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Contents

Engineering Japanese Settler Colonialism in Hokkaido
A Postcolonial Reevaluation of William Wheeler's Work for the *Kaitakushi*

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In 1876, the *Kaitakushi*, the Japanese government agency responsible for the settlement of the northern island of Hokkaido, hired three Americans from Massachusetts Agricultural College: William Smith Clark, William Wheeler and David Pearce Penhallow. Their task was to establish a comparable institution in Hokkaido, Sapporo Agricultural College, that would spread American-style scientific agriculture among new settlers. Although recent historical research has highlighted the colonial nature of the modern settlement of Hokkaido and other American advisors' role in transmitting modern technologies of settler colonialism, the tenure of these three professors has never been examined from a postcolonial perspective. This article will investigate the writings of engineer William Wheeler, who served as president of the new college for several years and advised the *Kaitakushi* on numerous infrastructure projects, to look for clues about his attitudes towards and role in Japanese settler colonialism in Hokkaido. Textual evidence reveals Wheeler's awareness of and complicity in this undertaking.

Keywords: William Wheeler, Sapporo Agricultural College, Hokkaido, settler colonialism, *Kaitakushi*, *oyatoi gaikokujin*

For years, there was a general consensus that Japan's modern colonial expansion began with 1895 acquisition of Taiwan, but recently, an increasing number of scholars have emphasized the importance of moving the date earlier to the advent of Japanese settler colonialism in Hokkaido (Siddle, 1996; Medak-Saltzman, 2008; Mason, 2012; Inoue, 2013). In 1868, immediately following the Meiji Restoration, the new Japanese government created the Kaitakushi, a colonial development agency in charge of systematically settling Hokkaido with Japanese farmers and exploiting its natural resources. From its inception, the Meiji government devoted extensive resources to the colonization of Hokkaido for three reasons. Strategically, they wanted to solidify their claims to the territory to create a northern buffer zone against Russian encroachment. Economically, they were drawn by the island's abundant resources, particularly coal, timber, fish and farmland. Finally, they saw the colonization of Hokkaido as a way to demonstrate that Japan was a 'modern' and 'civilized' country to the West, where colonial expansion was a key marker of prestige (Medak-Saltzman, 2008; Mason, 2012).

While this plan promised great benefits for Japan, the island's indigenous Ainu people were increasingly dispossessed of their land and livelihood as the Japanese adopted modern settler colonial techniques from Western colonial powers, especially the United States. Japanese leaders were inspired by the exam-ple of American settler colonialism during diplomatic trips there. Moreover, they believed that depicting Hokkaido as Japan's 'Wild West' would win goodwill in a country that was still considered a threat 15 years after American gunboats 'opened' Japan. This campaign was ultimately successful, with the American press soon fondly referring to the Japanese as 'the Yankees of the Pacific' (Medak-Saltzman 2008; Duus 1995, p. 431). Although Hokkaido is seldom thought of as a 'colony' in present-day Japan, viewing its history through a postcolonial lens is an important intervention for at least two reasons: it foregrounds the history of the Ainu, which has long been obfuscated in a heroic 'pioneer' master narrative, and it demonstrates that Japanese colonialism debuted directly after the Meiji Restoration, making Japan's modern nation and empire-building simultaneous processes (Mason, 2012, p. 3).

In 1876, three Americans from Massachusetts Agricultural College (MAC – today's University of Massachusetts, Amherst) were hired by the Kaitakushi to establish a comparable institution in Hokkaido, Sapporo Agricultural College (SAC – today's Hokkaido University). William Smith Clark, a charismatic figure and the founding president of both colleges, has become legendary in Japan, in large part because many of his students went on to become important leaders in different fields. Engineer William Wheeler and Botanist David Pearce Penhallow assisted him and each served in turn as president of the college after Clark's

departure. Although the role of other American employees of the Kaitakushi in Japan's colonization of Hokkaido has been studied (Medak-Saltzman, 2008; Yaguchi, 1999) and the later colonial history of SAC has also been explored (Inoue, 2013), the colonial role of these three American college presidents has never been investigated in any detail.

Since he served as president for far longer than Clark and Penhallow and concurrently undertook major surveying and infrastructure projects for the Kaitakushi during his tenure, Wheeler arguably did more for both the development of SAC and the colonization of Hokkaido than his colleagues. Wheeler is the subject of a book-length biography by Takasaki Tetsurō, published first in Japanese and later translated into English, and of a chapter in Masao Watanabe's book on Western science teachers in Japan (Takasaki, 2009; Watanabe, 1976, pp. 330-342). The first of these suffers from its avowed purpose to prove that Wheeler 'was every bit the equal to, if not better than, William Clark' (Takasaki, 2009, p. 196), and neither considers Wheeler's tenure from a postcolonial perspective. This article fills this research gap by examining the clues that Wheeler left about his attitudes towards settler colonialism in Hokkaido in the voluminous private correspondence he and his wife had with his family, his official correspondence with the Kaitakushi, his contribution to the first annual report of the college and an article he authored on 'Japan's Colonial College' shortly after his return to the United States (Wheeler, 1877a, 1877b, 1878, 1880; WWP). It will reconstruct as far as possible his view of and role in Japan's settler colonialism in Hokkaido to provide an important complement to existing, uncritical biographies.

Biographical Sketch

William Wheeler was born into a prominent family in Concord, Massachusetts in 1851. He was a member of the inaugural class of Massachusetts Agricultural College, majoring in engineering and graduating second in his class in 1871. Wheeler worked at an engineering firm for several years before being invited by MAC President Clark to accompany him to Hokkaido in 1876 (Hudson, 1933, p. 226).
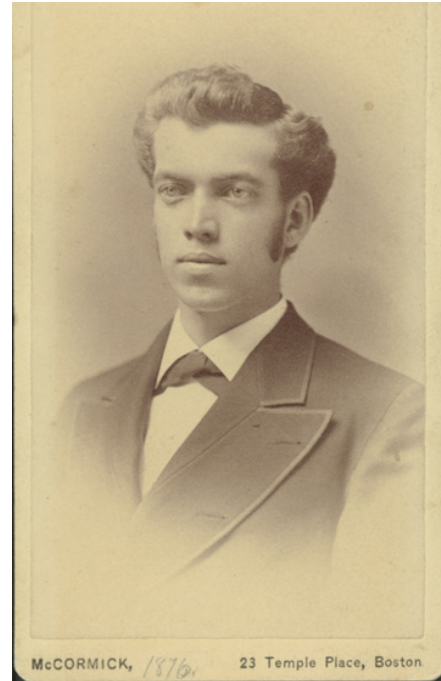
Figure 1: William Wheeler in1876. Photo courtesy of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst.

Despite being kept incredibly busy both as 'Professor of Civil Engineering, Mechanics, Mathematics, and the English Language' and as a civil engineer for the Kaitakushi, his numerous letters home reveal that Wheeler was afflicted by severe homesickness throughout his stay (WWP). Wheeler was so valuable for the Kaitakushi, however, that they induced him to stay until the end of 1879. They even granted him an extended leave of absence in 1878 during which he returned to the United States to marry his fiancée Fanny and purchase equipment and books for the college. Fanny Wheeler

traveled with him back to Hokkaido, where she accompanied him on expeditions and helped him with his engineering work (Fanny Wheeler to Mrs. Wheeler, her mother-in-law, 10 December 1879, WWP). During his tenure, Wheeler served as president of the college after Clark's departure in 1877, but also found time to conduct numerous surveying expeditions for roads and railroads, oversee the rebuilding of the imposing Toyohira Bridge, establish a meteorological station, and advise the Kaitakushi on a wide variety of other questions. He was therefore a significant figure in the Japanese settlement of the island.

Wheeler's good relations with the Kaitakushi were marred shortly after his departure from Japan by the failure of a New York firm to deliver scientific equipment and other supplies that had been ordered by Wheeler and paid for by the Japanese government. Japanese ambassador Yoshida Kiyonari wrote him an angry letter holding him responsible and threatening, among other things, to purchase supplies from other countries in the future (Yoshida to Wheeler, 17 September 1880, WWP). Yoshida even wrote to Clark, asking him to look into the matter and threatening that it 'would naturally reflect badly on yourself' if the incident was not resolved, also cajoling him by calling him 'a true friend of Japan, and its progress' (Yoshida to Clark, 20 September 1880, WWP). Wheeler's reply and the conclusion to this incident are not preserved in Wheeler's official papers, but in 1924, much to his surprise, he was awarded the Order of the Rising Sun, fifth class by the Japanese government. After his return to Massachusetts, Wheeler opened a successful private civil engineering firm, where he worked for the rest of his career. He died in 1932 (Hudson, 1933).

Letters from Japan

Wheeler's letters from Japan to his family, as well as his official correspondence with the *Kaitakushi* during his tenure at the college, provide a detailed record of his life and work in Hokkaido, but there is almost no mention of the Ainu or clues as to his personal view of Japanese colonialism. There are a few indications of his views of American expansionism, however. As described below, Wheeler would later praise the railroad as a vehicle of colonial expansion, but as he traveled across the Transcontinental Railroad to California en route to Japan, he showed little understanding or sympathy for the indigenous residents that the railway had displaced. In a letter to his mother, he argues that the common stereotypes of the '"noble red men" and the "heathen Chinese"' should be reversed, decrying the 'Laziness' of Native American men who sent their wives to beg at the train's refueling stations. In contrast, he praises the diligence of Chinese workers in the face of unfair persecution by white Americans (Wheeler to his mother, 19 May 1876, WWP).

This unflattering description of Native Americans notwithstanding, Wheeler would later draw heavily on the colonial trope of the 'noble savage' in his description of how an Ainu guide saved his life during an expedition into the interior of Hokkaido. In a letter to his mother, Wheeler describes in vivid detail how he fecklessly attempted to ford a swollen river and was nearly carried downstream into a powerful rapid. Wheeler's horse was carried downstream but Wheeler's foot caught in a crevice in the riverbed, holding him fast. The Ainu guide 'started to come out to me at the positive and evident risk of his own life, when I ordered him back,' Wheeler wrote (Wheeler to his mother, 12 June 1877, WWP). After the rope that the rest of his party threw to him snapped, he was carried further downstream but managed to grab hold of a log in the center of the current. At this point, the Ainu guide once more risked his life:

...the broken trunk of a tree projected out over my head from the edge of the water. Around this the faithful and brave Aino grasped one arm as far out as he could reach, standing with one leg in the water up to his thigh while the people on shore held his other foot. (ibid.)

The guide managed to tie a rope around Wheeler's chest so that he could be pulled to safety. 'No one is blameable [sic] but myself, which I was, for preceding the guide at a critical point,' Wheeler wrote, continuing that 'The Faithful Aino was certainly the agent by which mine [Wheeler's life] was saved, and I have undertaken partially to express my feelings to him in a fit manner' (ibid.). There is no indication what exactly this manner was, but Wheeler had the man photographed in Sapporo. The photo's caption calls him 'Ikasupakuru: The Aino who saved Will's life,' but the term 'ikasupakuru' means 'a man who helps' in the Ainu language, suggesting that it might not be the man's real name (Takasaki, 2009, pp. 115-116). Wheeler sent this photo of 'my brave Aino friend' in his next letter (Wheeler to his mother, 26 June 1877, WWP). In the letter described above, Wheeler reproduces colonial adventure narrative tropes such as the loyal 'noble savage' guide that dominated late-nineteenth-century Western representations of indigenous peoples (Ashcroft, Griffiths, & Tiffin, 2007, pp. 192-193; Wylie, 2009, p. 68). Hokkaido is presented as a fierce, untamed wilderness, the perfect domain for an intrepid, if sometimes foolhardy, white explorer. The Ainu is 'faithful and brave' in his service to his white master, but merits no further mention.

Indeed, apart from this episode, there are virtually no mentions of the Ainu in the hundreds of pages that Wheeler produced during his several years' residence in Hokkaido. Wheeler doubtless employed Ainu guides on other expeditions and encountered them in Sapporo, for he mentions them offhand on three occasions, when one asked to enter Wheeler's horse in a race, when he notes that 'Bears and deer are found by the natives some miles away' from Sapporo, and when he recounts a bear attack on two Ainu (Wheeler to his mother, 26 June 1877, 10 November 1878, WWP; Wheeler to his sister Irene, 11 February 1878, WWP). Wheeler also describes a trip he made together with Clark in early November 1876 to Tsuishikari, where a group of Ainu from Sakhalin had recently been forcibly relocated by the Japanese government. He notes that he and Clark had been sent to give their opinion on silk production there, returning by means of Ainu ' "dug-outs" ' (Wheeler to his mother, 10 November 1876, WWP). Wheeler tantalizingly mentions that he was requested by the Kaitakushi to provide information on 'relations of Ainos to the government,' apparently with reference to United States Indian policy (Wheeler to his mother, 28 January 1878, WWP), but unfortunately such a report, which would doubtless give much insight into Wheeler's colonial worldview, is not preserved in Wheeler's official correspondence.

