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8 Coming to terms with fish farming and fish consciousness

Introduction

This chapter explores how fish sentience, consciousness, and agency have been understood in Finnish public discussion in the context of fish farming. Understanding that fish are conscious beings, who feel pain, has long been part of our everyday culture. Various sources from different decades express how fish have been seen as lively and intelligent beings and how the suffering of a fish has evoked anxiety and empathy in humans.¹ In Finland, for instance, animal welfare societies organised events for fishmongers at the beginning of the twentieth century to teach the ethical treatment of fish.²

Throughout the twentieth century, the general perception among scientists has been that fish cannot have consciousness or feel pain.³ However, this kind of understanding has been slowly changing and fish consciousness has been studied more comprehensively in the twenty-first century. Several studies have appeared in the past two decades that point out that fish are much more intelligent than had hitherto been thought, possessing capabilities to memorise, learn, use tools, cooperate, and feel pain.⁴ Altogether, our cultural perceptions concerning fish have been and are still very contradictory. One example of this is the use of fish

1 See, for example, Anon., “Kalansaalis,” *Tornion Uutiset*, May 16, 1907, 2; Juhani Aho, “Kuinka särkiä ongitaan,” *Metsästys ja kalastus* 11 (1921); Väinö-setä, “Ongella,” *Viikko-Sanomat*, July 30, 1932, 3; “Metelöiviä kaloja,” *Länsi-Savo*, March 21, 1950, 3; Anon., “Tiesittekö tämän kaloista,” *Uusi Suomi Viikkolehti*, November 19, 1950, 1; “Kansainvälinen yhteistyö lohentutkimus alalla,” *Länsi-Savo*, August 7, 1971, 8; Anon., “Pilkkimisestä,” *Etelä-Suomen Sanomat*, April 13, 1982, 19; Suomen eläinsuojeluyhdistys, “Vapaa-ajan kalastajan huoneentaulu,” *Hangötiden*, June 20, 2003, 15.

2 Timo Mäkinen, “Kalankasvatus ja kalojen suojelu,” *Alue ja Ympäristö* 41 (2012): 102.

3 See, for example, George M. Johnson, “Do Fish Feel Pain?,” *Boys’ Life* 3 (1913): 23; F. Barbara Orlans, *In the Name of Science* (Oxford: Oxford University Press, 1993), 147; Brian Key, “Fish Do not Feel Pain and Its Implications for Understanding Phenomenal Consciousness,” *Biology & Philosophy* 30 (2015): 149–165, accessed May 10, 2022, doi:10.1007/s10539-014-9469-4.

4 See, for example Rebecca Dunlop and Peter Laming, “Mechanoreceptive and Nociceptive Responses in the Central Nervous System of Goldfish (*Carassius Auratus*) and Trout (*Oncorhynchus Mykiss*),” *The Journal of Pain* 6 (2005), accessed May 10, 2022, doi:10.1016/j.jpain.2005.02.010; Victoria Braithwaite, *Do Fish Feel Pain?* (Oxford: Oxford University Press, 2010).

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as nourishment. It is quite clear that many people consider fish to be non-human animals just like mammals, birds, and reptiles. However, some people refuse to eat animal products, but still make an exception concerning fish. According to discussion in different media, people choose this kind of diet, known as pescetarianism, for ethical reasons, as they think that fish do not feel pain and fear to the same extent as mammals.⁵ Even the famous American rock band Nirvana sang that “It’s ok to eat fish cause they don’t have any feelings” on *Something in the Way* on their seminal album *Nevermind* in 1991.⁶ As these examples show, it can be interpreted that fish are a borderline case in our culture – they can be defined as living and vibrant creatures or lifeless and inanimate things depending on the context.

I will focus in this chapter on an examination of how fish agency, sentience, and consciousness have been understood in Finnish public discussion concerning fish farming. When I talk about “agency” in the chapter, I mean the way in which animals have influenced history and contributed to making the world the place it is today. I use a broad definition of agency, including such vital functions as defecation. I aim to investigate how the perceptions of fish agency, intelligence and sentience, occasionally noticeable in our everyday culture, have been discussed in the context of Finnish fish farming from the beginning of the fish farming practices in the late nineteenth century up to 2018.⁷

The history of fish farming in Finland includes various changes. From the late nineteenth century to the 1960s, fish was mainly farmed to supply fish stocks in natural environments. The first fish hatcheries were established along the renowned salmon rivers during the latter part of the nineteenth century. There were only a few hatcheries in existence until the 1920s and 1930s. During this time, the permit conditions for log-driving and the building of dams began to include a clause for the establishment of fish hatcheries to compensate for damage caused by these industries. This act significantly increased the number of fish hatcheries in Finland. Another similar kind of act was the Fishing Act of 1951, in

5 See, for example, Lloyd Ellman. “Vegetarians Who Eat Fish Are Actually onto Something,” *Vice*, April 26, 2014, accessed April 29, 2022, <https://www.vice.com/en/article/3djvq9/vegetarians-who-eat-fish-are-actually-onto-something>; Annabel Mulliner, “Are Pescatarians just Lazy Vegetarians?,” *Wild Magazine*, April 7, 2019, accessed April 29, 2022, <https://wildmag.co.uk/2019/04/07/are-pescatarians-just-lazy-vegetarians/>.

6 Nirvana, “Something in the Way,” Track 12 on *Nevermind*, Butch Vig, 1991, disc.

7 The reason why I have set the time frame to end in 2018 is that the digitised source material I have used in this chapter is only available up to 2018. All the later digitised sources are copy-right-protected content and thus not visible via the digital archives of the Finnish National Library.



