The Paradigm Shift in Human-whale Interactions:

Lessons from Science, Cooperation and Transnational Commitments

Novel perspectives of how social relations were constructed as interspecies relations have emphasised that we are part of a complex and diversified network. This essay focuses on the feasibility of the transformation of collective perceptions, political and ethical responses regarding the improvement of human-animal relationships and some considerations about the contemporary efforts coordinated in transnational and national levels aiming to protect large cetaceans.

After many centuries of widespread, unregulated and intense whaling pushed by a huge and continuous worldwide trade, the last four decades have testified to a great paradigm shift in the human-whale interplay worldwide. This concise review shed light on collaborative entanglements between transnational policies, scientific knowledge and social movements, which have inspired diverse societies into an innovative pathway driven by the redefinition of collective attitudes, values and standards of ethics regarding human-whale interplay.

It is now evident that the blurred boundaries between human and non-human animals have become a common matter in both scientific and intercultural contemporary studies, which encompass anthrozoology, animal agency, environmental history, among other pluridisciplinary approaches to human-animal studies. Nevertheless, social capabilities to no longer see non-human animals as mere objects are still confined to a speciest mindset, as evidenced by the greater sensitivity to pets than to livestock and other "useful" animal species. Effective shifts in human-animal interactions have been designed within specific social contexts, with greater or lesser resilience, as a contemporary phenomenon involving different levels of recognition. Change has emerged partially in some societies, as a result of concerted and continous efforts of animal rights movements and of the implementation of animal welfare public policies. Clear disparities between different countries and cultural contexts persist, corroborating the heterogeneity of subjective realities in fostering such political and ethical responses.

These considerations draw our attention to the significance of the unprecedented worldwide mobilisation pushed by the whaling moratorium imposed by the International Whaling Commission (IWC), to pause commercial whaling activity from 1986 until now. As a historical landmark in our connectedness to some non-human animal species, the transnational response to face the collapse of large cetacean populations has configured an effective strengthening of contemporary perception of the intangible values attributed to these beings. No longer seen as a commodity, or as a brutal beast to be eradicated from the oceans for human convenience, whales' biological and cultural attributes have become a matter of different levels of social commitments.

Their past was well summarised by Ryan Jones' words[1]: "whales are the silent players at the centre of many historical dramas". The Japanese have been using cetaceans for the last 6000 years[2]. The Eskimos of Alaska have killed the Greenland right whale (*Balaena mysticetus*) for at least 1000 years[3]. The extensive history of large cetaceans' exploitation was intensified in medieval and early modern times as a decisive trade pushed by Euro-American imperialism. The Basques developed the first Western shore-based method of capture from the 11th century, that consisted of a group of men with hand harpoons and lances in small open boats, to reach and kill whales during the calving season, when they met in sheltered marine waters for breeding. Usually, the calves were firstly harpooned to facilitate hunting adult females. In Brazil, this expedient corresponded to a kind of grant given for the harpooner who had the privilege of taking the calves for himself, which stimulated the capture of females even more[4].

As well as the Portuguese, Basques were pioneers in developing whaling off their local shores, in the colonial expansion of whaling across diverse marine waters. Their traditional whaling method predominated until the 19th century and, in diverse marine coastlines, remained as local procedure promoted by seashore communities of whalers over the last century[5]. From the middle of the 18th until the end of the 19th century, whaling was part of the worldwide energy cycle rather than a mere fishery, since whale oil was the main source of lighting in the world until the second half of the 1800s, when it was substituted by querosene[6]. Other whale products, such as baleen (which was used in clothes) and the whale's tongue, consumed by the clergy and nobility, had great value in Europe. In Brazil, the oil was also used as medicine, for the treatment of rheumatism and certain skin diseases, and as alloy in cement for buildings. In the seashore's whaling areas, the bones became fences, furniture, and platforms in the ponds and rivers where washerwomen did their laundry.

Whaling was promoted in the vast Brazilian Atlantic coastline as well as in other European colonies. From 1614 to 1801, as the Portuguese 'Royal Fish' monopoly, whaling was very profitable even though the valuable oil deteriorated during the Atlantic crossing, and was often thrown into the sea before reaching Lisbon. The whale meat, considered worthless, both fresh and salted, did not have value in the European trade and was consumed just by coastal communities and slaves, who made up the largest portion of the whaling workforce[7].

In the 19th century, the severe depletion of coastal whale stocks in the most significant marine areas of capture, and the discovery of mineral oil, in 1859, leading to the substitution of whale oil by querosene, were signals which could have indicated the cessation of the activity. In fact, they were just announcing the start of the new era of industrial whaling, based on modern vessels' technology, developed to improve efficient hunting offshore, in the open sea. The largest hunt in human history had just begun and conventional land stations became obsolete, since the whales were processed entirely on-board factory ships[8].