It is unclear why the Ainu are so absent from Wheeler's otherwise detailed correspondence. Nowhere does Wheeler show concern for their displacement by Japanese settlement or the effect that his engineering projects or promotion of scientific agriculture through SAC might have on their way of life. At several points, he makes it clear that he views the 'development' of Hokkaido as representing an important advancement for 'humanity.' In a letter to his sister, he writes: 'There is a great need of good work to be done here, and the world needs the sacrifice of unselfish laborers for humanity, wherev-

er and whenever they can be found' (Wheeler to his sister Irene, 11 February 1878, WWP). Shortly before his departure from Hokkaido, he revisited a site he had earlier surveyed for a road and was 'astonished at the excellent manner in which [his] plans of two years since had been carried out,' finding the realization of his advice extremely gratifying (Wheeler to his father, 5 October 1879, WWP). He was a firm believer in the civilizing influence of Western science, writing, for example, that a Western doctor was needed in Sapporo not only to treat members of the local community and teach anatomy at the college but also because

> His official reports, containing the results of his observations upon the sanitary characteristics and conditions of the climate and people of Hokkaido, would also furnish authentic and valuable information upon a point of commanding interest to impending settlers and colonists, the resident officers and people, and to the scientific world. (Wheeler to Zushio [Chōsho] Hirotake, 20 August 1877, WWP)

Here and elsewhere, Wheeler demonstrated a strong desire to see Hokkaido become 'developed' and 'civilized' along Western lines, even if he was not always confident that the Japanese were up to the task.

Wheeler's View of the *Kaitakushi*'s Colonial Mission

Wheeler is more explicit in his thoughts about Hokkaido's colonial 'development' in several short articles he authored, revealing that he was fully aware of Japan's ambitions for the territory and the parallels that Japanese leaders saw between Hokkaido and the western United States. In a report on the weather station that he established, he wrote that meteorological observations 'constitute an element

of peculiar [particular] importance in the development of a new section of country, especially if its climatic character is unfavorably belied through ignorance existing within its own realm' (Wheeler, 1877a, p. 87). Here, Wheeler echoes Japanese leaders' goal of countering widespread 'misconceptions' in Japan about Hokkaido, particularly its harsh and forbidding climate, which they expressed in their own publications (Mason, 2012, p. 27).
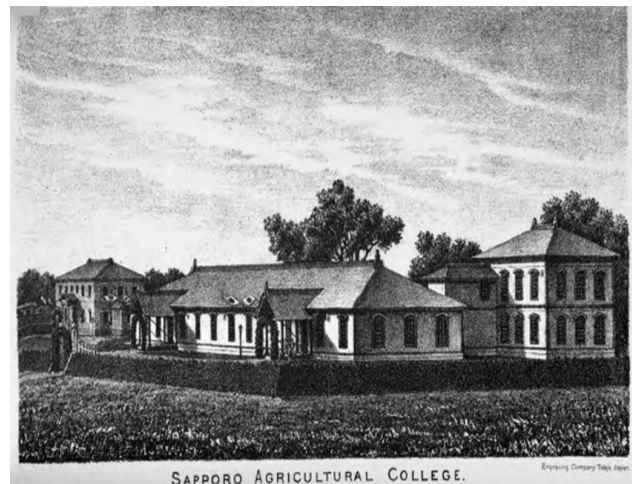
Figure 2: Sapporo Agricultural College in 1877. Source: W. S. Clark, W. Wheeler & D. P. Penhallow. (1877). *First Annual Report of Sapporo Agricultural College* (n.p.). Tokei: Kaitakushi.

In his 'Report on Transportation Routes between Sapporo & Tide-Water' in the same publication, Wheeler strongly advises the Kaitakushi to build a railroad from Sapporo to the port town of Otaru:

> railroads have proved to be, not only the most valuable means of inter-communication between well established communities, as in Europe and the older American states, but... they are regarded also as the true pioneers of colonization – the chief instrumentality in opening up vast territories in western America, South America, India, and Australia – in sections of the country totally devoid of civilized life,

and less rich in mineral and agricultural resources than is Hokkaido [...]. (Wheeler, 1877b, p. 106)

Here, Wheeler draws direct parallels between Hokkaido and both the American West and the European colonial territories of India and Australia, which he obviously thought could serve as useful models for Hokkaido. American engineers played an important role in building colonial railroads for other empires around the world during this period (Tufnell, 2017), so Wheeler was likely familiar with the examples he cites. That Wheeler writes that these 'vast territories' are 'totally devoid of *civilized* life' (emphasis added) indicates that Wheeler is aware that they are not devoid of *all* human life, but believes that the railroad's 'opening up' of the land is important nonetheless. Later, he repeats this assertion that the railroad is 'especially considered the forerunner of settlement and civilization' and recommends the translation of a pamphlet on American railways for the *Kaitakushi*'s official use (Wheeler, 1877b, p. 110). He even indicates that he sees Hokkaido and the western United States as similarly 'colonial': 'During the last half century, a million of square miles have been colonised through their agency [the agency of railroads] in the United States, and the people living therein contribute annually nearly one-half the products of the nation' (Wheeler, 1877b, p. 122). Wheeler was therefore both well aware of and a strong advocate of the railroad as an essential tool of modern colonialism that Japan would do well to imitate.

Wheeler's view of SAC and its role in the colonization of Hokkaido find their clearest expression in an article he published shortly after his return to Massachusetts entitled 'Japan's Colonial College' (Wheeler, 1880). Erasing the Ainu, Wheeler uses standard colonial tropes of Hokkaido's bountiful natural resources and

'vast areas of undefiled and scarcely explored mountain solitudes.' Curiously, he explains the meaning of the name 'Sapporo' in 'the Aino language' in a footnote without explaining who the Ainu were to his readers, to whom he explains the Meiji Restoration and other basic facts about Japan. The presentation Wheeler gives of SAC is of particular interest:

Here the Colonial department resolved to plan the nucleus of a system of western civilization, of which that of America was adopted as the most desirable type, which [...] should impart its characteristic impetus to the agricultural, industrial and educational interests and institutions of this part of the empire. (Wheeler, 1880, p. 6)

Here, Wheeler again shows that he is aware that the United States was chosen for emulation in Hokkaido from among numerous potential Western models, and that SAC was intended to be the 'nucleus' of this modeling. In addition to training future 'officers and skilled employees of the Kaitakushi,' SAC serves as 'a sort of advisory commission in the agricultural, industrial and sanitary interests of the department' (Wheeler, 1880, pp. 7, 9). For these reasons, 'few institutions of its modest pretensions enjoy the prospect of stamping so unique and marked an impress upon the future history of so large a state or process' (Wheeler, 1880, p. 9). Clearly, Wheeler, like his former employers, viewed his role as professor and president of SAC and advisor to the *Kaitakushi* as of central significance to Hokkaido's colonial settlement and future (Japanese) prosperity.

Public Praise, Private Prejudice? Wheeler's View of Japan
While Clark and Penhallow strongly supported the Japanese cause in lectures and publications after their return to the United States

(Maki, 2002; Penhallow, 1904), Wheeler's opinion of Japan is far less clear. In their private letters to his family, he and his wife express a deep disdain for Japanese culture and especially its bureaucracy, which seems to have colored their view of the country as a whole. On the other hand, Wheeler sometimes expresses admiration for Japan and is nearly always quite positive in his official letters to the Kaitakushi and published articles. This discrepancy is hardly strange, but nonetheless makes it difficult to determine exactly how he felt about Japan and its colonial project.

Figure 3: William and Fanny Wheeler (center) at the home of fellow American advisor to the *Kaitakushi* Benjamin Smith Lyman (left) in Tokyo, presumably in 1880. Photo courtesy of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst.

Wheeler's private correspondence reveals that Wheeler formed strong opinions about Japanese inferiority from early on and largely stuck to these throughout his tenure. He frequently complained about the excessive bureaucracy and wastefulness of the *Kaitakushi,* a problem which was in fact well-known even to its leaders, but tolerated because of its important mission of employing former samurai that otherwise could revolt against the regime. Wheeler applauded the *Kaitakushi*'s later decisions to

dispense with a large number of sinecures and to stop engaging expensive Western advisors, writing on the first occasion with evident satisfaction, 'Really this empire is progressing wonderfully' (Wheeler to his mother, 23 January 1877, 3 December 1877, WWP). Fanny Wheeler seems to have come to share her husband's critical views after coming to Japan, but writes that compared to a Western acquaintance of theirs who 'hates Japan and everything connected with it [...] although we are not in love with the Japanese character and are more and more glad to be going back to America, we do not think so badly of everything as he' (Fanny Wheeler to Mrs. Wheeler, her mother-in-law, 10 December 1879, WWP). There is no record of Wheeler actively promoting Japanese colonial interests after his return like Clark or Penhallow, but he did show a long-term interest in SAC and its students. Several years after his return, he expressed joy at the news that two of his former students had received government scholarships in the United States and wrote that 'I have never lost the lively interest which I acquired in the progressive measures adopted by your country.' Although his letters from Japan were pervaded by homesickness, on this occasion he even wrote that he sometimes wished he had not returned to Massachusetts so soon (Wheeler to Mr. D. Suzuki, 20 May 1884, WWP).

Although Wheeler is often intensely critical in his personal correspondence sent from Japan, one could interpret his frustrations with what he viewed as flaws in the Japanese national character as arising from a genuine concern for Japan's future 'progress.' In his various writings, Wheeler often lambasts what he believes to be Japanese backwardness, but attributes this to premodern traces remaining from before the Meiji period. He condescendingly writes that

No one can comprehend how much these people resemble the rest of humanity in the affairs or sentiments of the heart [...] nor how widely they differ in all those intellectual qualities, which give to the western nations their foremost rank in mental and material progress, without living for a time among them.

He attributes this, however, to 'the stupor which ages of absolute monarchism have implanted into the very life and being of her people,' repeating the classic colonial trope of Oriental despotism in which dictatorial Asian regimes can only uphold social order through harsh authoritarian rule, a system which impedes 'progress' and 'modernization' (Spurr, 1993, pp. 72-73). Nevertheless, he argues that the Japanese are striving to overcome this and will therefore eventually be successful 'if interference from other nations does not diver[t] them' (Wheeler to his mother, 16 August 1876, WWP). Elsewhere, he similarly censures the excessive time devoted to memorizing Chinese characters in Japanese education, but follows this up by writing that 'Now, fortunately, the entire regime is changed: but the seeds of the past cannot be eradicated at once' (Wheeler, 1880, p. 10). He refers to the Meiji period as Japan's 'progressive era' and plainly subscribes to the government's version of Japanese history, whereby the Meiji Restoration represents an important break with the Oriental despotism of the previous Tokugawa Shogunate (Wheeler, 1877b, p. 109). This nuances many of Wheeler's harsher criticisms of Japan, since he views them as remnants of the past that will eventually disappear.

Wheeler is inconsistent in his appraisals of how long it will take Japan to become 'civilized' and whether it could ever 'catch up' with the West. In a letter to his mother, he writes that 'Generations must pass, ere they can travel, un-aided, in the march of true progress' (Wheeler to his mother, 18 August 1876, WWP). Elsewhere, however, Wheeler writes that 'Japan is not so far behind the world in acquired wealth or material progress,' noting that 'Only about a century ago, Great Britain had a smaller population, less available wealth, inferior educational facilities for the masses, and fewer examples' in its quest to become modern. Wheeler even notes that Britain had foreign consultants of its own: 'her industries were established greatly by foreigners; she sent abroad for skilled workmen [...]' (Wheeler, 1877b, p. 121). Did Wheeler's position on this question change, or did he merely publish the latter statement to win favor with the Kaitakushi?