Figure 8.1: The fish hatchery of Ruunumyly in Finland in 1913. Photo by T. H. Järvi. Finnish Heritage Agency, Ethnographic Picture Collection. <https://finna.fi/Record/museovirasto.6357BFF213DEA2F44A1DC48165B5AB87>. CC BY 4.0.

which the government targeted funds to develop the fishing industry. This act encouraged fishery-promoting organisations to intensify fish farming.⁸

Altogether, the above-mentioned growth of the fish hatching industry from the late nineteenth century to the mid-twentieth century was small compared to the overall growth and change in the fish farming industry in the latter part of the twentieth century. One of the major changes was the commencement of the commercial breeding of fish for direct human consumption in the 1960s. Simultaneously, the fish hatching industry also grew significantly. Some of the main reasons for these changes were new technologies and the implementation of factory-made dry forage for fish.⁹

In Finland, fish farming for food focused on the breeding of rainbow trout. This industrially farmed fish species was even given its own Finnish name *kirjolohi* in 1965 by President Urho Kekkonen. Another significant change in the fish

⁸ See, for example, Vaito Mustajärvi, *Kalanviljelytekniikka* (Helsinki: Riista- ja kalatutkimuslaitos, 1999), 1.

⁹ See, for example, Pertti Manninen, *Kalankasvatuksen vesistövaikutuksista* (Helsinki: Vesihallitus, 1982), 5.

farming industry was the implementation of the open net-pen system in the late 1960s, in which fish are situated in natural waters in large net cages separating them from the surrounding environment. Prior to this fish had been mainly farmed in large artificial fishponds.¹⁰

Thereafter, several fish farming companies were established. The high season of the Finnish fish farming industry occurred at the turn of the 1990s. At this time, the yearly number of farmed fish was about 19 million kilos.¹¹ In the 2000s and 2010s, the number of farmed fish decreased to a yearly number of approximately 12 million kilos. This is still a large number when compared with the 1970s, for example, when the yearly number of farmed fish was between one to three thousand kilos.¹² According to fish farmers, the reasons for this decrease are the tightened environmental regulations and the cuts to the yearly quota restrictions of farmed fish.¹³ In the twenty-first century, almost two-thirds of Finnish fish farming has been situated in the Archipelago Sea and near the Åland Islands.¹⁴

The shared history between farmed fish and humans in Finland is long and it includes various changes, from which perhaps one of the most crucial has been the establishment of fish farming specifically for human consumption, as well as fish cultivation to supplement fish stocks in natural environments. In this chapter, I will focus on how fish sentience and agency have been described and understood in the public discussion in the context of both fish farming methods.

As research material, I use Finnish newspapers and magazines that have been digitised by the Finnish National Library. This database currently contains over 23 million pages of digitised material published in Finland from the early modern period up to 2018.¹⁵ This is already quite an extensive sample to reflect

10 See, for example, Manninen, *Kalankasvatuksen vesistövaikutuksista*, 5; Matti Hakanen et al., *Kalanviljelyn elinkeinotutkimus 1987* (Kuopio: Kehitysaluerahasto Oy, 1987), 4–5; Saariostaasiain neuvottelukunta, *Kalankasvatus saaristossa* (Helsinki: Sisäasiainministeriön aluepoliittinen osasto, 1987), 6–9; Mustajärvi, *Kalanviljelytekniikka*, 1.

11 See, for example, Manninen, *Kalankasvatuksen vesistövaikutuksista*, 5; Hakanen et al., *Kalanviljelyn elinkeinotutkimus 1987*, 4–5; Paula Partanen (eds.), *Kalankasvatus ja vesien suojele* (Helsinki: Vesi- ja ympäristöhallitus, 1988), 6.

12 See, for example, Saariostaasiain neuvottelukunta, *Kalankasvatus saaristossa*, 8; Mustajärvi, *Kalanviljelytekniikka*, 3; Ympäristöministeriö, *Kalankasvatuksen ympäristönsuojeluohje* (Helsinki: Ympäristöministeriö, 2013), 11–14.

13 “Kalanviljelyn historiaa Suomessa,” Suomen kalankasvattajaliitto ry, accessed March 18, 2022, <https://www.kalankasvatus.fi/kalanviljely/historiaa/>.

14 Ympäristöministeriö, *Kalankasvatuksen ympäristönsuojeluohje*, 11–14.

15 “Digital pages online,” National Library of Finland, accessed May 4, 2022, https://digi.kansalliskirjasto.fi/stats?set_language=en.



Figure 8.2: Farming of rainbow trout in net cages in the Finnish Archipelago Sea in 1983. Photo by Teuvo Kanerva. Finnish Heritage Agency, Historical Picture Collection. https://finna.fi/Record/museo_virasto.22AC06524DC33D3C6125DE6E4382871B. CC BY 4.0.

how Finnish public discussion perceived and understood different phenomena and reacted to them. To gather my resource material, I searched the database using the term “farmed fish” (*kasvatettu kala*). I chose this search term, instead of “fish farming” (*kalankasvatus*), as it does not refer directly to livelihood. In this way, I will gain access to a broader discussion regarding the fish themselves that was utilised in the fish farming industry. With the above-mentioned method, I found 502 newspaper and magazine articles from the database and all these texts constitute my research material. In what follows I will therefore only focus on the Finnish-language research material published in Finland.

In methodological terms, this study contributes to the field of digital humanities, as it utilises the digitised sources in which the printed text has been converted into machine-encoded text via optical character recognition (OCR) technology. As the sources have been processed with OCR, I have been able to make word searches

within a vast amount of newspaper and magazine material over a long period.¹⁶ Nevertheless, I have also used the traditional methods of qualitative data analysis by carefully reading and analysing the content of all 502 texts.

Theoretical background and previous studies

My study contributes to the theoretical field of human-animal studies that seek to understand the relationship between humans and animals. It takes into consideration the role of non-human animals and their impact on the multispecies past, present, and future of our planet. In other words, human-animal studies do not focus on animals per se, similarly to natural scientists. Rather, the approach is to explore the interactions between humans and animals.¹⁷

Most of the studies that have paid attention to fish intelligence and sentience in the context of the fish farming industry have been conducted in natural sciences.¹⁸ These are important studies, but they are not able to answer questions regarding how people who utilise and exploit these animals perceive them. For this reason, it is important that we also study farmed fish in the social sciences and humanities.

