tourists because of the buildings, warehouses, and streets that retain their appearance from the Tokugawa period. The website provides a brief explanation in English, “Castle Town provides the essential

context for the birth of Japanese industrialization, without which the speed and extraordinary nature of Japanese industrialization would be difficult to comprehend.” This makes an informed reader wonder why Hagi was “the” essential context, not others. Its Japanese text is different. It is more modest and bolder at the same time than the English text: “Hagi Castle Town symbolizes the social structure of the feudal period, at the end of which the Chōshū domain and its samurai challenged Western science [author’s translation],” as if it were Chōshū samurai who industrialized Japan. Did we forget that this castle town was the site of a large uprising by ex-samurai — the Hagi Rebellion of 1876 — against the Meiji government’s modernization policy? While there is no denying of the significance of Chōshū samurai for the Meiji Restoration, the fact remains that Hagi Castle Town is not and has never been an industrial site. Shōkasonjuku, located at the edge of the castle town, was not an industrial site either. Its listing as a Meiji industrialization site is justified by the promotional committee as “a private school which produced many of the key figures in Japan’s modernization and industrialization at the end of the 19<sup>th</sup> century.” The webpage that used to exist was indeed all about Yoshida Shōin: “Shōin was only able to teach for less than three years. . . but during that time, 90 students studied there. Shōin devoted himself to educating young Japanese and was recognized at the end of the

Edo Period as one of the most influential intellectuals in Japan.”<sup>29</sup> This page is now replaced by a much shorter text, “Many of his students became key figures in the Meiji Restoration and drove the subsequent political and industrial modernization of Japan.”<sup>30</sup> Yoshida was a strong proponent of Japan’s eventual colonial expansion, which his student Ito Hirobumi dutifully followed. However, as has been pointed out, the website makes no mention of this aspect of his teaching and solely focuses on his promotion of the adaption of western science and technology. As it happens, Yamaguchi Prefecture is a hometown of influential politicians such as Prime Minister Abe Shinzō; his registered residence remains in Yamaguchi Prefecture where his renowned maternal and paternal grandparents were from. It is fair to say that the UNESCO inscription of these sites has a lot to do with Yamaguchi native politicians wanting to bring to their hometown economic benefit and international recognition expected from World Heritage inscription. As Underwood argues, “A primary goal of the UNESCO bid, in fact, may be to provide a vehicle for repackaging and retelling modern Japan’s story to the Japanese themselves. If badly handled, the World Heritage listing could degenerate into a boastful nationalistic project for rehabilitating the domestic narrative not only about forced labor in wartime Japan, but also about Imperial Japan’s aims and actions across the Asia Pacific.”<sup>31</sup>



In the narrative put forth by Japan's Department of Industrial Heritage, the protagonists of Meiji Industrialization were the samurai from Chōshū and foreign engineers and businessmen they hired. No laborers appear. When the promotion committee for the UNESCO inscription had the website explaining the values of the Meiji Industrial Revolution Sites, it at least contained a few pages describing the hard labor of (Japanese) miners. Now the website has been replaced by one created by the Cabinet Secretaries Office, and even those few pages are gone.

Upholding the Meiji Restorationists and "their" industrialization by skipping the wartime period is a political act, for it determines the historical narrative of modern Japanese history. The interpretation of the Meiji period carries a heavy weight in Japanese historiography. As Laurajane Smith asserts, "heritage is a multilayered performance — be this a performance of visiting, managing, interpretation or conservation — that embodies acts of remembrance and commemoration while negotiating and constructing a sense of place, belonging and understanding in the present."<sup>32</sup> Performative function of the two Hagi sites — the symbol of the Chōshū legacy — indeed needs to be recognized; it overlaps Chōshū and the nation, displays the heroic and linear narrative of the nation/Chōshū, and enforces a direct connection between the Meiji Restoration and present-day Japan. Left out are anything that happened in

between, notably laborers and their exploitation, larger and deeper contexts of Japanese industrialization, and Japan's expansive empire.