In the beginning of the last century, around 239,000 Antarctic blue whales inhabited the Southern Ocean, but in the 70s, the impact of Norwegian, British and Soviet whalers decreased the species population in the region to 360, leading to the species protection agreement from

1966[9]. During the 20th century, the activity promoted by great whaler nations, such as the USA, Norway, UK, Soviet Union and Japan, resulted in, approximately, 3,000,000 whales killed. The most threatened species of whales were the large cetaceans, more specifically the blue, fin, sei, humpback, sperm, North Atlantic right, North Pacific right, Southern right, bowhead, gray, bride and mink[10].

The Turning Point

In the early decades of the 20th century, the critical collapse of whale stocks emerged as an international matter negotiated by the League of Nations. In 1931, the first whaling regulation proposal was established, aiming to prohibit the killing of a unique species, known as the right whale. The decision resulted in 26 countries participating in the Regulation of Whaling at the Geneva Convention, but the matter was put off until the end of WWII. In 1946, the International Whaling Commission (IWC) was instructed with the improbable mission to not only conserve the world's whales but also to ensure the preservation of the whaling industry as a result[11].

The following years revealed how impractical it was to adhere to the IWC's goal of both conserving and optimising the utilisation of the whale stocks. A clear crossing line dictated by the position of the State members demarcated a transnational arena of disputes and continuous challenges faced, which continued to be an issue in modern times. Founded by 15 Member States, which grew to 40 in 1999, the IWC is now composed of 88 members, and its procedures, values and beliefs are rooted in scientific information that has been gathered on whale stocks around the world. Its scientific committee is made up of scientists put forward by governments and by invited scientists, who work to supply information and promote investigations according to the IWC's needs. From 1999, the 'Journal of Cetacean Research and Management' was launched as the IWC's scientific journal, with a focus on conservation and management of whales, dolphins and porpoises. Its open access papers are available at the IWC's website.

With regard to the mission of the IWC, the 70s were decisive due to the emergence of global environmentalism and of a strong public opinion rejecting whaling activity. On the other hand, predominant whaler nations remained resistant to any form of regulation proposed by the IWC, given the lack of objective scientific data concerning the decreasing of whale stocks. As Kirkpatrick Dorsey (2013) observed in his book "Whales and nations: environmental diplomacy on the high seas", the whalers' attitude just stimulated national and international environmental movement against the 'irrational, immoral and selfish interests' of the whaling nations, pushing a transnational conservationist consciousness regarding these charismatic marine megafauna.

Various initiatives seeking more articulation with environmental organisations and treatises were developed, strengthening the conservationist trend within the IWC. In 1978, a Resolution established that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) must take "all possible measures to support the International Whaling Commission ban on commercial whaling for certain species and stocks of whales"[12]. The concept of a 'whale sanctuary' (initially adopted by the IWC as a tool 'to close' areas for whaling), grew as well. In 1979, the Indian Ocean Sanctuary was created for a period of 10 years, but it remains active until now, gaining more scope under the Precautionary Principle of the 1992 UNCED Rio Declaration. Entirely consistent with current practices regarding worldwide marine conservation, a sanctuary has the mission of promoting the biodiversity, conservation and non-lethal use of whale resources in a delimited marine area. In the Atlantic domains, the proposal to create the South Atlantic Whales Sanctuary was firstly presented to the IWC members, in 2001, as an initiative of Argentina, Brazil, Gabon, South Africa and Uruguay. There are 51 species of cetaceans distributed in the waters of the South Atlantic, and six large cetacean species that are highly migratory. Until now, the proposal had still not achieved the necessary affirmative votes.

Despite the evidence of critical damage to diverse large cetacean species, the whaling industry remained active, until the indefinite moratorium on commercial whaling came into play from 1986. Japan, Norway and Iceland are countries which had opted out of the moratorium to maintain their commercial and scientific whaling activities.

The Paradigm Shift Towards Interspecies Connectedness

At present, when global environmental treaties have been increasingly questioned by certain national agendas, and global goals for environmental sustainability are targets of ideological and economic hindrances, the maintenance of whale protection represents a far from simple or predictable challenge. The 'Future of the IWC' has been outlined to improve the conservation of whales worldwide, since they have now faced new threats, in comparison to the early period of the IWC. Due to their slow development, low reproductive rates, and potential bioaccumulation of heavy metals, whales remain vulnerable to the diverse impact of human activities as bycatch (accidental death in fishing nets), vessel collision, and different kinds of marine pollution[13].

The main goals proposed to maintain the future of the IWC include retaining the moratorium, the immediate suspension of unilaterally-determined whaling under a special permit, objections, and reservations for a period of 10 years. They also seek to bring all whaling authorised by IWC member governments and to limit whaling to those members who currently take whales, to ensure that no new non-indigenous whaling takes place so that whale species or populations are not currently hunted. Additional goals outlined include establishing caps for the next 10 years that are significantly less than current catches and within sustainable levels, to introduce modern and effective monitoring measures for non-indigenous whaling and to create the South Atlantic Sanctuary, as well as recognising the non-lethal value and uses of whales, such as whale-watching. This is used as a management option for coastal states which addresses related scientific, conservation and management issues of such uses, as well as focusing on the recovery of depleted whale stocks and taking action on key conservation issues[14].