Hitherto, the clear majority of studies concerning Finnish fish farming, conducted in the field of social sciences and humanities, have been made from the perspective of the fish farming industry. This means that the studies have mainly focused on the actions and impact of the industry, defining fish only as an output unit; not a being that has agency and intelligence affecting the industry and the world around us.¹⁹ Nevertheless, there are a few exceptions. For instance, the article “Who Cares about Farmed Fish? Citizen Perceptions of the Welfare and the Mental Abilities of Fish” by the social scientists Saara Kupsala, Pekka Jokinen and

16 See, for example, Hannu Salmi, *What Is Digital History?* (Cambridge: Polity Press, 2020).

17 See, for example, Margo DeMello, *Animals and Society* (New York: Columbia University, 2012), 4–6.

18 See, for example, Christine Jackson, “Laboratory fish: impacts of pain and stress on well-being,” *Contemporary Topics in Laboratory Animal Science* 42:3 (2003): 62; Victoria Braithwaite, and Lars Ebbesson, “Pain and stress responses in farmed fish,” *Revue scientifique et technique (International Office of Epizootics)* 33 (2014), accessed March 18, 2022, doi:10.20506/rst.33.1.2285; Becca Franks, Christopher Ewell and Jennifer Jacquet, “Animal Welfare Risks of Global Aquaculture,” *Science Advances* 7 (2021), accessed March 19, 2022, doi:10.1126/sciadv.abg0677.

19 See, for example, Timo Peuhkuri, *Tiedon roolit ympäristökiistassa. Saaristomeren rehevöityminen ja kalankasvatus julkisen keskustelun ja päätöksenteon kohteena* (Turku: Turun yliopisto, 2004); Salmi et al., *Kalankasvatus saaristoelinkeinona. Saaristomeren ja Ahvenanmaan kesäasukkaiden näkemyksiä kalankasvatuksesta ja kestävästä kehityksestä* (Helsinki: Riista- ja kalatutkimuslaitos, 2004).

Markus Vinnari is a very exceptional and significant work exploring how people in Finland have understood the consciousness of fish as part of the fish farming industry.²⁰

The study by Kupsala, Jokinen and Vinnari is based on a survey conducted in 2010. They concluded that people in Finland perceive farmed salmon as “more ‘simple’ with its experiential life than traditional farm animals (pigs, chicken, and cattle).” They also discovered that “although roughly 60 per cent of Finns believed that salmon can feel pain, a fifth still deny it, while this kind of denial of sentience was minimal for other animals.”²¹ The above-mentioned study is very interesting and important, but it does not include historical depth. Although the survey included answers from people of different ages, these responses can be seen to reflect the cultural discourses dominant in 2010, when the survey was conducted. The way how we understand and perceive other animals is constantly changing in time and culture.²² Thus, it is interesting to examine how fish sentience and agency have been described in Finnish public discussion for a long period from the beginning of fish farming to this day.

Overall, the study of the long-term relationship between humans and farmed fish has not been studied by historians in Finland with an approach that takes into consideration fish agency and mental abilities. There are some historical surveys published by the active members of the fish farming organisations, but these are without exception written from the perspective of livelihood, not from the perspective of fish.²³

In this chapter, I first explore how fish agency and consciousness are visible in public discussions concerning fish farming. I then analyse texts that contain a discussion of fish agency, intelligence and the ethical treatment of farmed fish. I investigate why these things are brought out in the context of fish farming and what they tell us about our constantly changing long-term relationship with farmed fish.

20 Saara Kupsala, Pekka Jokinen and Markus Vinnari, “Who Cares about Farmed Fish? Citizen Perceptions of the Welfare and the Mental Abilities of Fish,” *Journal of Agricultural and Environmental Ethics* 26 (2013), accessed February 18, 2022, doi:10.1007/s10806-011-9369-4.

21 Kupsala, Jokinen and Vinnari, “Who Cares about Farmed Fish?,” 124, 131.

22 See, for example, Joanna Bourke, *What it Means to be Human* (Berkeley: Counterpoint Press, 2011), 4–5; Otto Latva, *The Giant Squid in Transatlantic Culture: The Monsterization of Molluscs*. (London: Routledge, 2023), 9.

23 See, for example, Kauno Peltoniemi, *Taistelu kirjolohesta: muistelmia uuden elinkeinon, kalanviljelyn, alkutaipaleelta Suomessa* (Helsinki: Suomen lohenkasvattajain liitto, 1984).

The perception of farmed fish in Finnish public discussion

From the chart below (Figure 8.3), which presents coverage of references to “farmed fish” in Finnish newspapers and magazines from 1850 to 2018, one can see that the percentage share of the discussion of farmed fish in these publications is quite small in terms of the overall printed material. The highest peak in the level of this discussion took place at the beginning of the 2010s, but covers only a very small percent of the overall number of digitised newspaper and magazine pages from the Finnish National Library. The small number of texts about farmed fish, compared to the overall data, does not, however, prevent its use as research material. The material still contains more than 500 articles on farmed fish, which is a very good sample for this study.

From the chart, one can notice, for instance, the changes in the overall discussion of these animals. In the period from 1850 to 1900, there were no references to “farmed fish” in Finnish public discussion. Some news began to appear in print after this. By the late 1950s the quantity of writings that mentioned “farmed fish” had grown substantially, reaching a peak at the beginning of the 2010s. The overall curve can be also divided into three different interesting sections. The first is a peak in the discussion of farmed fish that took place in 1934. A second interesting feature is the generally smooth period of discussion from 1955 to 2000 (although annual variations did occur). Last, the period from 2000 to 2018 witnessed tremendous growth in the discussion of farmed fish compared with the previous 150 years. Nonetheless, this discussion decreased significantly after 2015.

The reason for the peak in 1934 relates to a piece of news that declared how there had been a success in fish planting in Finnish natural waters in 1933. In this year, governmental fish hatcheries dispersed almost 15 million fish fry into different waters. This news article circulated broadly in the Finnish press, and it was published in several different newspapers in Finland. Thus, together with other news articles concerning farmed fish published in 1934, it contributed to a peak in the curve for that year.²⁴

The sustained increase in newspaper and magazine articles that included references to “farmed fish” after 1955 is most simply explainable by taking into ac-

²⁴ See for example, Anon., “Noin 15 milj. kalanpoikasta istutettiin viimevuonna vesistöihimme,” *Aamulehti*, September 28, 1934, 2; Anon., “59,270,555 kalanpoikasta sekä 6,200,000 hedelmöitettyä mätimunaa istutettiin 5 vuoden aikana maamme vesistöihin,” *Ilta-Sanomat*, September 28, 1934, 1; “Kalanviljelystoiminta vilkkaassa käynnissä,” *Kaiku*, September 28, 1934, 1; “Kymijokeen istutettiin viime vuonna kaloja,” *Etelä-Suomi*, September 29, 1934, 2.