The absence of laborers and the celebratory connection between the Meiji industrialization and present-day Japan is also apparent in the official representation of the "Tomioka Silk Mill and Related Sites," inscribed on the UNESCO World Heritage list in 2014. UNESCO describes the value of the Tomioka Silk Mill and Related Sites as illustrating "Japan's desire to rapidly access the best mass production techniques," demonstrating "a model that enshrined Japan's role in the global raw silk market at the beginning of the 20<sup>th</sup> century," and bearing "witness to the early advent of a shared international culture of sericulture."<sup>33</sup> The website created by the prefectural office is primarily about technologies imported and improved in the Meiji period, such as the unique brick layering pattern, French machines and engineers, and so on. The only woman worker mentioned on the website is Wada Ei, daughter of a former samurai in Matsushiro, Nagano, who became a well-known silk-reeling instructor and engineer director at another silk factory. Wada was among the first recruits of silk reelers that the government specifically sought from established families in order to demonstrate the safe and respectable work environment to future female workers. As we know, these women were quickly replaced by daughters from poor

families, who made up the majority of industrial workers in Japan during the Meiji period. There is no mention of these “factory girls” on the Tomioka Silk Mill web page.

One may say silk, iron and steel, shipbuilding, and coal mines commemorated at the Meiji Industrial Revolution Sites and the Tomioka Mill are representative of Japan’s industrialization that began in the Meiji period. One may also think that Japanese ingenuity and die-hard efforts to catch up led to the successful and rapid industrialization, as emphasized on those websites. These assertions are not entirely wrong but myopic. The story of Rasa Island gives us a different story.

First, the Rasa Island story reminds us that Japan’s industrialization could not be understood without its colonial expansion. Uninhibited and territorially undeclared, the Daitō Islands’ colonization cannot be compared to that of Korea or Taiwan. However, the islands, together with numerous other islands in the Pacific, were colonized, settled, and exploited by Japanese entrepreneurs for the purpose of extracting resources for Japan’s industrialization. One should also remember the colonization of Okinawa and Hokkaido in the Meiji period. Phosphate in Rasa Island could not have become fertilizer for Japanese farmers without thousands of Okinawan laborers working there, whose migratory labor was a sad consequence of the Meiji colonization of Okinawa. Industrialization

required access to inexpensive raw materials, energy resources, and the market that colonies and informal colonies provided; development of industrial capitalism went hand in hand with imperial expansion, as eloquently narrated in Hobsbawm’s *Age of Capital*.<sup>4</sup> Japan’s industrialization was no exception.

Second, Rasa Island also reminds us that wars were central to industrialization. The Meiji wars, the Sino-Japanese War and the Russo-Japanese War, are missing from the website information on the Meiji Industrial Revolution for whatever reason, but economic historians know well how much Japan’s heavy industrialization depended on the indemnity from the Sino-Japanese War and Japan’s expansion as a result of the Russo-Japanese War, in addition to the sheer fact that military needs boosted the business of the mining, shipbuilding, iron and steel industries. Needless to say, the role of the Great European War and the Asia-Pacific War needs to be firmly acknowledged in the story of Japan’s industrial development, as exemplified by the Rasa Industry’s history. WWI played a pivotal role because the absence of European products provided a strong impetus and protection for Japanese industries. Rasa Industry’s sale went drastically up during the Great European War, and so did demands and sales for other businesses in the industrial sector in Japan. It was during WWI that the Japanese government implemented various measures to promote the

development of key industries, R&D infrastructure, and science education that laid the foundation of science and technology in twentieth-century Japan.<sup>35</sup> The crucial role wartime mobilization played in the development of technology and industry has been well established among historians of science and technology since Hiroshige Tetsu's influential works in the 1970s.<sup>36</sup>

Lastly, Rasa Island also reminds us that the chemical industry is often missing in the conventional narrative of Japan's industrialization. Chemical industry is widely acknowledged as an essential industry in the industrial revolution, and this was especially so for Japan, where the first and second industrial revolutions took place almost simultaneously. Economic historians usually date the second period of industrialization between 1870 and 1914. By the end of the nineteenth century, the momentum of early modernizing branches such as textiles, iron and steel, steam engines and railway transport had slowed in the industrially advanced parts of the West. As David Landes describes, it was "the rise of new industries based on spectacular advances in chemical and electrical science and a new, mobile sources of power — the internal combustion engine. . . the cluster of innovations that is often designated as the second industrial revolution."<sup>37</sup> The second industrial revolution involved the changing organization of production, with the economies

of scale powered by hydrogenated electrical power and the emergence of large concerns that invested in not just technology, as was the case earlier, but in new technological *systems*. Electrochemical industry was a vital feature of the second industrial revolution. In Japan, the artificial fertilizer industry propelled this development. It was the cutting edge industry that drove industrialization in Japan and elsewhere in the first half of the twentieth century, alongside of the steel and mining industries monopolized by large zaibatsu that Meiji Industrial Sites enshrines. We can ponder the assessment Barbara Molony gives in her study of the chemical industry in prewar Japan. According to her, it was "prewar technology-intensive industries — many of which were not zaibatsu-related — who pioneered most of the well-known areas of Japan's modern high-tech economy" and "the archetypical prewar high-technology industry" was the chemical fertilizer company.<sup>38</sup>