Danika Medak-Saltzman has argued that the Japanese attempted to juxtapose themselves against the 'primitive' Ainu in their colonization of Hokkaido in order to portray themselves in the West as a 'civilized' 'race' (Medak-Saltzman, 2008), but Wheeler's writings reveal that he still viewed the Japanese through the lens of classic Western colonial stereotypes of cultural inferiority, even in a context in which the Japanese played the role of colonial overlords. Nevertheless, unlike the Ainu, in whom Wheeler showed little interest and whom he often erased in his accounts of Hokkaido's ostensibly pristine nature, he seems to have viewed the Japanese as at least being on their way towards 'civilization' and Western-style modernity.

Conclusion

The above analysis of the documents he left behind reveal that engineer William Wheeler was a man of his times and an important 'agent of empire' who facilitated the trans-imperial flow of colonial knowledge. Recent historiography has demonstrated that such inter-imperial linkages played an important role in fostering ties between late-nineteenth and early-twen-

tieth-century empires and determining the shape their colonial rule took (Potter, & Saha 2015; Barth, & Cvetkovski, 2015). Wheeler's view of the Japanese, Hokkaido and the Ainu was molded by Western colonial tropes that he took with him from the United States, leading him to understand the Ainu as 'noble savages' and the Japan as emerging from a period of 'Oriental despotism' and embarking on a 'civilizing mission' in Hokkaido, a version of history also actively promoted by Meiji leaders. Wheeler both drew on and reinforced such hegemonic colonial discourses in his interpretations of Japanese settler colonialism in Hokkaido.

Whether or not Wheeler was 'a true friend of Japan,' he certainly did his part to aid its colonial expansion in Hokkaido. The roads, railways and bridges he designed facilitated the extraction of its natural resources and his dissemination of scientific colonial methods abetted its settlement by Japanese farmers. Although Wheeler shows barely any concern for the Ainu and little interest in European theories of colonial management in the remaining source material, the passages analyzed above indicate that he was not unaware of the colonial character of Hokkaido's development nor that of his own country. His advocacy of railroads as 'the true pioneers of colonization' in particular shows him to be an advocate of continental imperialism and settler colonialism, of which he believed Hokkaido and the western United States to be analogous examples.

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The Smartphone Annales
Japanese inventions and Western narratives throughout the history of mobile wireless telecommunication technology

DEIRDRE SNEEP

When it comes to the history of the smartphone, there is a general idea of the kind of technological achievements that led to its development. Most of these achievements are by US or European actors, while inventions that stem from other parts of the world, such as Japan for example, are largely excluded from the history of mobile phone technologies. As is usual with the construction of a canon of science and technology, the West constructs an image of itself as the classic 'master of the machines'. Japan in this regard is an interesting case because over the years it has actually manifested an image of being technologically advanced, despite being a non-Western country. Nevertheless, its achievements in telecommunications have been largely overlooked. Written from a historiographic perspective, this paper discusses how inventions in mobile and wireless telecommunication technology that came from Japan have been either ignored or otherwise devalued, arguing that this is because of a dominant techno-orientalist narrative which has changed in form somewhat over time. Furthermore, the paper offers an explanation of how the canon of achievements of telecommunications came to be, thus contributing to the understanding of power dynamics in the global history of technology.

Keywords: Japan, mobile phone, smartphone, history of technology, techno-orientalism

In 2014, TIME published an article on the occasion of the 20th birthday of what is regarded as the world's first smartphone: IBM's 'Simon' (Aamoth, 2014). Simon was a Personal Digital Assistant (PDA), which entered the US market August 16, 1994. It was a regular PDA in the sense that it had all the usual attributes (such as a calendar option, a calculator, and a notepad) and was also equipped with a program to send and receive emails with (albeit after a rather difficult set-up process). On top of that, it could be used to make phone calls with. Although the word 'smartphone' did not exist back then, Simon is now widely seen as the world's first smartphone because unlike the other PDA's that were on the market back then, it had the ability to make and receive phone calls. Unfortunately, its inconvenient size, limited battery life and high costs limited Simon's popularity. Sales were suspended a few months after its launch, after only 50,000 Simons were sold. Nevertheless, Simon's birthday was celebrated widely in 2014 and made it to many European news agencies such as TIME, Der Spiegel and BBC. To honor it, Simon even got a prominent spot in the exhibition on the Information Age that was hosted by the London Science Museum.

Simon's widespread celebration strikes one as somewhat odd as Japanese mobile phones, even around the mid to late 1990s, were more advanced than their European or US counterparts, and the early Japanese mobile phones that worked on 1.5G or early 2G networks that were established in the second half of the 1990s might seem more likely to be called 'smartphones' than a PDA with some cellular functions. Granted, the Japanese mobile phones came on the market a few years after Simon, but their widespread use and early internet access makes them at least fair competitors for the title. These phones, such as for example the 'J-Sky Walker' developed by J-Phone (later Softbank), featured the ability to send and receive e-mails ('Sky Mail'), and could download ringtones. Other carriers, such as DoCoMo, introduced similar services for their mobile phone users, all in the late 1990s. Also, unlike Simon or the other costly PDA's of the 1990s, these early e-mail capable mobile phones were very affordable, and widely used. In 1997, the provider DoCoMo had almost 20 million contractors for their mobile phone e-mail service (DoCoMo Report, 2012). Moreover, in 1999, DoCoMo introduced 'i-mode', the world's first nationwide mobile phone internet network. The first mobile phone that had the ability to use an internet browser was the F501i HYPER, manufactured by Fujitsu and sold by DoCoMo. Theoretically, to answer the question which of these phones is more deserving of the title of 'smartphone' would depend on the definition of the word, but the debate on this question could go on forever as in fact there is no clear standard definition of the word 'smartphone' at all. There is, however, a rather vague general sense of what a smartphone should be capable of (sending e-mails, for example). It is

therefore remarkable that there still is a device that is said to be the world's first smartphone and, furthermore, that this device is of US origin.

IBM's Simon is only one of the examples that show the prominence of Western inventions in the history of communication technology. The 'world's firsts' are predominantly made by US or European inventors or companies. IBM made the 'first smartphone' in 1994, Motorola made the 'first mobile phone' in 1973. If we look at the history of telecommunication further back, other names that immediately come to mind are Alexander Graham Bell and Guglielmo Marconi. In addition, when looking at discussions of mobile phones in popular contexts, except for perhaps mentioning the first mobile phone internet network, which was developed by DoCoMo in 1999, Japan (or any country outside of the West) receives little to no mention. Nonetheless, there are in fact several technologies which are deemed crucial to the development of the smartphone as we know it that are of non-Western origin. Simon's birthday celebration therefore should perhaps rather not be seen as 'the world's first smartphone' but as the most recent example in a series of celebrations of American or European inventions that ignore any contributions in the history of telecommunication technology by inventors that are not from a 'Western' country. In this article, I will discuss the writing of the history of mobile telecommunication and how it came to be that so little is known on Japan's contributions to our current 'Information Age'. This paper is written from a historiographic perspective, paying attention to why certain developments happened and offering an explanation on how and why a canon of achievements of mobile telecommunications is created, thus showing the power dynamics behind the writing of the history of telecommunications.

Before beginning this discussion, it should be noted that although this paper has a focus on Japan, when it comes to mobile phone technology, other Asian countries such as South Korea and China have also been main players. In particular, South Korea has been exceptionally active over the past few years. I do not mean to ignore the contributions of these countries or other countries besides Japan, as there are without doubt many that I have not mentioned (ironically perhaps, as omission is the very theme of the paper). However, as the aim of this paper is to deepen the understanding of Japan and Japanese telecommunication technology in global history, as well as for the sake of the length of this paper, I have made a selection. Furthermore, although I have mainly focused in this paper on a history of engineering, I want to add that in the academic discussion of the Information Age or Information Society, Japan has made significant contributions as well. The very word 'Information Society' was actually a term coined by a Japanese scholar. Thirdly, I want to make the reader aware that while this paper focused on exclusion due to race or ethnicity, the documentation of the history of mobile telecommunications also sees exclusion based on gender (think of for example the case of CDMA wave technology, the very basis for 3G Internet itself, which was invented in 1940 by Hedy Lamarr).

Master of the Mobile Phone

When it comes to the history of mobile telecommunication technology there is a persistent narrative that portrays the smartphone as a 'revolutionary' form of technology. The idea entails that the smartphone is essentially revolutionary in nature, and that its history is limited to a few decades, starting with mobile phone technologies that were developed sometime between the mid-1990s and now. While it is true that the mobile phone only

made its entrance among the general public in the 1990s, technologically speaking the device has a much longer history that connects it to many other media. While the similarities between the smartphone and the PDA or the pager are relatively obvious and have been discussed in length elsewhere (K. Ito, 2016; Ling, 2004; Natsuno, 2002), smartphones actually continue a long tradition of wireless communication stemming from radio technology (Ling, 2004), and even older, paper media (Briggs & Burke, 2014). Seeing that a medium always relates to a broad spectrum of other media (Briggs & Burke, 2014, p. 12), it would be incorrect to take a device such as the smartphone out of historical context and portray it as a 'revolutionary' and recent development – yet this is what is happening in the case of information technologies (Blyth, 2017), especially with the mobile phone. Details about the early history of communication devices are important, as they show us the transformation of media over the ages, but they are nevertheless often ignored or overlooked as it goes against the popular image of the 'Information Technology Revolution', which treats mobile phones as well as other ICTs as a sudden revolutionary development that is regarded as defining our current 'epoch'. In addition, if the history of the smartphone or mobile phone does receive attention in the form of research, researchers often focus only on the 'telephone' aspect, and connect the device only to previous forms of telephone technologies (i.e. Agar 2004; Katz and Aakhus 2002; Woyke 2014). This has all resulted in a narrative of smartphone technologies as hyper-renewing and 'disconnected' from previous forms of communication technologies. Central to this narrative of the 'smartphone revolution' is Manuel Castells' theory on the 'Information Age' (Castells, 1998). Because of the IT boom of the 1980s and 1990s, Castells defines our current era as revolutionary differ-

ent from our previous eras ('Zeitgeists'), and poses Information at the center of our new society. According to Castells, because of the invention of IT in the late 1980s, society shifted from being industrial societies to 'information societies' which are driven by Internet networks. This 'IT revolution', as Castells calls it, has supposedly thoroughly changed the nature of political and economic systems worldwide.

There are several problems with this theory, but the main issue is that it portrays Information Technology as revolutionary and something brand-new. Not only do Castells and other scholars who pursue this vision hereby take the history of information technologies out of context and ignore continuities concerning information and knowledge transfer through history (Callinicos, 2004), this theory creates a linear and specific timeline for the history of IT. The results are twofold. On the one hand, it creates a schism in the documentation of history, and ignores a vast history of technology by portraying IT devices as 'sudden' inventions (Blyth, 2017; Callinicos, 2004; Hardt & Negri, 2001). Information has always circulated – societies have always economically, politically, and socially, relied on networks of information (Briggs & Burke 2014), long before the invention of the Internet. On the other hand, driven by a technological determinist way of thinking, the idea of the 'IT Revolution' has led to a canon of 'the world's firsts', and it is this canon that is especially prone to a Western or Euro-centric way of thinking. Technology, after all, is one of the fundamental pillars of the ideas of Western supremacy (Lévi-Strauss, 1952). Historically, the West has developed an image of itself as, as Lévi-Strauss (1952, p. 47) puts it, 'maître des machines': master of the machines. Although it is undeniable that Asia has played a crucial role in the development of science and technology since the dawn of history – think of only algebra, the alphabet,

and astronomy for example, which all came to Europe via Asia – when it comes to the history of science the West always, as Shohat and Stam (2013, p. 14) argue, "organizes knowledge in ways flattering to the Eurocentric imaginary" (see also Bala, 2006; Park, 2014; Raj, 2007). It is no different when it comes to the history of mobile and wireless telecommunication technology. "The lion's share of technology studies – alongside research on the appropriation of mobile phones – has focused on Western countries, which has led to a tendency to center on Western-based concepts," states Tenhunen (2008, p. 516).