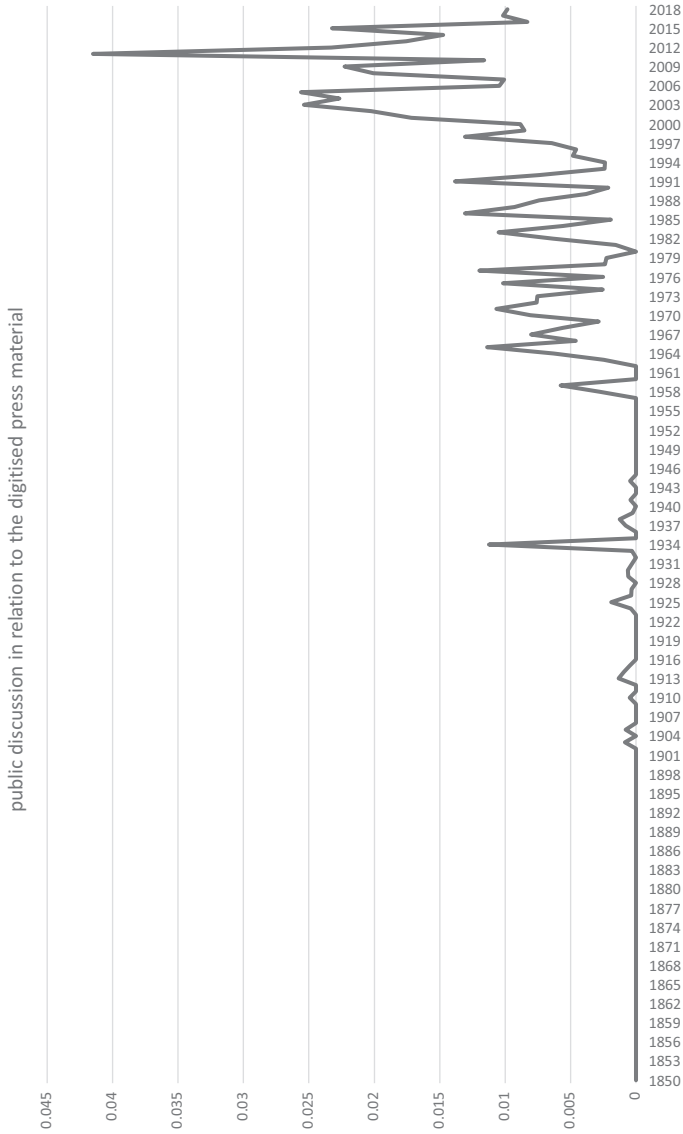


Figure 8.3: References to “farmed fish” in Finnish newspapers and magazines concerning the overall data digitised by the Finnish National Library. The numbers on the left-hand side of the chart indicate the percentage of the articles compared to the overall data and the numbers at the bottom of the chart represent the number of years.

count emergence of fish farming as a direct source of food in the same decade.²⁵ The size of the Finnish fish farming industry grew significantly after this development, which is why it began to play a larger role in public discussions. The seeming growth of the public discussion concerning farmed fish after the 2000s is much more complicated to interpret. According to the sources, the reason for this growth seems to be due to an increase in the discussed themes related to farmed fish. From the 1950s to the 1990s, the public discussion concerning farmed fish concentrated mainly on fish farming as a business.²⁶ For instance, in 1970 a publication presented the farming of rainbow trout in Finland and emphasised that there was still “plenty of clean flowing waters” in Finland for fish farming, and that “the demand for farmed fish has proven to be greater than production.”²⁷

Before the 2000s, different articles in newspapers and magazines mainly followed the content of the above quote. In the 2000s, the discussion of themes, such as the environmental impact of fish farming, the health effects of farmed fish and different discussions about how to prepare various kinds of food from farmed salmon, began to define the discussion of Finnish fish farming more than before. For instance, the environmental impact of fish farming became a much-discussed topic. Many news articles appeared about how fish farming led to the eutrophication of natural waters and how one should preferably buy domestic wild fish than farmed fish in order to help the badly eutrophicated Baltic Sea.²⁸ Much of the news published in the 2000s and 2010s also criticised the environmental impact of the farmed fish that were imported to Finland.²⁹ In the 2010s, news about the health effects of fish, for instance, emphasised that the levels of dioxin in farmed fish were much less than in wild fish caught in the Baltic Sea. Nevertheless, there were also articles that mentioned the residues of antibiotics in farmed

25 See, for example, Mustajärvi, *Kalanviljelytekniikka*, 1, 4–5.

26 See, for example, Anon., “Kalan tuotantoviljelyä maatalojen pienvesistöissä kehitetään,” *Maaseudun Tulevaisuus*, May 30, 1959, 13; Anon., “Perheelle 30.000 markan tulot vuodessa lohenkasvatuksesta,” *Uusi Suomi*, December 23, 1964, 18; Anon., “Euroopan suurin lammikkokalan tuotantolaitos Rautalammilla,” *Maaseudun Tulevaisuus*, October 1, 1970, 8; Anon., “Lohet uivat lautasille,” *Suomen Kuvalehti*, October 23, 1970, 8.

27 “Euroopan suurin lammikkokalan tuotantolaitos Rautalammilla,” 8.

28 See, for example, Anon., “Merilohi ja kirjolohi kuormittavat yhtäläillä,” *Etelä-Suomen Sanomat*, November 24, 2001, 16; Elina Korkee, “Itämeri tarvitsee apua sisämaasta,” *Länsi-Savo*, April 21, 2008, 11.