## WHAT HERITAGE?

It is not fair to say that Japan considers the Meiji Industrial Revolution Sites the only important sites in the country. In 2007, the Ministry of Economy, Trade, and Industry (METI) presented its own list of industrial heritage sites in a report titled "33 Heritage Constellations of Industrial Modernization." The list is interesting, diverse, and historical. It included, among other things, sites of Hokkaido's coal mining, agricultural

development, food processing and pulp industry; mineral and oil mining in the Tohoku region; hotel and recreation industry; brick and cement industries; the Ashio copper mine and its surrounding electric power and transportation system; the Yokohama and Kobe ports; soy source factories along the Tone River; textile factories in Osaka; and Okinawa's sugar cane and Ishigaki's coal mining. Here, dams and hydropower stations along the Kiso and Kurobe Rivers are listed, along with key industries such as fertilizer production and pharmacy, demonstrating a full awareness of the importance of the system, rather than individual sites, of the industrial revolution. The significance of the 1930s and wartime is acknowledged; the Kansai industrial area, for example, is explained in the context of the transition from the light to heavy industry through WWI, the 1930s, and wartime. The electrochemical/fertilizer industry features prominently on the list too, through figures such as Noguchi Shitagau, the founder of Nihon Chisso. Overemphasizing the Meiji Industrial Revolution Sites as the only or even most representative of what Japan considers its Meiji as well as its industrial past would be to deny the diversity and breath of voices and interests that compose a list like the METI's.

The making of this list was part of METI's program to promote local economy, and this is made clear in the first sentence of the report: "To invigorate local economy, it is extremely

important to learn the path of our predecessors and turn it into stimulation for the future. Modernization process from the Bakumatsu to early Showa period is especially and highly significant as the foundation of the present-day 'Japan the great creator' [monozukuri taikoku Nihon] and the roots of major local industries."<sup>39</sup> As the report includes a discussion of how many tourists can be expected from earning the status of heritage sites, METI's initiative clearly is intended to link the preservation of industrial ruins with the promotion of tourism for the declining local economy.

Meiji Industrial Revolution Sites seem to signify this same desire at the national level, the desire to turn the industrial past into the post-industrial future. Ito Yûichirō, the governor of Kagoshima Prefecture who acted as the head of the promotion committee of the Meiji Industrial Revolution Sites for the UNESCO inscription, states that "I headed the promotion committee because Japan needs to have pride as an industrialized country by making clear the pioneering role played by the steel, iron, shipbuilding, and coal mining industries in history. I believe the inscription of [these sites] provides an opportunity to look back at the origins of industrial Japan and to revive Japanese economy once again."<sup>40</sup> Japan is hardly unique in this regard. The UK and the US started registering their industrial sites decades ago. As Smith writes, "In Britain, heritage became

synonymous with right-wing politics and entrepreneurialism, with some commentators associating it with Thatcherite cultural and social control and free market enterprise.”<sup>41</sup>

Ever since the first inscription was made in 1978, the World Heritage Sites list has grown exponentially. By 1990, the list contained 335 sites, prompting heritage scholar David Lowenthal to call the landscape “saturated with ‘creeping heritage.’”<sup>42</sup> As of 2016, there are 1052 properties on the list. Many scholars characterize this ubiquity of heritage — not only World Heritage Site but also museums and local heritage destinations — as a distinctive phenomenon of late-modern globalization.

Rodney Harrison, scholar of critical heritage studies, has aptly summarized this: “Heritage had shifted from a process of the production of a public sphere in the eighteenth century to one of nation-building in the nineteenth and twentieth, to become concerned largely with the management of redundancy and waste in the late twentieth and early twenty-first centuries.”<sup>43</sup> The rise of industrial heritage sites in the late twentieth century is certainly a reflection of how far our society has been removed from the industrial revolutions. Deindustrialization rendered various industrial sites obsolete and more suitable for museum exhibits. What to do with this material excess of ports, factories, shafts, and so on that have no use any longer? A more flexible form of capital accumulation in late

capitalism has made heritage tourism an attractive industry, leading to an expansion of heritage sites beyond ancient buildings and national parks. Gaining the recognition of “heritage sites” makes those redundant and waste re-usable again, as an attractive tourist destination. In this context, as Harrison maintains, World Heritage became the most marketable brand, rendering the “World Heritage Emblem” a sought-after marking logo.<sup>44</sup>

