



Objects found in the water close to one of the shit-pits.

PHOTO: JOHAN HEGARDT

Shit-pits and the archaeology of a lost economy

by Johan Hegardt

“Those who possess a treasure will guard it carefully and seek to preserve it or improve it.”¹

It's the end of May 2018 and I am returning to Stockholm from my family's summer residence in the Stockholm archipelago. The property is from 1918 and I have spent my summers there since 1960, the same year that I was born. It was my maternal grandparents who bought the place after my English-born grandmother had inherited a sum of money. In those days the island had three farms, all more or less economically sustainable. Today there is only one left, and it will probably close down soon.

When waiting for the ferry, I talked with one of the inhabitants. When I asked her why she was not out on her jetty that much any more, she replied that there are too many sailing-yachts anchored close to it. She explains: “It's like saying ‘Here I am, and who are you?’ It's not that fun sunbathing when unknown people are watching you.” She also tells me that when

her father came down to their jetty to use his boat, two young kids in a small rubber-boat asked him when he was leaving because they wanted his place at the jetty. Their parents were encouraging them from their sailing-yacht. He made clear that this was his property, but they did not take any notice.

She told me that she is worried about the island and that too many people are moving around on it, with too much pressure on the fragile environment.

Her mother was born and grew up on the island, and her father is from a neighboring island. Their families are inhabitants of the archipelago, and have been a part of the old economy, but a new economy is forcing them to step back, and it's even taking their place, as shown in the example above.

They have a house on the island, where they live all year round, even in the dark winter months when the people from the new economy are absent. It's in the forest and not on the shore, but their jetty is and it's their property. According to the

law those that enter the jetty are trespassing, but what can he do – call the police?

This example is typical. Those who live in the archipelago and who were once a part of the old economy are now facing a new economy and they are pressing back. I will in this essay try to explain why.

This essay derives from a small project that is generously funded by *Helge Ax:son Johnsons Stiftelse*. My sources come from archives, interviews, excavations and inventories, and published material. References to published material have been narrowed down to as few as possible and represent a rather diverse field of texts, ranging from scientific publications to popular books. The archived material comes from *Stadsarkivet* (City Archive). Inventories, excavations, and interviews have been carried out on the island. I have decided not to mention the name of the island, nor the names of the people interviewed. Instead, the island will be called “Island”, and the interviewed individuals will be called interviewee 1, interviewee 2, and so on. Five interviews were conducted: one woman aged 93 when interviewed and four men in the age span between 65 and 98 when interviewed. I have also talked to people about the issues discussed in this essay.

A story takes shape

Since the early 20th century, the summer population and the resident population have populated the archipelago.² The majority of the summer population had and still have their permanent homes in Stockholm. The archipelago was first used in the late 19th century, but only islands close to Stockholm. Rich families erected huge villas in the style of national romantic architecture.³ The whole family, including servants, moved from the city to these fashionable buildings for the summer. This tradition, together with an equally old tradition of sailing in the archipelago, is an important myth in the new economy.

A summer population in the archipelago is of course not unique for Stockholm. A similar phenomenon can be found in Finland, and I assume also in other countries around the Baltic Sea.

As long as I can remember, I have been aware of small pieces of glass, ceramics, and metal fragments in the fields on the Island. A few years ago I wanted to know more, and I asked interviewee 1 what he knew. He told me that they used to transport feces and garbage for fertilizing from Stockholm to the Island. *Skitgropar* (shit-pits) that the farmers dug along the shore and close to the fields were filled. He did not have any experiences of the practice, but his father had told him that it ended during the 1920s, which I later found was correct.

That was not a sufficient explanation to dispel my curiosity. I contacted *Stadsarkivet*, *Stadsmuseet* (City Museum) and *Sjöhistoriska museet* (Maritime Museum) in Stockholm to find out what they knew. They were aware of the word *skitgropar*, but that was all. After some work, I came across archived material at *Stadsarkivet* and some literature at *Kungl. biblioteket* (Royal Library). An amazing story took shape, which apparently was almost forgotten, involving not only the archipelago, but the whole region surrounding Stockholm, and it all began in 1849.