(Pre-)Keitai

When it comes to Japan, however, we cannot simply reduce this to a typical victim-of-Western-oppression story in which an Asian country has been completely ignored or left out in a Euro-centric drive to create a self-glorifying documentation of the history of technology. Unlike the blatant neglect of scientific research from researchers from other non-Western countries, Japan has actually been 'granted' a position in the struggle for a mention on the techno-historical timeline of inventions. Sometime at the end of the last century, Japan even became associated with technologies of the future (Morley & Robins, 1995). Their advances in mobile phone technology in the early 2000s are also relatively well-known (Lim & Goggin, 2014). Yet it is only in a particular context that Japan is seen as a country of advanced technologies – a context that is very much shaped by ideas reminiscent of postmodern science fiction (Yu, 2008), and heavily influenced by techno-orientalism (Chun, 2000; Nakamura, 2002). Japanese technology can only be superior at the cost of something else. Morley and Robins (1995) argue, that it is at the cost of being seen as human: by attributing Japanese technological supremacy to an inhuman,

mechanical quality, the Japanese are dehumanized and their technological achievements thus devalued. Besides this, there is also an obvious ridiculing factor, as for example stereotypes about Japanese as 'technophiles' who are 'crazily' into technology not only dehumanize the Japanese, but also ridicule and belittle their technological achievements. This is a part of a recent form of Orientalism in which Japan is portrayed as 'crazy' and 'weird' (Wagenaar, 2016). As one of the first non-Western countries that have challenged the Western hegemony of modern science, it is the price Japan has paid. When in the early 2000s Japan developed a thriving mobile phone culture, the Japanese mobile phones were generally seen as impressive advanced forms of mobile communication technology (Hill, 2003; Holroyd & Coates, 2007; Rheingold, 2002; Srivastava, 2004). Yet even this was something that was sometimes more seen as a cultural phenomenon - perhaps more as an expression of the essential (obsessive) 'technophile' side of the Japanese: "No one will deny the perception that the Japanese are a highly technophilic people who are regularly seen sporting the latest technological gadgets" states Srivastava (2004, p. 246) for example, comparing mobile phone cultures. Rheingold (2002) labels young mobile phone users "Tokyo thumb tribes," in an almost alienating way. At that time, the Japanese mobile phone was also almost exclusively referred to in English-spoken research on the topic as 'keitai', the Japanese name for the device, as if to detach the device from the general history of mobile phones by deliberately not referring to it as such.

Yet when it comes to the history of telecommunications before 2000, Japan is completely overlooked by scholars outside of Japan, even though many early crucial steps towards mobile and wireless telecommunication technologies were made by Japanese

inventors. Engineer and historian Morishima (2006) states that Japan has always been a frontrunner when it comes to wireless communication technology, and that its advanced mobile phone technologies have a much longer history, which logically led to the invention of the advanced mobile phones of the late 1990s and 2000s. In his historical overview, Morishima (2006) lists all the Japanese inventions that contributed to the field of wireless communication throughout the 19th and 20th century. For example, in 1885, ten years before Marconi's work on long-distance radio transmissions, engineer Shida Rinzaburō already successfully experimented with wireless electromagnetic communication methods over the Sumida River in Tokyo. Furthermore, in 1912, Annaka Electric Corporation (now known as the multinational corporation Anritsu) manufactured the TYK, the world's first wireless telephone (radio telephone). As maritime transport had become increasingly crucial for the Japanese economy, there became the need to quickly be able to communicate around bay areas, which is why Annaka Electronic Corporation developed a wireless communication system not too long after the turn of the 20th century. In 1914, the first words spoken through a wireless telephone device that could cross significant distance were "Honjitsu wa seiten nari, honjitsu wa seiten nari, kochira wa Toba, kochira wa Kami-shima, Kami-shima" (Anritsu, n.d.) or, "Today's weather is clear, today's weather is clear, this is Toba, Kami Island, Kami Island". Still, these words never make it to most historical accounts. If the TYK is discussed at all, it is often only briefly mentioned in one sentence (see for example Sitaram, 1999, p. 464). In 1926, another pioneering Japanese invention contributed to wireless telecommunication: the Yagi-Uda antenna, named after its inventors Uda Shintarō and Yagi Hidetsugu. The Yagi-Uda antenna, still prominently visible

with its comb-like shape on the roofs of many houses in cities all around the world, is used for configuration for radio and television reception. It quickly became one of Japan's most important and ground-breaking inventions of the 20th century, after Yagi went to the US in 1928 to give a talk about his invention. By 1950, the antenna was used all over the world. Ironically enough, it actually played a large role in the defeat of the Japanese army in the Second World War, as the Yagi-Uda antenna was used by US troops for effective communication in the military, without the Japanese even realizing their countrymen's invention had become so popular overseas (Sato, 1991).

National Pride

There is a reason, however, that Japan was doing well in the field of radio technologies in the early 20th century – strategic imperial expansion. Yang (2010), in his historical assessment of the telecommunication technology of imperial Japan, points out that the rapid early progress and breakthroughs Japan made in the field of wireless telecommunications should be attributed to the imperial expansions that Japan undertook at the beginning of the 20th century. The early advances in the field of wireless telecommunication should therefore be seen as military developments, similar to many of the technological developments in Europe, Russia and the USA that were made around the same time. Science and technology are fields that are historically connected with military power, but telecommunication developments in particular have a history of being driven by militarist, nationalist or semi-nationalist purposes (Yang 2010). Some even argue that the underlying nationalist sentiment to develop wireless telecommunications was not only present during the early discoveries but was also present later on in the 1990s and 2000s (Hjorth, 2009, p. 91). Indeed, if we look at the current situation

of mobile phone technology, we clearly see a competition among several countries to be the first to successfully implement a 5G network - a competition that shows clear underlying techno-nationalist intentions. In their goals for the Tokyo 2020 Olympic Games, Japan pledged to be the first country to have a 5G network up and running. The country's largest mobile phone provider, NTT DoCoMo, is currently working on realizing this ambitious pledge in an international 'first-to-5G' race with, among others, South Korea's Samsung, and Sweden's Ericsson.

Although the world's leading mobile phone providers are currently all working towards realizing the world's first nation-wide 5G network, mobile phone networks have not always been globally aligned, interchangeable forms of technologies. For a long time in the late 1990s and throughout the 2000s, Japan's phones worked on a specific cellular network called Personal Digital Cellular (PDC), while Europe used a cellular system called Global System for Mobile Communications (GSM), which was ironically not a global system until very recently, and the US used so-called Code-Division Multiple Access (CDMA). Besides these, there were a plethora of other cellular network technologies used by different countries in different parts of the world. The only difference between the PDC and most other networks, was that the Japanese mobile phones only functioned on PDC, which made them unfit for export. This resulted in Japan manufacturing and catering only for the Japanese market, which caused a Japanese mobile phone 'Galapagos' effect (i.e., closed off from other countries and developing new technologies on its own). This has been called the unfortunate result of failing policies aimed at boosting the national economy (Zysman & Newman, 2006). Although it was clear that the Japanese phones from the early 2000s were extremely advanced compared to most other countries because of their early mobile internet access, the Galapagos effect made it easy to devalue Japan's achievements by projecting a form of technological 'othering' (Morley & Robins, 1995). Although this essentially nullified Japan's physical presence on the global mobile phone device market, it is important to note, however, that Japan's *technologies* for mobile phone internet were exported and applied all over the world quite successfully (Holroyd, 2005). Perhaps the most striking aspect of the discussion on Japanese cellular technologies is that it so often goes unnoticed that Japan was actually the country that set up the first mobile phone network in 1979, the 1G network, which was put into use for the first time by NTT in Tokyo. Copying Japan's network, other countries were quick to follow; the US was actually quite late, and implemented their first 1G network only in 1983. The US has traditionally been slow to implement new cellular networks, and was also one of the last developed countries to implement 3G (Ahonen, 2009).

Conclusion

In the above, I discussed some of the Japanese contributions to the development of the wireless and mobile telecommunication technology. This article does not provide a complete overview; many of Japan's pioneering technologies have been omitted (such as the invention of mobile phone WiFi, the mobile phone camera, MMS, etc.), but the purpose of this article is not to show that Japan has a right to 'the world's first' titles in the history of mobile and wireless communication technologies. Rather, its purpose is to show how several important technological breakthroughs that came from a cultural realm outside of Europe and the US have been systematically ignored in a mobile telecommunication history 'timeline' that focuses on European and American, or in other

words, Western achievements. It is only in the 2000s that Japan received attention by English language scholars for their invention of the first successful mobile Internet system and their high-tech phones – which, in scholarly literature, were often not referred to as 'mobile phones', but as 'keitai', as if to distinguish it from other mobile phones completely. However, Japan, slowly from the mid-twentieth century onwards, is gradually recognized by the West as a country that has significant technological prowess, and it is relatively well-known that Japan had a thriving mobile phone culture in the early 2000s. Nonetheless, Japan being recognized as a player in the global history of telecommunications technology seems to be only possible under two conditions. The first is that this technological excellence is often attributed to a peculiar 'technophile nature'. This devalues technological achievements as it dehumanizes the Japanese, and portrays them as either robotic (thus not human) or obsessed with technology. It is the continuation of a long tradition of Orientalism, which has taken on new forms in the case of Japan in the past decades. The second condition is that mobile or wireless telecommunication achievements previously made by the Japanese are often left undiscussed or only very briefly mentioned in general theories on information technology, in line with a tradition of the construction of a Euro-centric history of technology. All of this implies that the West is only selectively able to acknowledge Japan's mastery of a powerful trait considered 'theirs' – science and technology. The writing of history of breakthroughs in mobile phone technology can in this regard be seen as a reflection of the West struggling to keep its most prized title of 'master of the machines' in an era where the fields of science and technology are increasingly rivaled by actors from outsides of the West.

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The Aftermath of a Marine Disaster
Food Anxieties, Fish Production and Social Change in Contemporary Vietnam

NHUNG LU ROTS

In April 2016, a marine disaster seriously disrupted fisheries and aquaculture facilities in and around Hà Tĩnh Province, Vietnam. The environmental disaster has strengthened Vietnamese distrust for domestic products, especially seafood. Food anxieties have driven many Vietnamese consumers to the streets to demonstrate for changes in the food system and demand environmental justice. In recent decades, seafood, in particular fish, has played a significant role in Vietnam's economic growth and has become an important export commodity. Pangasius fish from the Mekong Delta, for instance, is not only one of Vietnam's key export products, but also a key tool for poverty reduction. However, global and domestic anxieties over food safety and environmental degradation constitute a threat to the industry. At the same time, these anxieties provide incentives for changing to sustainable farming practices. Applying transition theory in food practices, this article examines how current food anxieties, global as well as domestic, affect sustainable pangasius production. It also addresses the question of whether new food practices can contribute to economic and social change in Vietnam.

Keywords: Food safety, pangasius fish, transition theory, environmental disaster, Đổi Mới

In April 2016, 70 tons of dead fish washed ashore in Central Vietnam. An official investigation two months later revealed that a Taiwanese steel factory named Formosa in Hà Tĩnh Province had leaked toxic waste and caused the death of these fish ("Vietnam blames toxic waste", 2016). This environmental disaster changed domestic consumption: for several months afterwards, few Vietnamese purchased and consumed seafood. Seafood consumers were so concerned about delayed governmental responses and unreliable information that many of them stopped buying seafood altogether. The marine disaster also disrupted fishing and aquaculture, affecting hundreds of thousands of farmers and fishermen. This is a clear example of the fact that people's livelihoods are susceptible to environmental changes, especially in economically marginalized communities (Adger, Kelly, & Ninh, 2001).

The disaster was all the more disruptive because fish is such an important food commodity in Vietnam. It not only provides comparatively cheap protein, improving the standard of national nutrition, but has also played an important role in Vietnam's economic growth (Danida, 2010). Vietnam has a long coastline and favourable geographical conditions for the development of aquaculture. According to the General Statistics Office of Vietnam (2015), many small farmers got out of poverty thanks to farmed fish, and aquaculture products account for more than 60% of Vietnam's seafood export value. Tra fish fillet (Pangasius bocourti, also referred to as pangasius, basa fish, or catfish) from the Mekong Delta is one of the key products that have contributed to exponential export growth.

Vietnam is an emerging economy with a growing middle class (Hansen, 2015). An increasing number of well-educated people with high incomes in urban areas care about food safety and put their trust in traceable products sold in supermarkets (Thai & Pensupar, 2015; Eliot et al., 2016). The demand for safe, healthy, environmentally friendly and labelled products from a new generation of critical consumers is increasing. The hypothesis explored in this paper is that such demand-driven changes may help establish sustainable farming practices and thus contribute to solving local environmental problems, especially in an emerging economy such as Vietnam. Similar changes took place in Europe during the 1950s and 1960s, when consumers questioned the safety of the "convenience" food industry and demanded changes in food law, which led to stricter control. In addition, alternatives to large-scale industrial food production were developed, and organic food production grew in the 1980s (Van Otterloo, 2012).