For non-Western countries trying to get on the UNESCO list, giving meaning to those ruins has an additional task. Unlike Ironbridge Gorge, Cornwell and West Devon Mining Landscape, and Albert Dock in Liverpool in the UK, which easily made it into the inscription list as exhibiting the “universal value” of human civilization, non-Western late industrializers would have to justify why mines and docks in their countries are not just more of the same, mere duplicates of the West. One of the most important factors behind the rise of World Heritage Sites is the attempt to overcome what Laurajane Smith calls Authorizing Heritage Discourse (AHD), specifically Euro-centrism inherent in UNESCO World Heritage Committee selection. Because the World Heritage enterprise is based on the “universal values” initially conceived by the West and management requirements overseen by mostly Western or Westernized experts, its operations continue to reinforce Euro-centric views of what should be

marked as heritage of the world. Criticisms, protests, and movements by indigenous heritage activists, critical heritage scholars, and non-Western representatives in the 1980s led to adjustments of the criteria. As the door widened, more non-Western countries sought the World Heritage Emblem, although still almost half of the World Heritage Sites remain located in Europe.<sup>45</sup> Japan's vigorous attempts to get Meiji industrial sites took place in this context. Ultimately, however, the inscription of the Meiji industrial sites reinforces AHD, through the repeated phrase of the "first successful transfer" of Western industrialization to the non-Western world as its universal value justification. This in fact might be perhaps the only way to get non-Western excess ruins acknowledged under AHD. Additionally, the Meiji industrialization sites needed to add another layer of meanings in order to accentuate their universal yet *unique* significance, that is, how those sites led to Japan's prosperity and contribution back to the world. Here, there is no space for acknowledging Japan's exploitation of colonial labor or wartime aggression. None of the World Heritage Industrial Sites in Europe in fact acknowledge those things. By joining AHD, the Meiji Restoration story can be told, and can only be told, in an equally triumphant and unreflective way as AHD has done.

Rasa Island exhibits a universal story of modernization and industrialization from its first

sighting to exploitation. It shows that the rise of mercantilism and imperialism authorizing conquering of the sea and new lands, the exploitation of nature and human labor, modern colonialism that justified this system of exploitation, and the central role of wars and militarism were not just a "dark side" of the history that should be added to the mainstream history for a moral or political purpose but were rather *integral* to the history of industrialization. The Meiji Industrial Revolution Sites emphasize that the first successful transfer of Western industrialization took place in Japan. Rasa Island also shows the successful transfer of colonization, exploitation, and industrialization took place in Japan as Japan was integrated into the modern system of commerce, empire, and international politics. It is not a glorious history. In contrast to steel, coal, and shipbuilding that could easily be linked to "Japan as No. 1" of the postwar period, Rasa Island could only tell Japan's story of seabird slaughtering for profit, fertilizer exploitation for the condemned empire, inexpressible sacrifice of Okinawa, and defeat and subjugation to the US. In terms of the myopic line the World Heritage Sites attempt to establish between the Meiji Restoration and today's Japan, Rasa Island has exhausted its industrial utility as well as recyclable utility for post-industrial Japan. But historians' job is to keep telling stories so that these forgotten sites could come out of abandonment and into the light of history and tourism. Criticism and tensions do produce

dialogue. Criticism against Gunkanjima and the wartime underground tunnels did get people involved in discussing what is to be remembered and what is to be neglected. It is my hope that numerous abandoned places such as Rasa Island will encourage questioning about what is being forgotten through abandonment. Lowenthal once wrote that “Heritage in Britain is said to reflect nostalgia for imperial self-esteem, in America to requite angst for lost community, in France to redress wartime disgrace, in Australia to supplant the curse of European regency with indigenous antiquity.”<sup>46</sup> In Japan, I would say, heritage is to confirm Japan’s place in the world by insisting on its membership in Euro-centered universality, at a time when its post-industrial condition weakens the nation’s standing in world geopolitics.