Stockholm 1849

The old woman (interviewee 2) that I interviewed was the daughter of a farmer on the Island mentioned in the archived material, but she had no experience of the practice. Many of the older generation know where the pits are situated on the different islands. They told me stories that as kids they used to stroll behind the plow picking objects out of the field. Among the most fascinating objects found were doll-heads.⁴ Many informed me that they have them at home somewhere, but cannot remember exactly where. I have never seen one and am beginning to suspect that they don't want to show me them for various reasons, or as one person emphasized on a different occasion – “You're not supposed to know everything.” The archipelago has its *secrets*.

When I published a short text about *skitgropar* in the local paper, I was advised by the editor to contact an old man. It turned out that he was 97 and that as a young child he had taken part when his father used the material from a pit. When I told the story about the pits to a man from the summer population, he remembered that his father had passed a pit as a child when fetching milk at the farm and that it had been horrible, the whole pit was full of crawling things.

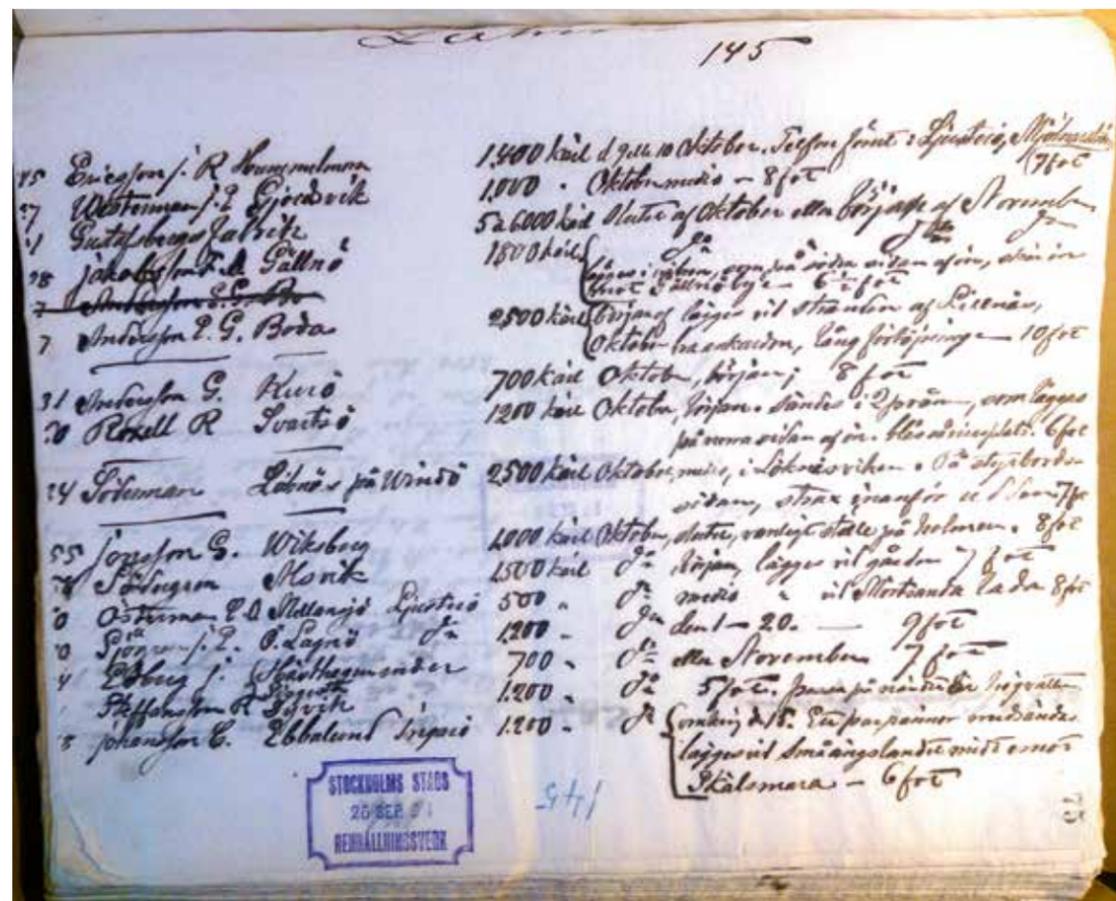
Despite these stories, there is a gap between those who once used the pits, now dead, and a generation after them knowing about their existence but not the whole story.