My analysis is grounded in the theory of "transitions and transition management" (Spaargeren, Oosterveer, & Loeber, 2012). With the objective to study "processes of change happening in a specific time and space, carried

by specific actors who try to block or enhance the transition depending on the interests at stake", transition theory can expose "specific rules of the game of food production, retail and consumption" (Spaargeren, Oosterveer, & Loeber, 2012, p. 4). These specific rules, or "food practices" as they may be called, can in turn shape social change towards a sustainable future. To my knowledge, this paper is the first academic analysis of domestic food anxieties about seafood products and social change in Vietnam. I will first analyze current events and ongoing environmental problems as consequences of the marine disaster in 2016. My analysis relies on observations from domestic and international media. In relation to this, I discuss consumers' concerns over food safety and environmental change, as well as recent developments in domestic food consumption. In the second part, I explore the farming practices and the production of the fish pangasius in the Mekong Delta, in order to examine my hypothesis about consumption-driven changes and sustainable production. The second part uses secondary data from scientific research on pangasius production, trading, and distribution. Lastly, I address the question of whether the new food practices will lead to economic and social change in contemporary Vietnam.

Food anxieties and social change in contemporary Vietnam

In 1986, the Vietnamese government implemented a number of economic reforms, called "Đổi mới", which led to the transition from a planned economy to an open economy with a free-market orientation. These reforms led to a process of decentralization, allowing local authorities to invite foreign investors. Foreign investment capital has since contributed to the rapid growth of the industrial and service sectors, creating jobs and reducing poverty. How-

ever, provincial authorities compete fiercely with each other in order to attract foreign investment, often disregarding public health and environmental consequences (Hansen, 2016). As a rule, local authorities grant permission to foreign investment projects and factories without seriously considering their environmental impact. For instance, there are several cases involving toxic waste that has escaped from these factories, which has lead to environmental degradation and threatened people's safety (Thai, 2009).

In 2016, the Vietnamese government took a cautious approach to the environmental degradation caused by Formosa. While pictures of dead fish and Formosa's suspicious waste processing system were widely spread on the (social) media, the state's scientific institutions initially denied the Taiwanese investor's involvement, stating that the mass starvation of fish might have been caused by the natural growth of poisonous seaweed in the ocean (Khadka, 2016). But the public was not easily convinced; through various media both inside and outside the country, people put pressure on the authorities to confess the real cause of the disaster. Scientists detected cyanide, phenol and iron hydroxides in the waste near the Formosa steel factory complex (Tiezzi, 2016). In the end, the state conceded, acknowledged the role of Formosa Ha Tinh, and made them pay half a billion US dollars in order to compensate the affected communities ("Vietnam blames toxic waste", 2016).

The leakage of toxic waste has led to environmental destruction and food anxieties. It has caused long-term damage, not only to marine ecosystems, but also to fishing villages along the coast in central Vietnam. Fishermen in Hà Tĩnh are no longer able to sell the fish they have caught near the coast. They cannot catch fish further away from the coast either because of territorial conflicts between Viet-

nam and China (Fels & Vu, 2016), so they have stopped fishing altogether (Nguyen, 2016). The environmental degradation has also affected and reduced consumers' trust in fish and seafood products (personal communication with seafood consumers in Hội An, June and July 2016).

Environmental pollution and public health are two factors that can undermine a state's legitimacy. Food safety and other public health concerns are among the most prominent topics of everyday conversation among Vietnamese people nowadays. Media have reported on unsafe amounts of pesticides and chemicals in a range of contaminated agricultural products, including some of Vietnam's main export products such as rice, fruit and vegetables, fish and shrimp (Hansen, 2017; "Vietnamese killing themselves", 2017). These are also the main domestic consumption items that constitute the staple diet for many Vietnamese families. Many people talk about their food anxieties, but they do not know how to solve the problem.

In addition to enforcing domestic food anxieties, the disaster has led to political unrest in the whole country. The environmental disaster in April was not the first case where toxic waste had escaped from a factory and entered the food chain. It was, however, the straw that broke the camel's back. Many people protested in the big cities in Vietnam in May 2016, and some were beaten and briefly imprisoned by the regime as a result ("Vietnam protest", 2016). A state investigation at the time did not find any connection between Formosa's waste system and the fish death ("Chưa có bằng chứng", 2016). It was not until the end of June that the state finally admitted the role of Formosa in the disaster, but they still had to deal with public anger over the compensation process that the company had put in place. Demonstrations continued for several months. On 2 October 2016, local people gathered in front of the For-

mosa factories - some even climbed over the closed gates - and asked the company to leave the country ("Biểu tình Formosa", 2016).

As North (1990) has predicted, new technologies can reduce transaction costs, thus encouraging social transformation and institutional change. Internet access is available virtually everywhere in Vietnam, and social media provide people with information outside the official channels. In spite of the strict censorship in Vietnam, more and more people raise their voices on blogs and social media about current issues, including food safety, toxic waste and local environmental depletion. Social media were used to mobilise people to join the demonstration in May 2016. Social media, therefore, have the potential to undermine local authorities. However, they can also help a weak state realize its vulnerability and act upon public concerns, thus preventing social and political instability. In other words, the spread of new communication technologies in Vietnam can lead to new policy approaches.

The political unrest during 2016-2017 points to social change in Vietnam, central to which are the ongoing transitions in food practices. According to Spaargeren, Oosterveer, & Loeber (2012), the transition of food practices has three dimensions: socio-cultural, socio-technical, and policy/governance. These three dimensions are all visible in the April 2016 incident. Public concerns over toxic waste have led to a change in value orientations with regard to seafood products. Consumers are no longer only interested in buying fish products with low prices, but also want to reduce food risks and assure personal health (socio-cultural change). Anxieties for food safety expressed on social media thus create a need for food traceability and certified food (a socio-technical development). When the need turns into a demand, it is in the interest of food producers, certification organizations and state actors to

act upon it (policy/governance).

As observed by Van Otterloo (2012), changing value orientations in domestic consumption transformed the industrial and mainstream food regime in the Netherlands during the 1950s and 1960s, as they led to the creation of alternatives to large-scale and chemical-based food production. Subsequently, in the 1980s, new perceptions about food value and new food-related anxieties spread among consumers; in response, various new alternatives to industrial food production such as self-sufficient and sustainable communities, organic food and ecolabels, small-scale farms and organic agriculture were developed. Furthermore, consumer initiatives for seeking alternatives to mainstream food regimes have led to changes in food laws, first in the Netherlands, and then, during 1970s and 1980s, at the EU level.

To summarize, environmental destruction poses a big threat to the legitimacy and power of the ruling elite in Vietnam. Regaining state legitimacy, despite the mistakes of provincial elites, requires special attention to food anxiety, and the establishment of more resilient institutions that can impose better regulations on food production (cf. Adger, Kelly, & Ninh, 2001). In response to the marine disaster, the public has made efforts to bring about transitions in environmental legislation and safe food certification. Meanwhile, domestic food anxieties help local food producers and retailers realize the market opportunities provided by certification and labelling schemes. By adopting new farming and distributing practices to meet higher standards, local food actors may change the Vietnamese foodscape. I will now take a closer look at the production of pangasius in the Mekong Delta, in order to examine whether such a transition in food practices indeed exists in the Vietnamese aquaculture sector.
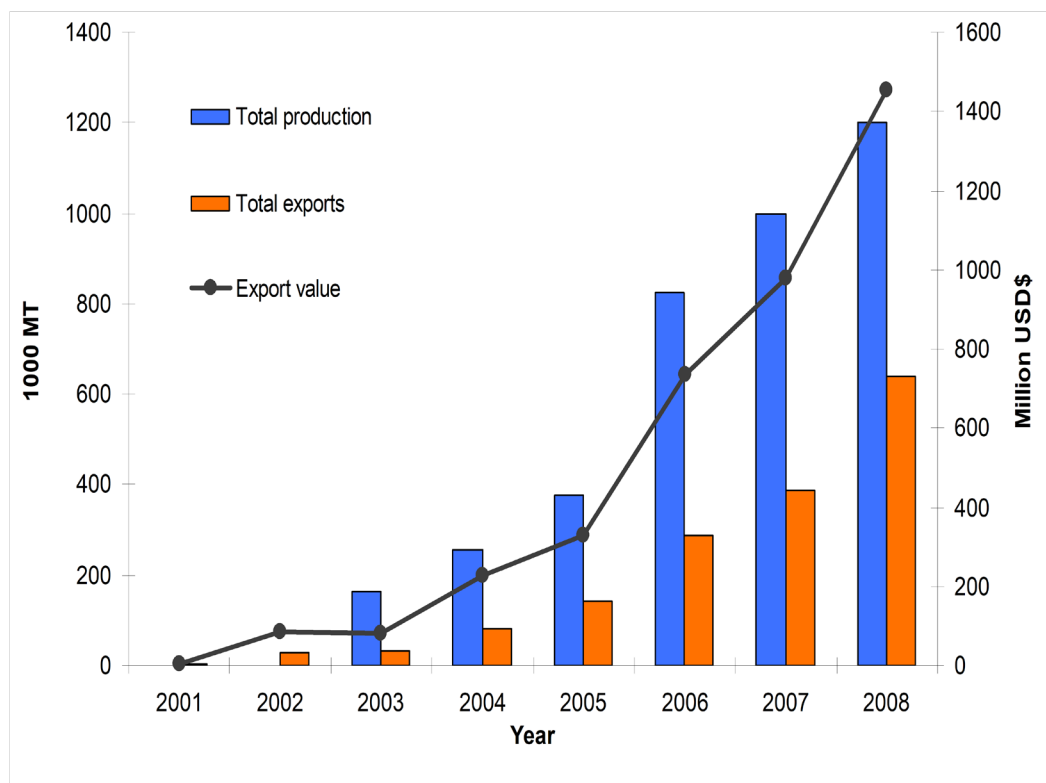
Figure 1: Catfish production in Vietnam (Source: Duc 2011)

Pangasius production and food practices in transition

In 2012, Vietnam produced 1.6 million tons of pangasius (Thong et al., 2017, p. 400). It currently accounts for 75% of the global production, and most of the farming is carried out in the Mekong Delta. Pangasius fish farming in the region has been growing fast; in 2008, it accounted for 47% of the region's aquaculture production (Kam et al., 2012). Graph 1 shows the fast growth of catfish production and export in the 2001-2008 period. The farming of catfish in the region goes back several centuries, but only recently has it been expanded and become commercialized, mainly in the provinces of Cần Thơ, Đồng Tháp, An Giang and Vĩnh Long. Pen and cage cultures account for about 35-45% of the farming practices; the rest is dominated by pond cultures (Halls & Johns, 2013).

Catfish in the Mekong Delta are raised in fresh water ponds of about 4-4.5m deep. Most catfish ponds are of the intensive type, and contain monocultures of Pangasius hyphophthalmus or Pangasius boucourti, or polycultures where these two species are bred together with Pangasius conchophilus (Edwards & Allan, 2004). Production cycles last from six to eight months. Intensive cultures lead to the production of fish with white flesh, thanks to a combination of water treatment and the right selection of feed. However, without intervention, the cultured catfish in the Mekong Delta has yellow flesh, which has low export value. Accordingly, the production of good quality fish requires good water quality, which is not easy to achieve given the current water pollution in the Mekong River. Ironically, the fish ponds constitute one of the main causes of pollution in this river (Anh et al., 2010).

In order to sustain the growth and meet the demand for high-quality products in foreign markets, pangasius production in Vietnam is adapting fast to new quality requirements and food safety standards. Such standards include but are not limited to those of the Aquaculture Stewardship Council (ASC), the Global Aquaculture Alliance (GAA) and the global Good Agriculture Practice (GAP) (Alfnes, Chen, & Rickertsen, 2017). The Vietnamese state has adopted ASEAN's GAP system and localized it as VietGAP. The two systems are similar to Global GAP's requirements with some modifications in order to better fit with local conditions (Michida, 2015). While this has been a strategy for the state to strengthen its authority and generate higher income (Marschke & Wilkings, 2014), VietGAP labels have provided domestic consumers with safe and high-quality products (Anh et al., 2014). As for the export market, the recently developed VietGAP for aquaculture is playing a vital role in improving the reputation of pangasius fillets in European and American markets (Prein & Scholz, 2014). Product certification and labelling, such as VietGAP, is an effective tool in sustainable fisheries management in Vietnam (Anh et al., 2014).