29 See, for example, Anon., “Norjalaiset napanneet aimo palan lohimarkkinoista,” *Länsi-Savo*, March 13, 2001, B4; Lauri Kontro, “Kalavaje,” *Maaseudun Tulevaisuus*, March 12, 2014, 5; Sanna Kipinä-Salokannel, “Särkien syöminen vesiensuojeluteko,” *Lauittakylä*, March 1, 2017, 15.

fish.³⁰ Cooking recipes published in newspapers and magazines also began to feature instructions about how to prepare different kinds of farmed rainbow trout dishes in the 2010s. These cooking articles sometimes emphasised how the meat of farmed rainbow trout is different than the meat of wild salmon.³¹

In the long run, the above-mentioned themes of business, environmental impact, health issues and food-related concerns are the most visible thematic categories when one reads the Finnish newspaper and magazine texts concerning farmed fish. Within these themes, fish are almost always mainly described as being a product that is a kind of lifeless object; a consumer good with no agency or will of their own.

The number of texts highlighting the agency and consciousness of the farmed fish only represents a small fraction of the articles discussing these animals. In the chart below (Figure 8.4), the yellow line demonstrates the number of texts that mention fish agency and consciousness in the context of fish farming. If we compare the outcomes of the study by Kupsala, Jokinen and Vinnari, which conclude that Finns do not perceive farmed salmon as sentient beings like other farmed animals,³² with the results shown by the chart 8.4, it is not surprising that the number of texts describing the agency and consciousness of the farmed fish form only a tiny fraction of all the writings. However, what is surprising is that discussion of pain suffered by fish and their consciousness in the context of the fish farming, which was discussed widely in the global press during the 2000s and the 2010s,³³ was not reflected in news coverage in the Finnish press.

It is difficult to define why the news articles concerning the pain and consciousness of farmed fish circulating in the global press were not translated into Finnish and published in Finnish newspapers and magazines. After all, Finnish publications often republished international news articles.³⁴ Was it because the Finnish journalists did not feel these were sufficiently newsworthy for their read-

³⁰ See, for example, Jussi Lankinen, “Suomalainen saa dioksiininsa Itämerestä,” *Etelä-Suomen Sanomat*, January 25 2011, 7; Seppo Lahti, “Syö jos uskallat,” *Kokkola*, March 30, 2016, 16.

³¹ See, for example, Panu Pälviä, “Monta herkkua lohesta,” *Ilta-Sanomat*, April 20, 2017, 29.

³² Kupsala, Jokinen, and Vinnari, “Who Cares about Farmed Fish?,” 131.

³³ See, for example, Andrew Davies, “Food: It’s a Pain, but There’s still a Passion for Poisson,” *Birmingham Post*, May 3, 2003; Kenneth Kidd, “That must be painful. Or not,” *Toronto Star*, July 16, 2006; Paul Petersan, “An Aquaculture Reality,” *The Washington Post*, December 6, 2007; Tim Carman, “Scientists say fish feel pain. It could lead to major changes in the fishing industry,” *The Washington Post*, May 24, 2018, accessed June 10, 2022, <https://www.washingtonpost.com/news/food/wp/2018/05/24/scientists-say-fish-feel-pain-it-could-lead-to-major-changes-in-the-fishing-industry/>.

³⁴ See, for example, Ullamaija Kivikuru and Jukka Pietiläinen, “Esipuhe,” in *Utisia yli rajojen. Ulkomaanuutisten maisema Suomessa*, ed. Ullamaija Kivikuru and Jukka Pietiläinen (Lahti: Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus, 1998); Turo Uskali, *Ulkomaanuutisten uusi maailma* (Tampere: Vastapaino, 2007).

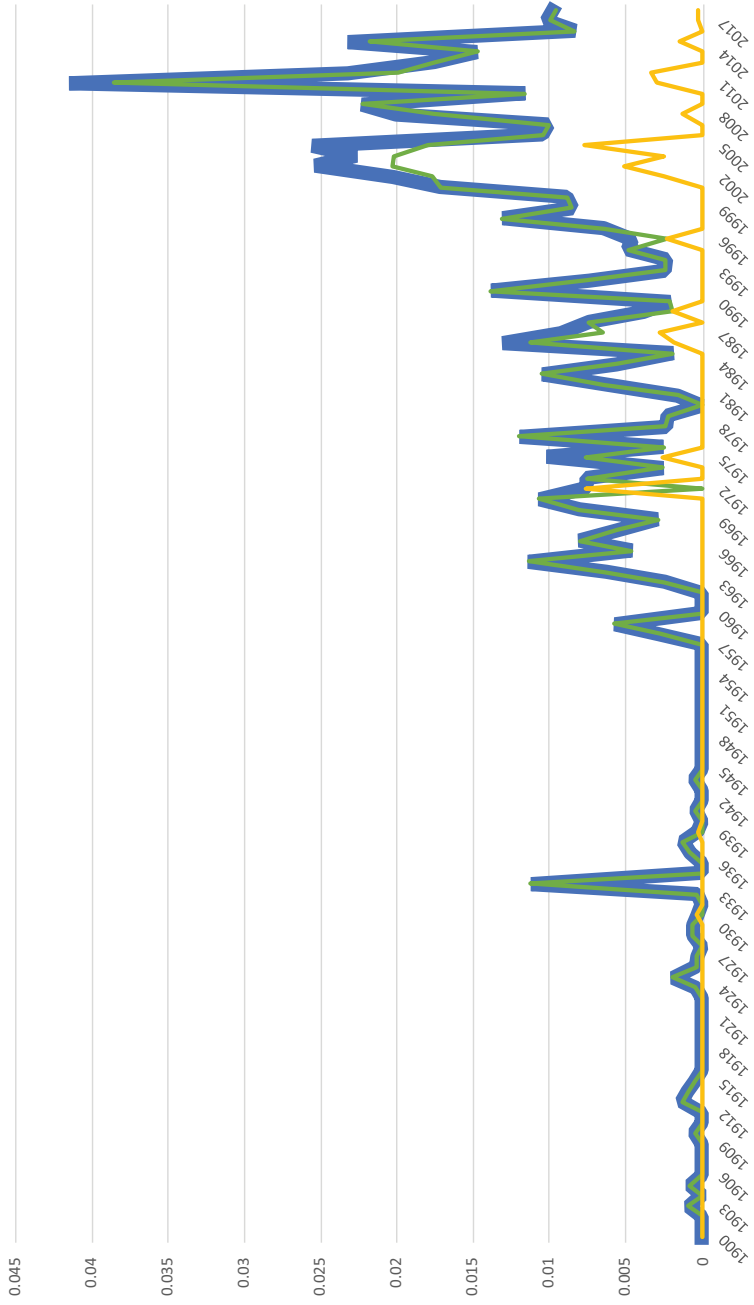


Figure 8.4: A comparison of writings that describe fish as either lifeless products (green curve) or lively and/or intelligent beings (yellow curve), among the texts that mention “farmed fish” (bold blue curve).

ers, or that perhaps the idea of fish as sentient beings was too difficult for them to believe? What is clear is that the large number of newspapers and magazines that have already been digitised by the Finnish National Library do not mention anything about the discussion about the consciousness and pain of farmed fish, which was published, for instance, in Canada, Great Britain, and the United States during the 2010s.