It all began in 1849. That year the Stockholm City Council bought Fjäderholmarna, a cluster of small islands situated in the Salt Sea in between Stockholm and Lidingö.⁵ Today the islands are a popular tourist attraction and nobody remembers that the islands once were filled with garbage and feces.

Until 1850, garbage and feces were dumped around Stockholm, creating sanitation problems. Polluted water made its way down into the groundwater, and cholera epidemics killed scores of people. Something had to be done, and the islands were bought. A *Kungörelse* (public notice) from 1851 stated that feces and garbage must be placed in barges in the harbors surrounding the city. They were then transported to Fjäderholmarna.

In 1857, Anders Retzius (1796–1860), one of Sweden's more prominent scientists, published the essay “An easy way to handle feces so that it becomes clean and useful.”⁷ Here he explains how to make fertilizer by combining garbage with feces. He also underlines that water should be kept clean. Accordingly, Stockholm now started to combine feces with garbage to produce fertilizer for sale. The archival material is very sparse from the first years, but it looks as if they sold feces and garbage from Fjäderholmarna as early as 1850.⁸ The production of fertilizer for sale became more extensive from the 1860s. Barrels of feces and garbage were placed in barges and towed out to Fjäderholmarna where the barrels were emptied and cleaned and returned to the city.⁶ Feces and garbage were placed in barges and transported by tugboats to the buyers.⁹

The stench from Fjäderholmarna was unbearable. A growing fleet of steamboats passed the islands and the passengers started to complain. The city therefore bought Löfsta and Riddersvik in 1885, two properties on the banks of Lake Mälaren.¹⁰ From this point the production grew rapidly.



In the archives there are hundreds of papers with orders for feces and garbage that came from everywhere around Stockholm.

PHOTO: JOHAN HEGARDT

In 1894 Karl Tingsten (1863–1952), father of Herbert Tingsten (1896–1973), who would become a famous professor in political science, a leading liberal, editor in chief, and a critic of Nazism, took over as a director.¹¹ At this point the archived material is more reliable, and under his leadership they developed a new form of fertilizer called *pudrett*, a combination of feces and peat.

In 1885 there were 89 registered water closets in Stockholm. In 1927 they had increased to 106,¹² and the amount of feces declined rapidly. The city also started to burn its garbage. The skitgrop system would come to an end, but Stockholm would face a new problem, namely, the pollution of the Salt Sea and Lake Mälaren from the water closets. They had obviously forgotten Retzius' appeal, but that's another story.¹³

The *skitgrop* system was, to use popular words by today's politicians, a "world-class re-cycling system" and a commercial practice that helped Stockholm handle its problems with garbage and feces. In popular language, the system was called *smutsguld* (dirt-gold) or *folk-guano*.

But more important is that the *skitgrop* system demonstrates the archipelago population's trust in future farming. When buying feces and garbage for fertilizer, large economic and physical resources were invested. This is important to remember because there are not many farms left in the archipelago today. The fields are disappearing, and unproductive scrubland or houses for the summer population are shadowing an important part of the archipelago's history.