However, Bush et al. (2013) have raised the problem of the exclusion of small producers in aquaculture as a result of international sustainability certification schemes. These international standards have failed to take into account the position of small-scale farmers in the Global South, and have marginalized them further by limiting their access to the global seafood market. Recent developments in the farming of catfish include vertical integration, which means that fish processing companies buy grow-out farms, taking charge of brood stocks, breeding, feeding, grow-out facilities, processing, production, and distribution. This type of development can help companies control the quality, meet the growing demand, and fulfill the strict quality requirements of the world market. However, this closed production cycle puts small farms out of business because

they cannot compete with these big companies. In addition, big producers and processors have already acquired international certificates such as those from ASC, GAA and global GAP in order to gain access to export markets (Marschke & Wilkings, 2014). Small farmers, on the other hand, have to compete very hard in order to get access to markets with less strict standards and requirements. Therefore, Marschke and Wilkings (2014) suggest that the Vietnamese aquaculture sector needs to have a separated VietGAP certification scheme for small farmers. In addition, sustainable governance needs to take into account local perspectives.

As many researchers have observed, many farms in the Mekong Delta region suffer losses due to fish diseases, low water quality and high production costs (Edwards & Allan, 2004: Griffiths, Van Khanh, & Trong, 2010; Bush & Belton, 2012; Halls & Johns, 2013). Feed and feeding costs make up a large part of the production costs of pangasius, at times up to 70% (Halls & Johns, 2013). Diseases caused by bacteria pose a serious problem as well (Griffiths, Van Khanh, & Trong, 2010). A common treatment is to use chemicals in the pond preparation period, and antibiotics when diseases are in full swing. The use of chemicals and antibiotics in pangasius production has spurred European consumers' concerns over food safety and environmental pollution in the Mekong River. Such negative information about farming technologies of pangasius has made European consumers reluctant to buy and eat the fish (Bush & Belton, 2012). As a result, pangasius is often the cheapest fish sold in European markets.

During the past two decades, pangasius production in Vietnam was export-oriented; domestic consumers were not accustomed to eating tra fish from the Mekong Delta until recently (Tung, 2017). After losing access to the American market as a result of anti-dumping policies in 2003 and negative perceptions by European consumers (Bush & Belton, 2012), tra fish exporters in Vietnam had to find new consumers in other markets, such as China, Japan and the Middle East (Phong, 2018). The domestic market with 90 million potential consumers and their high demand for seafood appeared lucrative as well. Therefore, Vietnamese pangasius distributors are currently targeting the domestic market, and pangasius products have gradually become familiar to Vietnamese consumers (Tung, 2017).

Research on pangasius consumption has only looked at ways in which international consumers' expectations and requirements have affected the production, certification and distribution of pangasius (Little et al., 2012; Bush & Belton, 2012; Prein & Scholz, 2014). Little attention has been paid to domestic consumers, and to my knowledge no research has been conducted on domestic consumption practices and how these practices influence the sustainable production of tra fish in Vietnam. However, it is important to understand Vietnamese consumers' preferences since the domestic market has its own characteristics. Vietnamese prefer fresh fish, while the current distribution system of tra fish needs cold chains, which are supply chains that require refrigerated production, storage and distribution at a desired low temperature range. These cold chains are only available for products sold in the supermarkets or trading centers (Tung, 2017). In areas other than big cities, people stick to their traditional routines, shopping in small and convenient market areas.

Based on the existing literature on the production of pangasius in the Mekong Delta, it appears too early to draw the conclusion that domestic food anxieties lead to changing farming practices in Vietnam. For the time being, it seems international food anxieties are creating change, and the transformation of the Vietnamese fish production takes shape in ac-

cordance with food safety standards in foreign markets.

The application of international standards and certification methods in the Vietnamese aquaculture sector has led to the marginalization of small farmers and to more social inequality (Bush et al., 2013; Hansen & Trifkovic, 2014; Marschke & Wilkings, 2014). There are indications that the industry is changing, but the transition from traditional small-scale farming practices to high integration between pangasius production, processing and distribution is not sustainable if it marginalizes local and small producers (see Marschke & Wilkings, 2014). Therefore, researchers and policy-makers should take into account the small fish farmers' perspectives, for instance when it comes to issues related to product certification and labelling. Globalization brings them opportunities to commercialize their products for export, but the same force may just as well deprive them of their livelihoods, as a result of economic and political marginalization.

Conclusion

Vietnam is generally considered to be a successful development story. The Communist Party is proud that its economic reforms and development policies have lifted millions of people out of severe poverty. Foreign investment has indeed been a cause of economic development, but also of environmental degradation, as the Formosa case illustrates. The emerging Vietnamese economy is characterized by severe environmental challenges and corresponding social tensions. Solving such problems is extremely difficult in an authoritarian regime without an independent civil society, where people have limited space to express their anxieties about environmental issues. The response to the marine disaster, nevertheless, shows a bottom-up approach where a new group of consumers demand a systematic change in food production and distribution. By showing their concerns over local environmental degradation and food safety via public demonstrations, Vietnamese people have asserted their right to receive correct information and the right to freedom of expression – which are, after all, human rights.

As I have argued in this paper, environmental problems pose a threat both to people's well-being and to the legitimacy of the state. Using transition theory in food practices, I explored the hypothesis that domestic food anxieties, which increased after the April 2016 incident, contribute to transitions in local food production and help build up sustainable farming practices. The political unrest following the marine disaster shows that Vietnamese consumers are putting pressure on authorities, pushing for reforms in local environmental management and food production systems. Drawing on the existing scientific literature on pangasius fish production in the Mekong Delta, I discussed changes in the Vietnamese aquaculture sector. However, these changes are driven by international food anxieties, not domestic ones. In particular, consumers in foreign markets are concerned about whether pangasius is produced safely, based on negative information about water pollution in the Mekong River and unsafe chemical use in regional farming. These concerns have led to the adoption of safety standards, certification, and product labelling. This international demand-driven change puts pressure on local fish production, as small-scale farming is marginalized by a process of vertical integration among producers, processors and retailers. For the time being, global safety concerns, rather than domestic ones, appear to have more impact on local farming practices. And it remains to be seen whether Vietnamese fish farming practices are in transformation and transition due to international food safety standardizing

processes.

In this paper, I have discussed two different case studies: the social effects of the Formosa toxic waste disaster, and the impact of global food safety concerns on Vietnamese aquaculture. Although different in terms of scale, both cases point to one important issue: there is a growing food anxiety in the Vietnamese and international seafood markets, both of which have a significant economic and social impact, affecting local Vietnamese livelihoods, consumption patterns, and people's trust in the authorities. It would be useful to see more studies on domestic consumption patterns and local consumers' preferences in seafood products, especially pangasius fish, in the future. As Vietnamese purchasing power is increasing, and food-related anxieties continue to prevail, domestic issues may well gain more importance in years to come. If pangasius farmers in the Mekong Delta succeed in framing their products as safe and sustainable domestically, they may well find a new market in their own country, as Vietnamese consumers may then opt for "safe" pangasius instead of other seafood products.

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The rise and decline of extreme economic inequality in 20th century Japan
A literature review through the lens of institutional changes

CHRISTER KOLD LINDHOLM

As economic inequality is rising in many countries around the world, the interest in how inequality has risen and declined in the past is being revived. Some researchers have seen modern history since the industrial revolution as a positive story of economic growth and technological progress that enhanced social development for all. Others have seen modern political economies as wrought with vicious cycles of inequality and social instability. This study investigates the rapid rise of economic inequality in Japan beginning in the 1880s and its equally dramatic fall in the 1930s. Using the World Income and Wealth Database's new statistical data, I argue that Japan's early economic development was characterised by highly inegalitarian institutions: taxation laws transfered resources from agriculture to urban centres for decades, corporate, financial and land properties were heavily concentrated in top income groups and rights-based organisations built by labour and women's movements took time to gain national influence. The unequal strength of these institutions prevented economic growth from fostering inclusive development. Only with the outbreak of World War II were these institutions reformed during the collapse of the global economic system. This article thereby supports the development literature that draws clear distinctions between unequal growth and socio-economic equality tied to institutional change.

Keywords: economic inequality, Meiji Japan, labour movements, capitalism, globalisation

When Piketty (2014) published the fruits of his collaborative research on economic inequality, it caused widespread public debate. By applying a unified statistical method accounting for both income and wealth, the group was able to compare inequality in all major economies going back over a century. Piketty's (2014) *Capital in the Twenty-First Century* thereby demonstrated for the first time how extreme levels of inequality have been the normal state of society in today's high income countries. In concrete measures, these inequality economists discovered that between 1850 and 1940, from when the industrial revolution began in several parts of the world until World War II, it was common that just 10% of the population in Japan and Europe received 40-45% of total national income and owned 80-90% of all wealth. In contrast, at the bottom of the income distribution, 50% of the population merely received a 20-30% share of national income and owned less than 5% of national wealth (Piketty, 2014; Piketty & Saez, 2014). During World War II these scales of inequality dropped sharply but have started rising again since the 1980s. Today inequality in the US has already reached Europe and Japan's highest 20th century levels. Other studies also reveal a gloomy picture. Milanovic (2016) accounted for global income inequality from the fall of the Berlin Wall in 1989 to the worldwide financial crisis in 2008. He was forced to conclude that, on average, in the rich countries the bottom half of the income hierarchy has experienced 'the absence of growth in real income over twenty years' (Milanovic, 2016, p. 19). With stagnating wages in a reformed labour market, concentrations of wealth building up again, and income from capital surpassing labour income (UN 2016), Japan might possibly be poised to go in America's direction (Baldwin & Allison 2015).

Japan in the pre-World War II period is a valuable case for understanding inequality's significance in a country's course of economic development. As Japan attained industrial growth rates in the 1880s, it started a path to become the first high income country outside of Europe and America, but for half a century Japan's distribution of income growth was completely unlike the relatively egalitarian decades in the post-war period. This transition from extreme inequality to relatively equal growth was anchored in a sweeping confrontation with the 'old world's' economic order (Piketty, 2014, p. 322). Starting in the key year 1937, World War II became the setting for a global collapse of capital systems, which had supported top income groups. State policies finally confronted major social divisions with redistribution of property and progressive taxation. Labour unions became a powerful parliamentary influence. This study ties previous research literature to the statistical data published by Piketty and Atkinson in 2010.

Economic theory: refuting the growth-equality nexus

How economic growth is intertwined with equality, social hierarchies, parliamentary institutions and labour's rights is a long-standing question in development scholarship. Economists writing in the mid-20th century, like Kuznets (1955, 26) who deemed that his own calculations were "95 per cent speculation", argued that the early phases of industrialisation widen income inequality while growth in the later stages is a virtuous cycle as it lifts farmers into professional and industrial occupations. Atkinson (1983, p. 190) questioned this analysis and argued that we are starting to see the presence of 'dynastic' inheritance again. Leading economist Minami (1998, p. 55) countered the explanation in Kuznets's theory for Japan by linking its equality during the post-war period to 'the new government's policy of heavy

taxes on assets and wealth', concluding that 'equality does not always result from economic growth but can only be realised by strong policy measures'.

Atkinson and Piketty (2010), Moriguchi and Saez (2010) and Alvaredo et al. (2017) have strengthened Minami's refutation and weakened Kuznet's growth theory with their statistical work. In Figure 1 below, the evolution of top incomes in Japan and America 1913-2015 are shown. I take these two countries' top 1% income elites as examples of well-known inequality evolutions to prove that inequality can both rise and fall dramatically regardless of growth rates. The graph presents the share of total national income received by the top 1% in those two countries in any given year. These persons are a small minority who received very substantial incomes of 18% (Japan) and 20% (US) of the national total in the peak year 1925.

Figure 1: The top 1%'s share of national income in the USA and Japan, 1913-2015.
Source: WID (2018) and author's comments.

In the late 1930s, World War II broke out and inequality declined rapidly. In Japan income inequality had nearly vanished by 1945. Similarly in the US, top incomes gradually declined year after year to a low level both during and after the war. Since the 1970s, a reverse course begins: in the US the pace stepped up, from an 8% share in 1978 to an astounding 22% in 2007, thereby returning to the heights of the 1920s (Piketty, 2014; Stiglitz, 2012). In Japan the rise is moderate but significant: from around 8% in the 1970s to 11% in 2007.