Whatever the reason as to why Finnish newspapers and magazines did not republish international news and opinions about the consciousness and pain of fish in the context of fish farming, the absence of such news tells us something about how the mental abilities of fish and the questions related to the welfare of farmed fish have been understood in Finland. Of course, the way in which the media makes decisions about what to publish does not reflect the mindset of the entire cultural sphere of the nation. Nevertheless, the absence of stories and information about fish consciousness and pain may have had the effect that Finns are not aware of the latest knowledge on the subject and are thus unable to broaden their understanding of the mental abilities of fish. In a sense, this kind of refusal to be able to publicly discuss fish welfare is not even surprising. As Veera Koponen has mentioned, Finns had been lulled into believing that they live in a model country for animal welfare. Nevertheless, the reality was that Finland had begun to fall behind other European Union and Nordic countries that had been progressively updating their animal welfare laws.³⁵

The discussion of fish agency and consciousness

The reality that Finland had begun to lag behind in animal welfare standards becomes clear if one compares the content of the newspaper and magazine articles concerning fish farming, which were not mentioned by the Finnish media, particularly in regard to questions related to the agency and consciousness of farmed fish. However, although the number of such articles is low, it is still reasonable to analyse how and why these texts discuss fish agency and consciousness.

The newspapers and magazine articles that I have found that discuss the agency and consciousness of farmed fish consist of various kinds of text. The common feature in these writings is that fish intelligence or sentience is not openly discussed, but it can be read between the lines. Moreover, if it is discussed at all, it is presented as a curiosity. The writings published in Finland in the first part of

³⁵ Veera Koponen, "Paluu tulevaisuuteen: Suomi ja sivistynyt eläinsuojelusääädäntö," *Impulsseja* (2021).

the twentieth century, in particular, mention the agency and consciousness of farmed fish with a mixture of humour and curiosity. For instance, in a news article published in 1931, the writer wondered how fish cultivated in a salmon farm in the River Äkäsjoki would act and behave. This is because the name of the river can be understood to refer to the Finnish adjective *äkäinen*, meaning ‘irascible.’ The writer thus humorously mentioned that perhaps the reason for the inhibited fish farm plan was that people were afraid that the salmon bred near the Äkäsjoki River would become irascible.³⁶

The previous example discussed presumed agency, but the first clear mentions of fish agency and consciousness did not appear in Finnish public discussion before the 1970s. For instance, a news article appeared in 1972 about Azerbaijani fish farmers who were cultivating sturgeons and who had stated that this species of fish did not survive in natural waters if they were not offered some activities. In the Finnish press, this news was published among articles concerning natural curiosities and it was entitled “Fish should not be pampered.”³⁷ This piece of news clearly states that fish are not just mindless creatures. Instead, they need to undertake activities that help them to learn how to survive in the wilderness. In other words, one can read between the lines that fish can learn and think. Nevertheless, the need for farmed fish to receive activities and training to learn survival skills could not be written in terms of scientific correctness; instead, the humorous verb ‘pamper’ was chosen for the title.

The discussion of the abilities of cultivated fish to survive in nature became a more discussed topic in the 2010s. A news article was printed, for example, that presented breeding methods in which the fish fry were exposed to flowing water, changes in water level, and predator fish.³⁸ In this way, breeders taught survival skills to their fish whereby they would know how to act after they were released into natural waters. In this context, fish were not considered as brainless beings, but intelligent animals that were able to memorise and have cognition.

In another newspaper article, concerning fish cultivation, researchers and conservationists caught fish from the rivers that had planted by fish hatcheries and farms to supplement the natural stock of fish. When they discovered a rainbow trout, they called it a “mollycoddled fish.” By this they were implying that farmed and cultivated fish would not be able to survive in natural waters. They proposed a new cultivation method, in which fish spawn would be situated in the

36 Anon., “Kengisfors,” *Aitosuomalainen*, October 2, 1931, 4.

37 Anon., “Kalanpoikasia ei saa hemmotella,” *Etelä-Suomen Sanomat*, July 7, 1972, 8.

38 Jaakko Pikkarainen, “Kalanpoikasia kasvatetaan luonnonoloja jäljitellen,” *Maaseudun Tulevaisuus*, September 7, 2011, 24.

river in which they had grown up and would therefore genuinely be able to learn to survive in natural waters.³⁹

Both above-mentioned examples indicate that the intelligence of fish and their ability to learn and act were accepted facts among people who were attempting to cultivate fish as a means of supplying fish stock in natural waters. Nevertheless, what is interesting in this regard is how differently the intelligence of farmed fish was discussed depending on the aims of fish farming. If fish were being bred to supplement natural stock, the discussion included the fish's ability to learn. If fish were being farmed straight for human consumption, their mental abilities were not discussed. This kind of definition of an animal's mental abilities from the perspective of anthropocentric aims tells us a lot about how contradictory the human relationship with non-human nature was during the previous decades and still is today.

Another interesting discussion related to the mental abilities of farmed fish concerns the environmental impact of fish farming industry. Fish farming has faced lot of criticism about its environmental impact in recent decades.⁴⁰ Usually, when the environmental impact of fish farming has been discussed in the Finnish press, the reason for these studies has been stated as being due to the concerns of the fish farming industry, in which farmed fish are only viewed as lifeless products. I have discovered only two newspaper articles in which the environmental impact was mentioned as something produced by farmed fish.⁴¹

The first of these news articles was published in 1975 and it quite explicitly states that the reason for the environmental impact of fish farming was related to the excrement produced by farmed fish.⁴² This is extraordinary as the theme was very widely discussed throughout the latter part of the twentieth century and in these writings, the environmental impact of the excrement of farmed animals is explained rather as a side effect of the industry rather than the bodily function of the animals themselves.