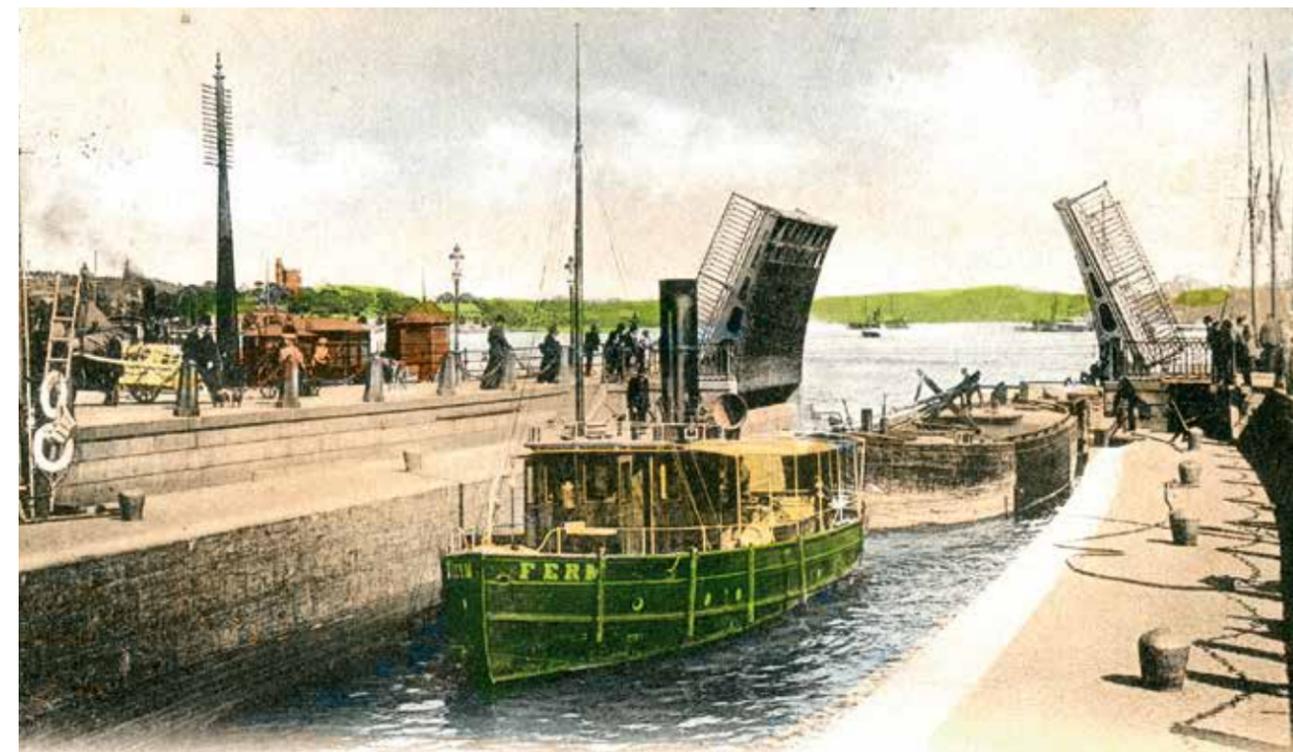
The Island

The most important archived material is the order list, collected in two volumes. On hundreds of wafer-thin papers the orders have been noted by hand, with different handwriting depending on who took the order. Sometimes it is easy to read the order, sometimes problematic. To be able to deal with this material, with ten or more orders on each sheet, I had to focus on one island, and for obvious reasons my focus fell on the Island. In all I found 11 orders, between 1894 and 1916, but I did notice orders from all around Stockholm.

Orders for *pudrett*, feces, and garbage came from everywhere around Stockholm. Rich people in fashionable suburbs surrounding Stockholm, for example Djursholm, ordered fertilizer for their gardens. They did not handle the stuff themselves, but had gardeners to do the job. Counts from huge estates around Lake Mälaren ordered too, and so did ordinary farmers from Roslagen – mainland areas north of Stockholm – and market gardens around Stockholm.¹⁴

Trains were used to transport the material from Lönsta to Roslagen or to the suburbs. To counts around Lake Mälaren or to farmers in the archipelago, tugboats were used, towing barges. They used two tugboats named the *Ferm* and the *Riddersvik*. Kilander was in charge of the *Ferm* and Bengtsson of the *Riddersvik*. Transportation could only be done when there was no ice.

The year 1907 was a top year when 1,036 barges were transported to buyers around Lake Mälaren and in the archipelago: 911 contained garbage, 70 contained *pudrett*, and 55 contained



Ferm, one of two tugboats that transported fertilizer, at Slussen 1905.

PHOTO: STADSMUSEET IN STOCKHOLM

feces. Transportation started on April 17 and ended on December 30. The total income was 17,264.70 SEK.¹⁵

In the new economy, tourists and the summer and archipelago population travel via high-speed ferries during the months without ice. Vaxholmsbolaget manages these ferries¹⁶, and each ferry travels approximately 21,000 nautical miles during one season.¹⁷

Three to five transportations took place every day, some only taking a few hours, others taking many days, depending on the distance. During an ordinary season the tugboats covered a distance over 2½ times the circumference of the equator.¹⁸ The circumference of the equator is 21,600 nautical miles, and 21,600 multiplied by 2½ is 54,000 nautical miles. If we divide that by two, each tugboat covered a distance of 27,000 nautical miles in an ordinary season. That is 6,000 nautical miles more than Vaxholmsbolaget's ferries travel in one season, and the tugboats had only one captain each. This shows the massive scale of the enterprise and the hard work.