In the US the 1% highest income group today receives the same share of national income as the 1% did in 1920. Japan's inequality has risen more moderately. The immense shifts in inequality occurring in the mid-20th century and the significantly diverging patterns in recent decades cannot be explained as a result of changing growth rates (Piketty 2014).

Atkinson & Piketty's (2010) research breaks new ground by using sophisticated statistics on wealth to unravel the various dimensions of economic inequality and anchor them in institutions and historical events. The evolution of income inequality in Japan and the US shown in Figure 1 provides evidence that, unlike Japan which was defeated and subjected to severe destruction in World War II, the US emerged unscathed and with a healthier economy than before, yet the US also experienced a reduction in inequality. This is partly explained by the labour movement's increased strength during the Great Depression and preparatory planning for war, which led to the government's adoption of various innovations in tax and corporate policies as part of the New Deal (Piketty, 2014; Moriguchi, 2003).

In Japan 'the defining event for the evolution of income concentration' was 'a historical accident, namely the Second World War' (Moriguchi & Saez, 2010, p. 78). Its outbreak created a series of exigencies that demanded un-

precedented transformations in the economy from both capitalist and bureaucratic groups (Moriguchi, 2003; Gordon, 1991). The centrality of historical accidents and regressive/progressive policies whose influence lasts for decades made Piketty & Saez (2014, p. 842) conclude that 'powerful forces [push] alternately in the direction of rising or shrinking inequality. Which one dominates depends on the institutions that societies choose to adopt'.

Methodology: income inequality and institutions

Without any conclusive linkage between growth and economic equality, an explanation of inclusive economic development must combine changes in political institutions, legislation, shifts in the world economy and historical accidents. Development research on Japan has revealed this but it has paid little attention to the central role of inequality.

Amartya Sen's (1999) influential 'human development' theory sought to account for necessary virtuous linkages in economic and social development. Supported by the United Nations' human development statistics, Sen (1999, p. 153) argues that Meiji Japan was the 'pioneering example of enhancing economic growth through social opportunity, especially basic education', achieving higher literacy rates than Europe's growth economies already in the 19th century. Literacy, lower mortality rates and poverty amelioration must support growth in successful development.

The classic Asian 'developmental state' scholarship (Johnson 1982; Cumings 1984; Schmiegelow & Schmiegelow 1990; Chang 2002) has similarly focused on the mutually enhancing aspects of government initiatives and income growth. In Japan, in addition to implementing national education, the state initiated growth through a state-supported industrial and military sector by utilising foreign technol-

ogy imports and taxation to channel resources from agriculture to urban centres and various monetary policies.

This article investigates why Japan's growth was highly inegalitarian and how political changes turned everything around when World War II broke out. I explain the rise of inequality by looking into early taxation law and the unequal relationship between labour and employers' organisations. I then present precise data on both income and wealth inequality to account for the structure of unequal economic development and discuss the weak impact of post-Great Depression labour legislation on the continuing income scale divides. Finally, utilising those data further, the study identifies the key years when inequality fell and links this dramatic shift to the global financial economy's collapse as well as to an array of domestic reforms resulting from war-time power struggles in government.

The Meiji nation state and early regressive taxation

The Meiji Restoration of 1868 was less of a one-sided 'modernisation' story of a new regime planting the first seeds of future development and more of a 'revolution from the top' (Lockwood 1968, p. 505) that built upon substantial economic developments of the late Tokugawa period (Macpherson, 1987, p. 24). The victorious Meiji leaders ended the reign of local lords and took from them the key prerogative of eliciting taxes from the peasant population that cultivated land in Japan's previously fragmented domains. Policy jurisdiction was transferred to the central state. The Meiji period therefore saw the consolidation of a national bureaucracy in the already emerging urban centre of Tokyo. Powerful Tokugawa merchant families would continue to expand their wealth in the following decades. The major administrative reform (Gordon 2003, p. 64) established

a nationally unified tax system based on credit payments by each individual following market prices.

Tax reform tied the agricultural economy closely to the urban centres and made it susceptible to administrative initiatives and market instability. In 1880 Japan was still predominantly an agricultural economy. 72% of the population was employed in agriculture and 90% of state revenues derived from agricultural land taxes (Minami, 1994, p. 258). The state taxed this large and developing resource base, channelling resources into incipient urban industries.

Inequality-reducing tax legislation aimed at the emerging high-income industrial economy proved more difficult to implement. In 1887 Japan's first wage income tax code was enacted. The Meiji administration sought to impose a progressive, rudimentary 1-3% taxation on personal income. With people earning below 300 yen (10 times average annual income) exempted, only 0.3% of the population were liable tax payers (Onji & Tang 2017, p. 443). The top 1,089 largest companies of the 1880s Tokyo Stock Exchange, including the wealthiest family-owned *zaibatsu* conglomerates, were in large part able to circumvent this law. To avoid personal tax, top conglomerates reorganised and incorporated smaller companies, gradually replacing them. By 1892, 54% of large textile companies had become branches of joint stock corporations, and 1/3 of sole proprietors disappeared.

Migration and unequal organisation between labour and employers

In the 1880s, on the eve of Japan's boom in manufacturing, peasant families were subjected to the new administrative state's attempt to establish a currency economy. The pressure on public finances caused by the expense of suppressing revolts and building infrastructure in

the 1870s was met by printing large amounts of money, which caused high price inflation. Finance Minister Matsukata responded to the situation by implementing severe deflation policies. Almost over night, rice prices declined by as much as 50% (Ericson, 2014). These deflation policies created a spiral of inequality in which desperate peasants became indebted to meet rent and tax payments, often having to give up land ownership and urge their children to take up work in the urban factories to earn additional income. These events therefore linked up with the tremendous reorganisation of labour that took place during Japan's industrial boom around 1886.

Japan's early industrialisation was based primarily on textile manufacturing. Between 1876 and 1900, the agricultural sector's share of employees fell from 78% to 65%, then to 51% in 1920 (Moriguchi & Saez, 2010, p. 86). By 1909, 500,000 Japanese were employed in textile manufacturing. With 50% of total national exports consisting of textiles, the sector accounted for 60% of all growth until 1938 (Minami, 1994, p. 98). No less than 85% of this workforce was female and nearly all of them were migrant peasant daughters in their late teens (Patrick, 1976, p. 59).

According to labour scholar Tsurumi (1990), during these decades factory compounds were institutions of social control. Because urban residents knew about the degrading and miserable conditions, factory owners were forced to recruit girls from rural regions where fathers, hardpressed by debt, forced their daughters to become textile hands. The living quarters of locked and fenced off factory dorms were tightly packed with small sleeping pads and inadequate bathing facilities having 'more in common with a prison' (Yamamura, 1997, p. 257). The small portions of bad quality food that were served every day were a major reason for flight and caused malnutrition. A

death rate of 9% was probably normal. Working twelve hours a day, cotton hands were forced to work demanding night shifts every second week. The result was a turnover rate of 100% (ibid., pp. 256-261). Tsurumi (1990, p. 138) argues that only 10% of the girls in this heart of production were literate, which underlines how force rather than education was necessary to make people contribute to the new socio-economic system, as one worker song testified: 'Factory work is prison work. All it lacks are iron chains' (ibid., p. 98).

Factory owners, on the other hand, formed wide-ranging organisations. In the absence of state regulation, the Yamanashi and Suwal silk employers' alliances wrote legislative treaties that gave them the right to fire employees without constraint and to unilaterally set and withhold wages while making it compulsory for workers to stay at the same company for a whole year (1990, pp. 49, 74).

After World War I, social activism and labour unionisation became major movements in Japan. The urban labour organisation Friendly Society, founded in 1917, became the largest union, the Japan Confederation of Labour. Closely studied by Gordon (1991) and Garon (1987), the proliferation of civil society organisations was based on widespread protest against low material living standards and against lacking acknowledgement of labour's contribution to the economy. The fact that in Nankatsu, Tokyo's principal industrial centre, union membership grew from approximately 2% to 32% of the local labour force between 1912 and 1929—reaching approximately 7.9% on a national level—is testimony to the vitality of community-building in an environment where unions were still formally illegal (Gordon, 1991, p. 186). Union proliferation led to a comparable increase in disputes between workers and employers which rose from 500 to 3,000 incidents countrywide in the 1920s. This

movement undeniably produced impressive victories for social progress: In 1922 women won the right of freedom of association and free public speech. In 1925 universal male suffrage was implemented (in 1908, only about 47,000 qualified to vote in elections). A year later a bill in the Japanese parliament, the Diet, legalised labour disputes. In 1928 night work by women and children was prohibited by law. At labour's peak strength in 1931 following the Great Depression, the elected representatives in the lower Diet found themselves flanked by socialist parties that had roots in the urban proletariat and they even managed to pass a bill to legalise unions, but the upper Diet's unelected members stopped the law indefinitely.

Slow material improvements, repressive factory institutions and unequal political rights spurred workers to organise themselves and to pressure employers through disputes and parliamentary participation. This movement achieved victories that resulted in better labour market regulation. However, this legislation was not enough to substantially reduce economic inequality, which contined to rise until the 1930s.

Wealthy dynasties, capital and corporations: expansion in the 1920s

We saw in Figure 1 that the share of national income going to the 1% highest income group was 20% until 1937. It did not decline during the labour movement's activist years. However, compared to wealth, capital and property, which accumulated rapidly through this period, income was relatively equally distributed. Moriguchi & Saez's (2010) account of Japanese estates—the capital portfolios and properties inherited within the wealthiest families—begins with data from 1905.

In Figure 2 below we observe the evolution of capital concentration among these rich families. The wealthiest 5-2%, of families owned substantial wealth compared to the rest of society. Their assets maintained values that floated around 10-20 million yen until the 1940s. However, this small wealthy group did not truly participate in the rapid economic changes taking place. The rise and fall of wealth is much more strongly pronounced

ISSUE 6
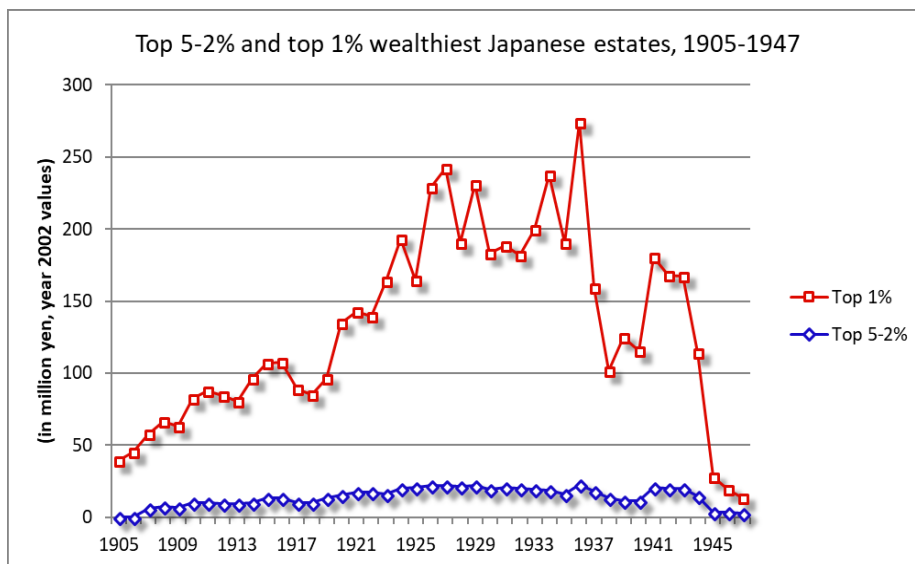
Data source: Moriguchi & Saez (2010, pp. 147-8).

Figure 2: The top 1% and top 5-2% of the Japanese wealth scale from the 1905 until World War II. Wealth inequality remained anchored primarily in the properties of Japan's 1%. Their fortunes surged upwards especially after World War I and did not decline until World War II policies were implemented in 1937.

among the top 1%. Their fortunes grew from 40 million yen in 1905 and peaked at over 250 million in 1936. The evolution was towards ever higher inequality, with a temporary precipitous decline during the Great Depression, but without a lasting fall until 1938, the very same year when income inequality took a nosedive. This scale of capital accumulation meant that income growth alone could never substantially reduce inequality. For the entire nation, annual growth rates reached 2.1% between 1905-1936 (Maddison 2003, pp. 180-182), but capital grew at the faster rate of 7.4% for the top 1%, 3.5 times faster. This is consistent with Piketty's (2014, p. 25) 'fundamental inequality' of capital growth exceeding income growth in extremely unequal societies.