Discussions concerning cetaceans' welfare became a matter of interest for the 'Working Group', established in 2014 to examine events of entanglements, ship strikes, mass strandings, whale-watching and marine pollution. In regard to the methods adopted in the whaling activity, the Animal Welfare Institute argued in the 67th IWC Meeting in 2018 that "all are inherently cruel because even the most advanced whaling methods cannot guarantee an instantaneous death or ensure that struck animals are rendered insensible to pain and distress before they die" [15].

As one of the biggest and oldest existing multilateral treaties for biodiversity conservation, the whaling moratorium has improved the interest of the scientific community in large cetaceans and marine sciences. The plural repercussions of this unprecedented benchmark have been built into multidisciplinary inventories and approaches, inspiring synergies between national governments, the scientific

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community, activist movements and local communities. Blurred boundaries between the natural sciences and the humanities are becoming the norm in countless approaches.

Objective scenarios have demonstrated that human-whale connectedness has been a participative and transformative mechanism in the interstice of science, politics and social participation. In many countries, whale-watching tourism has been adopted as a profitable and sustainable alternative for coastal communities. In the Azores Archipelago, home to traditional land-based whaling for the Portuguese and Americans, whale-watching has become a lucrative way of life for seashore communities, as well as opening sites to improve studies based on lessons learned from the effects of past exploitation[16]. Among the most complex and fascinating manifestations of contemporary human interactions with whales, the access to bioacoustic technology for underwater recordings revealed the 'whales' song', as a symbolic expression of the possibilities of interspecies communication.

The scope of this essay was to examine the complex context of transnational efforts aiming to protect the whales, highlighting its potential significance to the ambition of human de-centration expressed by plural narratives and encompassing different societies. Certainly, we should explore the possibilities and complexities of these continuous entanglements and their potential impact on the improvement of human-animal relationships. There are different narratives and perceptions to be taken into account as a matter of a multiplicity of agendas (individual, local, regional, national and transnational). It is no longer 'us and them', but rather concerted efforts have been made to pave the way for attitudes and thinking towards interspecies connectedness.

REFERENCES

1. Jones, Ryan T. (2019) "A Whale of a Difference: Southern Right Whale Culture and the Tasman World's Living Terrain of Encounter" Environment and History, Volume 25, Number 2, May 2019, pp. 185-218(34).
2. Akamine, Jun (2013) Intangible Food Heritage: Dynamics of Whale Meat Foodways in an Age of Whale Meat Rarity. SENRI ETHNOLOGICAL STUDIES 84: 213 – 225 - Anthropological Studies of Whaling
3. Konrad, Jon M. (1989) "Bioeconomics and the Bowhead Whale." The Journal of Political Economy, vol 97, n 4, pp 974-987.
4. Castellutti Jr, Wellington (2015) Histórias conectadas por mares revoltos: uma história da caça de baleia nos Estados Unidos e no Brasil (1750-1850). Rev. hist. comp., Rio de Janeiro, v. 9, n. 1, p. 88-118.
5. Castellutti Jr, Wellington (2005) A atividade da pesca da baleia nas últimas décadas dos oitocentos – Itaparica: 1860-1888. Afro-Ásia, 33, 2005, 133-168.
6. Tertzakian, Peter (2006) "A Thousand Barrels a Second: The Coming Oil Break Point and the Challenges Facing an Energy Dependent World", NY: McGraw Hill.
7. Castellutti Jr, Wellington (2005) A atividade da pesca da baleia nas últimas décadas dos oitocentos – Itaparica: 1860-1888. Afro-Ásia, 33, 2005, 133-168.
8. Fitzmaurice, Malgosia (2017) "International Convention for the Regulation of Whaling." available at www.un.org/law/avl
9. Giggs, Rebbeca (2019) Whale songs are getting deeper. In: https://www.theatlantic.com/magazine/archive/2019/10/whale-songs-are-getting-deeper/596635/
10. Environment Investigation Agency/Animal Welfare Institute. Commercial whaling: Unsustainable, inhumane, unnecessary. (Report), 2018.
11. Rocha, Robert C. et al. (2015) "Emptying the Oceans: A Summary of Industrial Whaling Catches in the 20th Century". Marine Fisheries Review 76(4) March 2015 37-48.
12. IWC's Resolution to the CITES, 1978.
13. Marega-Inamura, Marcela et al. (2020) "Scientific collaboration networks in research on human threats to cetaceans in Brazil" Marine Policy 112, 103738.
14. Proposed Consensus Decision to Improve the Conservation of Whales from the Chair and Vice-Chair of the Commission - IWC/62/7in:https://iwc.int/private/downloads/aVhYnPU8D6j_dl39_VLG_g/62-7rev.pdf
15. Opening Statement of the Animal Welfare Institute to the 67th Meeting of the International Whaling Commission
16. Vieira, Nina & Brito, Cristina (2009) "Past and recent sperm whales sightings in the Azores based on catches and whale watching information." Journal of the Marine Biological Association of the United Kingdom, 2009, 89(5), 1067 – 1070.

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