It's possible to connect orders with existing pits, fields, and buyers. I have measured one of the empty pits, and according to my calculations it could contain a maximum of 74 cubic meters. There is an order from 1894 for feces to precisely this pit, and it is related to when, according to the current farmer, the field was cleared. The order was for 800 barrels of feces. One barrel contained 60 liters,¹⁹ which means that the pit at this time was filled with 48,000 liters, or 48 cubic meters, of feces.

Prices between 1900 and 1909 were 0.20 SEK for a barrel of feces. The towing cost for each barge was 5 SEK for a nautical mile,

but this could be reduced depending on how many barges were towed.²⁰ From Lönsta to the Island it is approximately 30 nautical miles, which means that the farmer would have paid 150 SEK for towing and 160 SEK for the feces.

If we multiply this by the rest of the orders we find that roughly 480,000 liters of feces were used on the fields on the Island between 1894 and 1916 at a cost of around 1,600 SEK, a huge amount of cash for an almost cashless community.

The fertilizers did of course have a visible impact on the production, otherwise the farmers and others would not have bothered. It is, however, not possible to calculate the exact impact because there were no scientific calculations done, or at least not left in the archives. What they did was to study what *pudrett* contained. A Professor L. F. Nilsson did the study in 1895. According to him, *pudrett* contained 77.35 units of water, 17.57 units of nitrogen-free organic substances, 0.61 units of nitrogen as ammoniac, 0.49 units of nitrogen in organic compounds, 0.74 units of phosphorous, 0.41 units of "Kali" (potassium), and 2.53 units of other minerals. They also calculated the amount of *pudrett* needed when fertilizing. For example, one hectare needed 3,000 kg or 60 hectoliter (6,000 liter) of *pudrett* for potatoes if the fertilizing was moderate, more if intense fertilizing was needed and less if the fertilizing should not be that powerful.

Regarding feces, it is explained that it is a rather nasty business to handle the stuff, but it is because of this very cheap compared with *pudrett*, and those that used it found that it was the most powerful of all fertilizers.²¹

On the sea floor outside the pit there are broken ceramic and glass objects. These items came with the feces as garbage and were thrown into the sea because the farmer did not want the stuff in the field.

Small objects and fragments of objects ended up in the field. I have partly gone over the field with a metal detector, finding all sorts of metallic fragments of objects and a coin from 1878, but also small pieces of glass and ceramics when digging for the metal objects.

I have not been able to more closely study the metal objects found, but a man told me that he believed that I had found fragments of a harmonica. Other things are more problematic. I suspect that there is a rather large amount of lead in the fields and there might be other environmental toxic chemical compounds in the fields, too. But most of it has probably disappeared long ago.

When the *skitgrop* system disappeared, the farmers had to turn to other fertilizers. One thing always used is fertilizer from the animals at the farms and in modern times different forms of commercial fertilizers.

From 1907 it was forbidden to throw away non-organic objects together with organic garbage or feces.²² Any field that was fertilized with feces or garbage after 1907 therefore does not contain any fragments of objects.

Even though the *skitgrop* system bears witness to a faith in the future of farming in the archipelago, a new economy was on its way, which would dramatically change the conditions not only for farming, but for the whole archipelago.

A new society

It's not a coincidence that the *skitgrop* system disappeared in almost the same year that the future for Swedish society was spelled out by the Social Democratic leader Per Albin Hanson (1885–1946). In 1928 he held his famous *folkhem* (people's home) speech, pointing out a new direction for Swedish society. Two years later the Stockholm Exhibition displayed a new modern architecture, perfectly suited to a future society within a framework of functionalism.²³ What can symbolize this new era better than water closets? Due to new vacation laws, a growing national tourism industry also took form.

In his excellent thesis, Bertil Hedenstierna takes us on a journey through the history of the archipelago. What he shows is the decline of the traditional way of life and how a new economy is slowly taking over. Hedenstierna can even demonstrate how the summer population was starting to own more land in the archipelago, and we should remember that his research was conducted during the late 1930s and early 1940s. Hedenstierna writes: "The importance of the summer population for the archipelago is crucial and has in many areas led to problems that need immediate rational solutions." He even points to a new category that he calls "The 'nomadic' summer population", by which he means those who travel in the archipelago with their own boats.²⁴

Strawberries and nails

Due to ideal climate conditions, there were 1.5 million strawberry plants in the archipelago in 1943.²⁵ Today they are all gone.