## SPECIAL FEATURE

### Remembering Japan’s Industrial Development, Preserving its Dark Heritage

Edited by Hiromi Mizuno with Tze M. Loo

Tze M. Loo, Japan’s Dark Industrial Heritage: An Introduction  
(<http://apjff.org/2017/01/Loo.html>)

Miyamoto Takashi, Convict Labor and Its Commemoration: the Mitsui Miike Coal Mine Experience (<http://apjff.org/2017/01/Miyamoto.html>)

Jung-Sun Han, The Heritage of Resentment and Shame in Postwar Japan  
(<http://apjff.org/2017/01/Han.html>)

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## Notes

<sup>1</sup> Bernhard Welsch, “Was Marcus Island Discovered by Bernardo de La Torre in 1543?,” *The Journal of Pacific History* 39, no. 1 (2004): 109–22.

<sup>2</sup> Takara Kurayoshi, “The Senkaku Islands Problem as Seen Through Okinawan History,” *Challenges for Japan-China Relations and Okinawa* (March 2013), 100-101.

<sup>3</sup> Hiraoka Akitoshi, *Ahodori to teikoku nihon no kakudai* (Tokyo: Akashi shoten, 2012), 70-83.

<sup>4</sup> Jimmy Skaggs, *The Great Guano Rush: Entrepreneurs and American Overseas Expansion* (New York: St. Martin’s Press, 1994). According to Hiraoka Akitoshi, seabirds and their excrements also drove Japan’s colonial expansion to the South Pacific. See Hiraoka, *Ahodori to teikoku nihon no kakudai*.

<sup>5</sup> Gregory T. Cushman, *Guano and the Opening of the Pacific World: A Global Ecological History* (New York: Cambridge University Press, 2013) and Michael Monteón, *Chile in the Nitrate Era* (Madison: University of Wisconsin Press, 1982).

<sup>6</sup> Sato Hiroyuki, “Tsunetō Noritaka to hiriyō kōbutsu chōsasho,” *Chishitsu Nippon*, no. 278 (Feb 1986): 36, 39.

<sup>7</sup> Tsunetō Noritaka, *Yo to rinkō no tankei* (Tokyo: Tokyodō, 1936), 26.

<sup>8</sup> Tsunetō Noritaka, *Rasatō shinkei* (Rasa Rinkō, 1919), no page number.

<sup>9</sup> Rasa kōgyō kabushikigaisha shashi henshūsha, *Rasa kōgyō hachijūnenshū* (Rasa kōgyō, 1993), 18-23; and Hiraoka, 194-5. Tsunetō’s career pattern resembles that of Takamine Jōkichi, internationally renowned chemist-cum-entrepreneur. Takamine worked for the Ministry of Agriculture and Commerce before he established Tokyo Artificial Fertilizer Company in 1877, the first superphosphate works to produce chemical fertilizer in Japan. The company changed its name to Japan Artificial Fertilizer Company in 1910 and became one of the largest chemical companies in Japan, Nissan Chemical Industries. Takamine went on to become one of the most successful Japanese entrepreneurs in the U.S. with the successful isolation and production of adrenaline and amylase that he patented.

<sup>10</sup> Tsunetō, *Rasatō shinkei* 19-21; and Hiraoka, 196.

<sup>11</sup> Tsunetō, *Rasatō shinkei* 15.

<sup>12</sup> Tsunetō, *Rasatō shinkei* 33-39.

<sup>13</sup> Yamada Gentarō, *Rasa tō no ippan* (no publisher information, 1911), 4.

<sup>14</sup> *Rasa kōgyō hachijūnenshū* 36; and Hiraoka, 196-8.



<sup>15</sup> Ishikawa Ichirō, “Superphosphate Industry in Japan,” *Journal of Chemical Industry* 24, no. 281 (July 1921): 63.

<sup>16</sup> Chōfūsō tsurikyaku, *Kaubeki kabu ni juunana shu* (Tokyo: Imai sennosuke, 1920).

<sup>17</sup> *Rasa kōgyō hachijūnenshū* 46-8.

<sup>18</sup> *Rasa kōgyō hachijūnenshū* 59, 84, 92, 95.

<sup>19</sup> *Rasatō shinkei* 18-9.

<sup>20</sup> *Rasatō shinkei*, 4662.

<sup>21</sup> *Rasatō shinkei* 48.

<sup>22</sup> *Rasatō shinkei*, 52.

<sup>23</sup> *Rasatō shinkei*, 73.

<sup>24</sup> Morita Yoshio, *Rasatō shubitai ki: gyokusai wo kakugoshita heishitacih no ningen dō* (Tokyo: Kōjinsha, 2011), 96, 133.