Overall, the above-mentioned theme to explain the problems of the animal industry as something stemming from industry, not the agency of the animals exploited in the animal farming, is very common in Finnish public discussion. For example, the environmental impact of the excrement of fur animals has long been described in Finland as a by-product of the fur farming industry, not the fur

39 Markku Peltonen, "Jokitalkkarit koluavat koskessa," *Etelä-Suomen Sanomat*, May 30, 2012, 3.

40 See, for example, Salmi et al., *Kalankasvatus saaristoeläinkehitys*, 1.

41 "Huomioita kalankasvatustalosten jätteisiin," *Maaseudun Tulevaisuus*, April 19, 1975, 16; Kaisa Rossi, "Kirjolohti edelleen ekotehokas," *Etelä-Suomen Sanomat*, December 9, 2003, 2.

42 "Huomioita kalankasvatustalosten jätteisiin," 16.

animals themselves.⁴³ At the conceptual level, the problem with such a way of discussing the effects of animal farming is that it hides the agency of animals and emphasises their existence only as units of production. This can be seen very well in the context of fish farming.

The reason why the news article published in 1975 departed from this line is probably that it was one of the first commentaries in Finland on the environmental impact of farmed fish. As the fish farming industry was still in its early development phase, the industry was not yet comprehensively institutionalised, but it was also an experimental hobby. For instance, in the early days of fur farming in Finland in the 1910s, many farmers recognised the breathing being living under the fur, but this changed when the fur industry became a serious business in the mid-twentieth century. At this time, fur farmers began to speak about foxes and minks as a final product – furs or skins – when these animals were still alive.⁴⁴ It might be that the same lack of institutionalisation in fish farming made some fish farmers perceive the environmental impact of fish as the cause of their agency, not as the impact of the fish farming industry.

Nevertheless, there is also another news article concerning the environmental impact of fish farming that was published in 2003. This is an extraordinary text as in it the CEO of the Finnish Fish Farmers' Association acknowledges the environmental impact caused by the defecation of farmed fish. The reason for the publication of such a statement was not, however, to emphasise the agency of farmed fish, but to show how small the environmental impact of farmed fish was in comparison to farmed cattle and pigs.⁴⁵ As this example also shows, the context of the discussion defines whether farmed fish were recognised as possessing agency or not. In other words, the agency of fish can be highlighted if it promotes the industry.

What is interesting here is that when farmed fish, mainly described as a product unit without agency in the context of fish farming, escape from the fish farm, they are accorded a high degree of agency in public discussion. For instance, in 1989, a news article about salmon that had escaped from a Norwegian fish farm was published. The reporter suggested that they would weaken the natural fish stocks in the Tana River, flowing through Northern Finland and Norway.⁴⁶ This

43 Otto Latva, "Tuote vai elävä olento? Näkökulmia turkiseläinten historialliseen rooliin Suomessa 1900-luvulla," *Alue ja Ympäristö* 49 (2020), 115–116, accessed March 12, 2022, doi:10.30663/ay.83302.

44 Latva, "Tuote vai elävä olento?," 108–112.

45 Rossi, "Kirjolohi edelleen ekotehokas," 2.

46 Anon., "Norjan kalankasvatus on uhka Tenojoen lohelle," *Etelä-Suomen Sanomat*, August 21, 1989, 9.

also applies to other farmed animals. There are, for instance, numerous pieces of news about wild minks who escaped from fur farms and how these minks affect surrounding nature.⁴⁷ Altogether, the discussion that emphasises the agency of the runaway farmed animal, which are usually described as passive and as almost lifeless products when they are situated on farms, reveals a problem in terms of how we understand and define farmed animals today.

In addition to the discussion of how farmed fish that escape from farms subsequently weaken natural fish stocks, it has also been suggested that they can also spread disease among wild fish. Some news articles appeared on this theme in the 2000s. One of the most interesting articles commented on how Norwegian eco-activists had captured and killed farmed fish in Lake Bullaren in Sweden, near the Norwegian border. The reason for the operation centred on the concern of the activists about how the fish farmed in the lake would affect the wild stock of Norwegian salmon. According to the news, the last time people farmed fish in Lake Bullaren, a parasite was discovered from the farmed fish that is dangerous for the wild stock of fish.⁴⁸

Overall, the agency of farmed fish and the descriptions of them as intelligent beings seem to appear in public discussion most often if they are doing something that seemingly does not fit the aims of the industry. One excellent example is the discussion of the problems of fish feeding that arose in the summer of 2018. This was a really warm summer in Finland and farmed fish refused to eat. Two newspapers wrote about this as a problem for the fish farming industry, although the fish were the ones that did not want to eat.⁴⁹

Altogether, it seems to be very typical in Finnish public discussion to ignore and underestimate the agency and intelligence of farmed animals. Nevertheless, the abilities of farmed animals to act and think are highlighted in public discussion if they are doing something that hinders the industry. For instance, if farmed animals escape from a farm, they are attributed with a high degree of agency, which is usually described negatively. The above-mentioned features only apply to animals bred for human consumption. For instance, if one is talking about fish that are bred to supply natural stock, it is much more accepted to discuss their agency and intelligence. In this context agency and intelligence are seen as positive abilities.

⁴⁷ Latva, "Tuote vai elävä olento?," 116–118.

⁴⁸ Anon., "Aktivistit tappoivat lohia Ruotsissa," *Länsi-Savo*, August 23, 2002, 13.

⁴⁹ Kari Manninen and Tuukka Tuomasjukka, "Kalojen kasvatus kärsii helteestä," *Karjalainen*, July 27, 2018, 14–15; Kari Manninen, "Suomeen vajetta kirjolohesta," *Savon Sanomat*, July 27, 2018, 10–11.