The realm of the Japanese capitalist aristocracy is well-known. Throughout the 1920s, zaibatsu conglomerates grew and expanded their power (Minami, 1994, p. 114). Reflecting traditional aristocratic values, the Japanese es-

tate was organised around patriarchy with the head of a dynasty managing the bulk of family wealth while also holding authority in overlapping board memberships in a conglomerate's corporate and banking branches. When possible, these positions and assets were inherited by the first-born son. In Figure 3, an overview of their wealth shows how capital property yields higher income: vast agricultural land ownership (34% of all wealth) provided property owners with income from renting farmland and housing to tenant families. With the new capital economy, massive amounts of financial assets (50% of total in 1937) provided high returns to stockholders in banks and corporations.

Wartime reform and economic collapse: the fall of inequality

A series of historical events led to the demise of capital and extreme inequality in Japan. Labour unrest in the 1930s provided strong
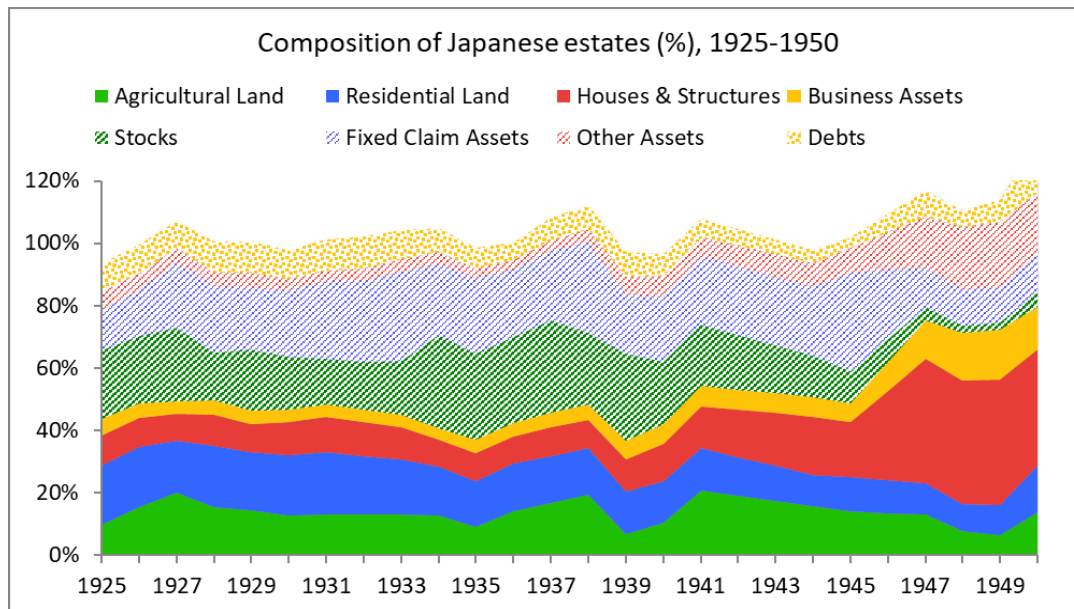
Data source: Moriguchi & Saez (2010, p. 151)

Figure 3: Composition of Japanese wealth, 1925-1950. Both agricultural and residential property remained key sources of wealth and rental income until the 1940s, but financial assets constituted as much as 50% of total wealth in 1937. Half of all financial capital vanished during the years of war.

evidence for affluent circles that society and economy were dysfunctional. They held an 'obssessive fear […] that domestic society was collapsing' (Gordon 1991, p. 10), and groups of reform bureaucrats 'believed that radical policies to nationalize industries, control private property, and thereby eliminate popular discontent were essential to national defense' and 'to reduce the tremendous gap between the rich and poor' (ibid, p. 279).

The state became an arena for conflict and collaboration between capital managers and civil servants. In 1938, the war-preparatory Mobilisation Law was passed, which in principle allowed the bureaucracy to control Japan's corporations. To accommodate business leaders in the wartime plans, the former Mitsubishi *zaibatsu* and Bank of Japan executive, Ikeda Seihin, entered government as the first minister of a newly established powerful Ministry of Finance. He tried to preserve independence in corporate boards while aligning their corporations to the war effort. Ikeda was forced to resign after clashing with the Home Ministry's planners who favoured stronger state-centered coordination (Johnson, 1982, pp. 145-8).

The shifting wartime governments managed to implement an array of unprecedented reforms to bolster social stability. They regulated and standardised wages across industries both at the top and bottom; they mandated workers' councils in factories to empower state-governed unions; and they put a ceiling on executive wages. The regressive tax system was finally turned around with the imposition of heavier taxation on corporate and rental income each year after 1938, while land was redistributed from property owners to tenant farmers and rice prices were fixed. In the stock market, war bonds replaced generous state obligations, thus nullifying a major rental income for capital-owners (Moriguchi & Saez, 2010, p. 101).

With Japan's defeat in 1945, the economy was in an advanced state of collapse. Hyperinflation increased the cost of goods 150 times in just two years. Zaibatsu empires in Asia were dismantled in conjunction with the American occupation government's demobilisation of the army. All these forces in combination dramatically weakened the institutions that had supported capital clusters. As Figure 3 shows corporate stocks and financial assets which had constituted 52% of estate wealth in 1938 fell to a mere 17% by 1950.

A new constitution legalised labor unions for the first time in an attempt to muster popular support for breaking up the zaibatsu conglomerates. In the crisis environment of inflation, food scarcity, unemployment, labour was revitalised like never before. In just four years, independent union membership came to cover 56% of the workforce. In June 1946, 157,000 Japanese participated in 233 takeovers of factories. After averting a planned national strike that involved 6 million people, the occupation government again decided to douse activism by making public union strikes illegal (Gordon, 1998, pp. 7-10).

In sum, historical accidents in the form of a collapsing global economy and hyperinflation decimated family-owned wealth clusters. Policies intended to foster social stability during war redistributed economic resources. Strong labour organisations only played a secondary role in the overall development by influencing parliament's legislation (Gordon, 1998; Esping-Andersen, 1990).

Conclusion

Japan's pre-World War II political economy of development transformed it into the first Asian country that reached high income levels. It was at the same time among the most inegalitarian countries in modern history. As a result of the highly concentrated and inherited ownership

of capital, growing wealth inequality inhibited the possible positive effects of national income growth and early labour rights and tax legislation. Growth alone did not constitute a virtuous cycle. The turn-around took place in a time span of just 8 years and was directly linked to the breaking up of old power constellations. World War II both compelled and enabled the government to implement a flurry of first-time progressive taxation, to redistribute property, to reforge capital bonds and even to empower labour.

For development scholarship, the central conclusion is that policies designed to promote growth which neglect redistribution constitute a weak and disjointed approach to development in which growth may even lead to deeper socio-economic inequalities. This proposition is strengthened by the fact that the considerable victories in Japanese labour market regulation and social rights legislation won in parliament helped narrow social gaps but had a limited direct impact on the immense scale of income and wealth inequality. Only direct taxation and redistribution, or crisis events with comparable harmful effects to capital, alleviated that divide.

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Book Review

Tyrell Haberkorn, In Plain Sight: Impunity and Human Rights in Thailand. Wisconsin, Madison: University of Wisconsin Press, January 2018. 312 p. ISBN: 978-0-299-31440-8.

In her new book, Tyrell Haberkorn, Associate Professor in Asian Languages and Culture at Wisconsin University, takes a close look at state violence and impunity in Thailand from the 1950s to date, while also reflecting on human rights activism. This unique contribution to Thai studies that links Thailand's history with a global human rights historiography, expands on Haberkorn's earlier work on state and para-state violence, impunity, resistance, law and justice in Thailand.

The book begins with the Thai authoritarian regimes after the end of World War II, and specifically the ideas about how to control people considered "political dangers". The book ends with the 2017 military rule that seized power through a coup in 2014 and its use of law to repress political opposition. Haberkorn does not adhere to the common narrative of social disruption through coups and regime changes that dominate Thai modern historiography but instead demonstrates the repetition of a specifically violent state order. Haberkorn finds that the institutionalisation of illegitimate state violence and impunity is a character trait of the modern Thai nation-state (pp. 6-7, 220). Merging the scholarly approaches of James C. Scott and Ranajit Guha, Haberkorn insists that impunity "demands a reading of state documents against the grain in order to identify a different kind of hidden transcript: indications of complicity and participation in violence, anxiety, and the evasion of responsibility by

the state itself". (p.112) Haberkorn exposes how engagement in a nascent international human rights regime in the 1950s and 1960s, when the Thai state not only contributed to the UN human rights year-book and participated in drafting the genocide convention but also promoted human rights at home, could co-exist with human rights violations in Thailand. The quoted speeches of field marshal Sarit Tanarat (1958-1963) are a case in point: human rights in Thailand could be limited through a nationalistic discourse and by creating legal exemptions (Chapter 2). This is an early form of impunity for state violence in the era before the international monitoring of human rights was well developed. In the later chapters dealing with the recent past and present, Haberkorn shows how impunity for human rights violations takes form in the judiciary itself, with judges writing its history (Chapter 6).

The book is not an exhaustive account of state and para-state violence in Thailand – an impossible task given that so much of it is undocumented – but it offers an insightful, nuanced analysis of instances where impunity has been created. It is both thematically organised and follows what the author calls a "new and partial chronology of Thai history". The local Thai timeline adheres to the global history of human rights outlined by Jan Eckel and Samuel Moyn that regards the mid and late 1970s as a "breakthrough" moment for human rights as a popular movement (2013). This turn is largely

attributed to US president Jimmy Carter's human rights-promoting administration in 1977, which also opened up opportunities for the Thai human rights movement. Thailand was a close ally of the US during the cold war and the US withdrawal from Vietnam, Laos, and Cambodia in 1975 resulted in the Thai state becoming increasingly fearful of communism. Indeed, this fear provided the backdrop to the massacre of student activists and subsequent coup on 6 October 1976 just three years after an attempt to bring democracy to the country. In the repression that followed, local human rights groups worked on solidarity and wrote reports about political prisoners. The reports were distributed among international solidarity networks and Amnesty International, which had not previously campaigned explicitly for cases in Thailand. Haberkorn unearths the global turn of Human Rights from the state archives of the Ministry of Foreign Affairs (MFA), and concludes, "[…] the files indicate a growing realization within the MFA that the meaning of human rights was changing and neither they nor other state officials were its sole arbiters any longer, even within Thailand." (p. 151)

The evidence for the establishment of human rights advocacy in Thailand in 1977 is strong, but questions remain about what preceded it and what followed. The major part of the book is dedicated to the violence and movement during the politically turbulent 1970s while the 1980s and 1990s serve mostly as a passage towards the 2000s. Haberkorn touches on the decrease in legal and extrajudicial violence during the 1980s, but does not follow up on how this affected the development of human rights activism in Thailand. As Haberkorn's study points towards paying attention to legal institutions and advocacy for legal redress, it is also relevant to ask what impact formal human rights institutionalisation in the late 1990's – yet another period

when Thai history is clearly aligned with global human rights trends – might have had on the practice of state violence and impunity. Unfortunately the international links and world politics are missing in the chapters dealing with recent times.

Haberkorn convincingly demonstrates that the very same legal institutions that could work to the benefit of human rights have been, and are continuously being, used to violate both humans and their rights. While the main focus of the book is on the state's violations and the impunity embedded in the Thai state, the people subjected to the violence and their resistance are not forgotten and the book praises their struggles. It is sadly also a reminder of what the institutionalisation of human rights have not been able to do for the people of Thailand.

Haberkorn's book is an important contribution to the body of knowledge on this subject and with its incredible richness in detail and analysis, it will for a long time be a standard reference for everyone writing on human rights in Thailand. All who are interested in Thai political history and in understanding the Thai state should read it. The book is also relevant to those not familiar with Thailand but concerned with methods of studying history of human rights violations and the quests for justice in (post-) authoritarian states.

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- Provide a maximum of six keywords. The reader should get a strong impression of the main ideas discussed in your piece from this short list.
- Please include a short biography, including information about your affiliated institution, academic degree and your primary research interests.
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