I was informed by interviewee 3 that a man once told him that there was more money in nails than in strawberries. What he meant was that there was more money in building things for the summer population than in farming strawberries.

Televisions and the collapse of history

It was a relief when electricity came to the Island in the late 1950s, but it would also have a negative impact on the community. One of my informants (interviewee 4), who has an incredible memory and knowledge of the Island and its history, told me that with electricity television soon appeared and that would mean the end of a long tradition of sitting together talking. Oral history is a well-known phenomenon,²⁶ and this is exactly what my informant told me about. Coming together to talk was a question of bringing the history of the archipelago, families, relatives, and events into the minds of a younger generation, but also of keeping track of relatives on the mainland, sharing information, and telling anecdotes. When television was introduced a new storyteller stepped up on the scene, and from now on the families sat by themselves. The radio did not have the same impact, he told me. The introduction of the Internet has further widened the gap between the past and the present, as underlined by interviewee 2 when I interviewed her. She concluded that today everyone is lonely on the Island because they don't talk to each other anymore.

Today the older generation that is carrying the stories and memories are passing away, and when there is no one left to hold on to the stories, place names, and traditional practices such as farming and fishing history will collapse and disappear, leaving the Island open for a new and exploitative a-historical economy, *the economy of the nomads*.²⁷

The nomads

The nomads – here I include day tourists – have no interest in history, traditions, stories, places, nature, or anything else that defines the archipelago. What they want is beaches, summer-warm cliffs, and entertainment – on land and on water – and bars and restaurants. Entrepreneurs from the mainland and some from the archipelago are doing what they can to serve these people. But to make money they must exploit the archipelago and open it up to as many as possible. One of the most problematic actors is the foundation *Skärgårdsstiftelsen* and to some degree *Vaxholmsbolaget*. The municipalities around the archipelago own the foundation. Its predecessor took shape back in the 1930s, and Bertil Hedenstierna became engaged in it, presumably because he thought that it might have a positive impact on the archipelago, and it probably did to begin with.²⁸ Today it is the largest landowner with the overall agenda to direct, together with *Vaxholmsbolaget*, as many people as possible to the archipelago. Hedenstierna warned against this kind of exploitation, and it's time that we take this seriously again. Compared to 1949, the population in Stockholm has not only grown enormously, it's also much richer. At the same time, Sweden is promoting tourism on all fronts. Thousands of tourists arrive in Stockholm every sum-

mer and many visit the archipelago. No one has calculated the carrying capacity of the archipelago, a capacity that is probably already overexploited.

Mahogany pioneers

I mentioned earlier a tradition of sailing in the archipelago. It started in the early 20th century, and in those days the charts were primitive. The archipelago is dangerous waters, so the first to sail in the archipelago had to rely on the experienced archipelago population and on each other's experiences. They used wooden or mahogany boats specially built for archipelago conditions. Books on how to navigate in the archipelago were published.²⁹ Such pioneers are now mostly forgotten, but the myth of archipelago adventures is still active. Yet, today's high-standard 40-foot plastic sailing-yachts are more like caravans that can be parked anywhere. The charts are digitized and cover every meter of the sea floor. These *nomads* have no interest in the history of the archipelago or even in sailing, and most of the time they use the boat's engine.