The discussion of the ethical treatment of farmed fish

The discussion of the ethical treatment of farmed animals is the most clearly distinguishable theme in the public discussion of farmed fish from other farmed animals. For instance, the ethical treatment and the well-being of fur animals and cattle have been much discussed,⁵⁰ but the treatment of farmed fish not nearly as much. One of the main reasons for this is the matter examined at the beginning of this chapter: the scientific community has long explained that fish are unintelligent and somehow lesser animals than, for instance, mammals. This discussion has had its impact on the wider public but also ethical treatment. In our culture, the human understanding of the intelligence of animal species has traditionally defined the worth of every species. This worth has also defined how humans have treated these species.⁵¹

In the case of fish, ethical treatment seems to depend very much on the context in which humans and fish encounter each other and on how humans perceive fish. Not all humans automatically treat fish as lifeless objects, as some have respect for their life and suffering. As I mentioned at the beginning of this chapter, the Finnish animal welfare societies organised events for fishmongers at the beginning of the twentieth century as a way to teach the ethical treatment of fish.⁵²

Overall, the ethical treatment of fish has been discussed occasionally in the Finnish public forums from the late nineteenth century to the current day.⁵³ Nonetheless, in the context of fish farming it has not been discussed very much. One of the only mentions of the ethical treatment of farmed fish that I have come across in Finnish newspapers and magazines is a short news article about how Norwegian fish farmers were planning an ethical marking for farmed fish. This would enable the fish to have more space to move in an open net-pen system. The reason for this was that customers had begun to demand ethically bred fish.⁵⁴ The news article in question contained a section that stated the following: “Fish

50 See, for example, Kupsala, Jokinen, and Vinnari, “Who Cares about Farmed Fish?”.

51 See, for example, Elisa Aaltola, *Varieties of Empathy: Moral Psychology and Animal Ethics* (London: Rowman & Littlefield, 2018).

52 Mäkinen, “Kalankasvatus ja kalojen suojele,” 102.

53 See, for example, Anon., “Tarpeetonta eläinrääkkäystä,” *Sanomia Turusta*, June 15, 1893, 2; Anon., “Kaikki kalamiehet kuriin ja nuhteeseen,” *Etelä-Suomen Sanomat*, September 30, 1972, 13; Suomen Eläinsuojeluyhdistys, “Vapaa-ajan kalastajan huoneentaulu,” *Hangötidningen*, June 20, 2003, 15; Christa Lassfolk-Feodoroff, “Animalialle ymmärrystä,” *Warkauden lehti*, May 22, 2018, 16.

54 Anon., “Norjassa halutaan tuottaa vapaata lohta,” *Maaseudun Tulevaisuus*, December 19, 2003, 8; Anon., “Norjassa kasvatetaan vapaata lohta,” *Etelä-Suomen Sanomat*, January 3, 2004, 15.

have been perceived as non-sentient organisms, but consumers today ask about the welfare and conditions of fish in fish farms.”⁵⁵

In Finland, this kind of discussion by consumers did not appear in the material I have examined for this chapter. As a matter of fact, only a small amount of information appeared about how farmed fish were treated and how, for instance, they were slaughtered. The first description of how farmed fish were slaughtered appeared in 2017.⁵⁶ These findings match the results that Kupsala, Jokinen and Vinnari presented in their article. They concluded that “almost half of Finns think that the welfare of farmed fish is very good or fairly good.”⁵⁷

The result suggested by Kupsala, Jokinen and Vinnari is interesting, if one compares it with the nearly non-existent Finnish media content concerning the welfare of farmed fish. It questions whether the results in Finnish newspapers and magazines would have been different if they had translated and published articles from the global press that discuss the ethical problems of fish farming. This is perhaps something that we will see in the future because the public discussion of the ethical problems related to fish farming has seemingly been growing throughout the 2010s. Arguably, it is just a matter of time until there is more discussion of the ethical treatment of farmed fish and their animal rights.

Conclusion

In this chapter, I have examined how fish agency, intelligence and their ethical treatment have been understood in Finnish public forums from the late nineteenth century to 2018. By analysing Finnish newspapers and magazines published during the above-mentioned period that have been digitised by the Finnish National Library I have discovered several sources that describe the relationship between humans and farmed fish in the context of Finnish culture.

First, the public discussion of farmed fish brings out the stark contractionary understanding of fish as a living being in Finnish culture. Usually, the context of the discussion or the aims of fish breeding define the descriptions of the extent to which a farmed fish is judged to be sentient or intelligent. For instance, if one contemplates farmed fish in the context of fish breeding as a means to supplement natural fish stocks, even the cognitive abilities of fish are emphasised. However, if the

⁵⁵ Anon., “Norjassa kasvatetaan vapaata lohta,” 15.

⁵⁶ Tuula Viilo, “Teurastusmenetelmiä eri laitoksissa,” *Maaseudun Tulevaisuus*, September 13, 2017, 8.

⁵⁷ Kupsala, Jokinen, and Vinnari, “Who Cares about Farmed Fish?,” 126.

discussion concerns the farming of fish for human consumption, the agency and intelligence of the fish – and generally the fish themselves as living beings – are ignored. The fish farming industry is at the core of this context; the industry is the agent, and the fish – breathing and defecating creatures – are mainly described as lifeless products. What is interesting is that from time to time the agency and sentience of farmed fish emerges in the texts written about fish farming for human consumption, but usually between the lines. Ultimately, farmed fish are not lifeless products, but humans have only defined them to be such beings.

Second, there has not been any major debate on the welfare and ethical treatment of farmed fish in Finnish public discussion. Yet, a similar kind of discussion has been an on-going phenomenon in the global press for at least 20 years. The lack of such discussion has probably affected the perception of Finns vis-à-vis the welfare of farmed fish as very good or fairly good.

Altogether, the discussion of the agency, intelligence and sentience of farmed fish constitutes only a small fraction of the overall public discussion in Finland from the late nineteenth century to 2018. In a sense, the number of articles concerning these themes already highlights that they have hitherto not been regarded as sufficiently important to be discussed more often in Finnish newspapers and magazines. It will be interesting, however, to discern how the public discussion of the mental abilities and the ethical treatment of farmed fish will change in the future as new generations are seemingly more aware of animal rights, and environmental crises, such as climate change and biodiversity loss, have begun to provoke more discussion that will increasingly challenge our current relationship with non-human animals.