<sup>25</sup> Morita, *Rasatō shubitai ki* The original was published in 1995 by Kawade shobō.

<sup>26</sup> UNESCO World Heritage Centre, “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining,” (<http://whc.unesco.org/en/list/1484/>) [last accessed September 28, 2016]

<sup>27</sup> Takazane Yasunori, “Should ‘Gunkanjima’ Be a World Heritage site? The Forgotten Scars of Korean Forced Labor,” (<http://apjif.org/2015/13/28/Takazane-Yasunori/4340.html>) *Japan Focus* Vol 13, issue 28 (July 13, 2015).

<sup>28</sup> China and advocates for former American and British POWs also complained about the nomination of these sites to World Heritage without acknowledging this negative page in history. William Underwood, “History in a Box: UNESCO and the Framing of Japan’s Meiji Era,” (<http://apjif.org/2015/13/26/William-Underwood/4332.html>) *Japan Focus* Vol. 13, Issues 26, Number 1 (June 2015).

<sup>29</sup> “Shokasonjuku Academy,” ([http://www.kyuyama.jp/e/kyushuyamaguchi/ky\\_hagi\\_05.html](http://www.kyuyama.jp/e/kyushuyamaguchi/ky_hagi_05.html)) *Sites of Japan’s Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas* [last accessed March 20, 2016]. This webpage has been replaced by a new web page created by the Japanese government’s Department of Industrial Heritage under Cabinet Secretariat.

<sup>30</sup> Department of Industrial Heritage, Cabinet Secretariat, “Shokasonjuku Academy,” *Japan’s Meiji Industrial Revolution*. Last accessed on Sept 11, 2016.

<http://www.japansmeijiindustrialrevolution.com/en/site/hagi/component05.html>

- <sup>31</sup> Underwood, "History in a Box."
- <sup>32</sup> Laurajane Smith, *Uses of Heritage* (London and NY: Routledge, 2006), 3.
- <sup>33</sup> UNESCO, "Tomioka Silk Mill and Related Sites," *World Heritage Centre*, last accessed Sept 28, 2016, <http://whc.unesco.org/en/list/1449>
- <sup>34</sup> Eric Hobsbawm, *Age of Capital: 1848-1875* (London: Little, Brown, and Company, 1975, 1995).
- <sup>35</sup> James Bartholomew, *The Formation of Science in Japan: Building a Scientific Tradition* (New York: University Press, 1993); and Hiromi Mizuno, *Science for the Empire: Scientific Nationalism in Modern Japan* (Stanford University Press, 2009).
- <sup>36</sup> For example, Hiroshige Tetsu, *Kagaku no shakaishi* (Tokyo: Chûō kōronsha, 1973).
- <sup>37</sup> ed. (Cambridge, UK: Cambridge University Press, 2003), 4. See also Joel Mokyr, "The Second Industrial Revolution, 1870-1914," in *The Lever of Riches: Technological Creativity and Economic Progress* (New York: Oxford University Press, 1990).
- <sup>38</sup> Barbara Molony, *Technology and Investment: The Prewar Japanese Chemical Industry* (Cambridge, Mass: Harvard University Press, 1990), 2-3.
- <sup>39</sup> Ministry of Economy, Trade, and Industry, "33 Heritage Constellations of Industrial Modernization" (2007) and "Zoku 33 Heritage Constellations of Industrial Modernization" (2008). The quote is in the first page of both 2007 and 2008 reports.
- <sup>40</sup> Sangyō isan kokumin kaigi, "Sangyō kokka nihon no genten: 'Meiji nihon no sangyō kakumei isan' o jisedai he," *Nyūsu letaa*: 4.
- <sup>41</sup> Smith, *Uses of Heritage*: 39.
- <sup>42</sup> David Lowenthal, *The Past is a Foreign Country* (Cambridge, UK: Cambridge University Press, 1985), xv.
- <sup>43</sup> Rodney Harrison, *Heritage: Critical Approaches* (NY: Routledge, 2013), 81.
- <sup>44</sup> Harrison, *Heritage*: 89.
- <sup>45</sup> Forty-nine percent, to be precise. See UNESCO, "World Heritage List Statistics," (<http://whc.unesco.org/en/list/stat/#d3>) *World Heritage Centre*, last accessed December 12, 2016.
- <sup>46</sup> David Lowenthal, "The Heritage Crusade and Its Contradictions," in *Giving Preservation a History: Histories of Historic Preservation in the United States*, eds. Max Page and Randall Mason (NY: Routledge, 2004), 14.