A new economy

In his essay "Im Schwarm", Byung-Chul Han addresses the digital age.³⁰ Han explains to me what I have been trying to understand for years, which is the discrepancy between the past and the present on the Island and in the archipelago. The *nomads* and tourists have come with a new reality, the digital economy. The Island is digitized – not in reality, but it is visualized by the *nomads* and the tourists through the digital media. What is not possible to digitize does not exist, Han explains. For *nomads* and tourists, history has no meaning because the digital composition is not a narrative, which history is. As long as the Island is transparently the same as the image, the *nomads* and tourists will arrive. But if the Island changes, which it will when the farm is closed, the Island will take a different shape, which will not correspond with the digital potential, and the *nomads* and the tourists will stop coming because they are not interested in decline or in history. They are not interested in the depth, but only in the surface. A yacht's anchor will, for example, bring with it huge amounts of seaweed. These weeds are ecologically and historically important for the bay, for the fish, for the seabirds, and for the people that once found their economy in the bay³¹, but for the surface-fetishistic *nomads* the seaweed is a problem. Therefore they have technical systems on board to get rid of the weeds, which sink dead back into the depth. For every anchor, the sea floor is ruined a little bit, and they are many, and they come every summer, these nomads, who cannot stand the depth, but only travel on a digitized *surface* that is completely transparent and therefore without history, narrative, or secrets. With no past in the present, there is no future either. There are no responsibilities for, as Han puts it, these narcissistic islands of egos³² that travel the archipelago. Therefore the *nomads* can ruin whatever they encounter. Bertil Hedenstierna emphasized the lack of historical consciousness, responsibility, and knowledge among tourists and *nomads* already in 1943.³³

Waste

I read in the local paper in 2013 that the archipelago population is tired of cleaning up after day tourists and *nomads*.³⁴ During a few summer months in the same year, 80,000 people – mostly *nomads* – visited a small cluster of islands in the archipelago, leaving behind 25 tons of garbage and 34 cubic meters of glass.³⁵

Tourism is about moving and feeding people. Tourists do not produce anything or integrate with any society, city, or ecology. That's why eco-tourism is a contradiction in terms. Tourists do not make new friends, nor do they meet with colleagues, and therefore they do not spread new ideas or cultural or scientific influences. Instead, they consume someone's labor, an ecosystem, or city. Believing that tourism will boost the economy is dangerous. Instead, tourists, like *nomads*, often ruin what they encounter. Because it is based on a commodity, tourism lacks social and ecological responsibility. But tourists dislike the decline and the waste that they produce. Therefore, any ecosystem or city must be continuously cleaned. The responsibility is, as the local paper states, in the hands of the local people.

If the *nomads* and the tourists – because of their sheer numbers – have a negative impact on the archipelago, who is the summer population? The summer population is semi-nomadic. We arrive over weekends during the spring, stay for our vacation during the summer, and return for weekends during the fall. Sometimes we show up during the winter. Hedenstierna was right when he warned about the negative impact the summer population might have, but in contrast to tourists and *nomads*, the summer population was and still is engaged in the islands and their history and population. But a new trend is approaching. Tremendously rich people are buying old summer properties. They demolish the old houses and build new and architect-designed buildings including all the comforts of the city. They reach these places from Stockholm with aluminum boats or rib-boats that easily make 40 to 60 knots, and they have the same desire as tourists and *nomads*; they also want beaches, summer-warm cliffs, but their private beaches and cliffs, and entertainment – on land and on water – and bars and restaurants. Because they are a part of the new economy, these people don't engage in the history of the archipelago, nor in its ecology or people.

The end

In his essay, Han returns to Martin Heidegger's farmer, who carries forbearance and constraint, fundamentally secured in the land and in the field. Han compares the farmer's being with the digital being and finds no correlation.³⁶ It's almost ironic how right Han is, because in a few years the farm on the Island will no longer exist. Almost 300 years of farming will come to an end, and with that history, memories, secrets, traditions, place names, *skitgropar*, and knowledge will disappear into an unproductive scrubland, and the history of the Island will fade from memory.

To stop this from happening, I suggest that it's time to develop an understanding of the carrying capacity of the archipelago, regulate the number of tourists, force the nomads to dock at

special harbors, reduce speed, noise, and waves, and, most importantly, make sure that an economically, ecologically, and *historically* sustainable farming is re-introduced on islands that once had farms because, as we have seen, the fields are not only a resource, but *history and narratives*, through which the archipelago has existed since it rose out of the sea after the latest Ice Age. Only in this way can we make the archipelago ecologically and *historically* sustainable in the future. ✖

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- 34 Carin Tellström, *Skräpet ökar i skärgården* (Skärgården June 22, 2013) [More waste in the archipelago].
- 35 Lina Mattebo, *Mindre sopor om skärgårdsstiftelsen får bestämma* (Skärgården April 2, 2014). [Less waste if skärgårdsstiftelsen may decide] See also Andrew Holden & David Fennell, *The Routledge Handbook of Tourism and the Environment* (London: Routledge, 2013).
- 36 Han 2014, 57; 65.