



## Food for Thought

### Good ethics or political and cultural censoring in science?

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Peer-reviewed journals are the cornerstones to communicating scientific results. They play a crucial role in quality assurance through the review process, but they also create opportunities for discussions in the scientific community on the implications of the results or validation of methods and data. This requires that journals adhere to commonly accepted scientific standards and are open about their editorial policy. Norwegian scientists experience problems in getting research on minke whales accepted for publication where the data have been collected in association with commercial whaling. The journal *Biology Letters* refuses to publish papers based on data from the Norwegian whale register while publically claiming a sole focus on scientific quality. Although there are good arguments for claiming that clearly unethical research should not be rewarded with scientific publications, one also has to realize that some fields of research are beset with unresolved ethical and cultural debates. In these cases, it is to the benefit of the progress of science, and indeed society, to be open about the issues and support arguments through scientific studies. Political or cultural censoring of scientific information will in any case jeopardize the role of journals in quality assurance of scientific research and undermine the credibility of science as a supplier of objective and reliable knowledge.

**Keywords:** ethics in science, lethal sampling, publication policy, whale research.

#### Background

A recent study published in the journal *PLoS One* was the first to demonstrate the migration of the Antarctic minke whale (*Balaenoptera bonaerensis*) to the Arctic and also to present genetic evidence of a hybrid between the Antarctic and common minke whale (*Balaenoptera acutorostrata acutorostrata*) (Glover *et al.*, 2010), two species thought to have diverged ~5 million years ago (Pastene *et al.*, 2007). The study was based on data and preserved samples from the Norwegian Minke Whale DNA Register (NMDR; Glover *et al.*, 2011) and historical samples from the Japanese Whale Research Program. No animals were therefore killed to complete the study as they were already

collected and preserved for other purposes. No external funding was applied for or received, and the cost of the study was covered in total by the Institute of Marine Research (Bergen, Norway; IMR).

Before submission to *PLoS One*, a specific enquiry was sent to *Biology Letters* asking whether they in principle would consider this work for scientific review. The journal declined to review the paper as the editor concluded “we feel that *Biology Letters* should not publish papers that use data from the Japanese or Norwegian whaling programmes” (IMR, 2010).

The IMR requested the opportunity to publish a letter to the editor in *Biology Letters* discussing the premises for the refusal.

This again was denied because it is a “widely held view in the scientific community and beyond that these programmes are unethical” (IMR, 2010). This was then followed up by a request to present the scientific basis for the claim that these programmes are unethical. Biology Letters refused to answer the question (IMR, 2010).

We argue that these types of decisions, particularly the refusal to openly supply arguments, are a threat to the credibility of science. Although we appreciate that the editors of Biology Letters are frank about the reason for rejecting the publication of Norwegian and Japanese research on whales, we hold that the way they deal with ethically sensitive issues is unsatisfactory in various regards. Several Norwegian scientists have experienced difficulties in getting studies reviewed that have been based on data collected in association with the commercial harvest of minke whales in Norway, but apparently the editors use subsidiary reasons for refusing a review. Comparable difficulties in getting scientific work on whales published in scientific journals are reported by Japanese scientists (Fukui *et al.*, 2005).

### The mandate of the IMR and the NMDR

The IMR is a governmental research institute of the Norwegian Ministry of Fisheries and Coastal Affairs. The Institute’s mandate is to conduct surveillance and research on the state of the Northeast Atlantic and adjacent waters and on the living resources therein and provide adequate advice for ecosystem-based management of the living resources to which Norway has legal rights. The IMR has a specific research group dedicated to monitoring, research, and advice on marine mammals (Misund *et al.*, 2008).

The NMDR was established shortly after Norway reinstated its commercial harvest of minke whales in the Northeast Atlantic in 1993. It contains 7644 individual genetic profiles for minke whales commercially harvested during the period 1997–2010 (Glover *et al.*, 2011). This represents 99% of the 7751 whales harvested by Norway during this period. The register primarily serves as a control system to detect and deter any attempts at an illegal trade of products derived from other stocks of minke whale, or other whale species, under cover of the legal Norwegian harvest originating from the Northeast Atlantic. It is formally owned and managed by the Norwegian Directorate of Fisheries ([www.fiskeridir.no](http://www.fiskeridir.no)); however, all practical work including genetic analysis is conducted by scientists employed at the IMR. The register has been implemented in a range of scientific studies, including the study of genotyping error rates and their causes (Haaland *et al.*, 2011), migration of minke whales and interspecific hybridization (Glover *et al.*, 2010), identification of feeding behaviour in Greenland sharks (*Somniosus microcephalus*; Leclerc *et al.*, 2011), genetic tagging (Skaug and Øien, 2005), and studies of mating behaviour (Skaug *et al.*, 2008).

### Facts about whaling

Whaling remains a controversial issue, and the legal aspects are regulated by the International Convention for the Regulation of Whaling (IWC, <http://iwcoffice.org/>; International Whaling Commission, 1946). A moratorium on commercial whaling was implemented by the International Whaling Commission (IWC) from 1985/1986 due to difficulties in agreeing on catch limits and differing attitudes to the acceptability of whaling (IWC, 2011a). However, this decision is not binding for countries who have objected according to Article V of the Convention (IWC,

1946). Norway and Iceland put forward such objections and were/are thus legally exempted from the moratorium on commercial whaling. Whaling is performed by a number of countries, both members of IWC and others; Canada, Commonwealth of Dominica, the Faroes (Denmark), Greenland (Denmark), Grenada, Iceland, Indonesia, Japan, Norway, the Philippines, Russia, St Lucia, Saint Vincent and the Grenadines, and the United States (IWC, 2011b; High North Alliance, 2011). Of the IWC member countries, Norway and Iceland are engaged in whaling as a commercial activity, Japan as a research activity, and the remaining IWC countries (Greenland (Denmark), Russia, Saint Vincent and the Grenadines and USA) as aboriginal subsistence whaling. The total catch in the 2009 or 2008/2009 season was 1914 animals (IWC, 2011b). The commercial hunt (Norway and Iceland) was 574 whales of the North Atlantic common minke whale stocks (northeastern and central North Atlantic and off West Greenland), stocks in healthy status counting 180 000 individuals (IWC, 2011c, d). There are bycatches of whales, dolphins, and porpoises in commercial fisheries in addition to the hunts. It is estimated that the global bycatch of marine mammals in conventional fisheries is of the order of hundreds of thousands of individuals and that bycatch is likely to have appreciable demographic effects on many populations of marine mammals (Read *et al.*, 2006; IWC, 2011c).

### Facts about the ethics of whaling

It is a matter of fact, supported by several opinion surveys, that attitudes to whaling differ among people, and it is clear, furthermore, that dominant attitudes, pro or con, co-vary with whether the nation is engaged in whaling or not (Freeman, 1994; Nagasaki, 1994; Hamazaki and Tanno, 2001; Scott and Parsons, 2005; Bowett and Hay, 2009). Thus, a majority of people in Norway and Japan report a pro-whaling attitude, while a majority of people in, for example, Germany and the UK report disapproval of whaling, thus confirming a “cultural gulf” between whaling and non-whaling countries. Both attitudes are typically beset with strong emotions. At the same time, it is also clear that the strength of attitude is seldom matched by more detailed knowledge about the subject (Freeman, 1994; Hamazaki and Tanno, 2001).

One finds a variety of attitudes to whaling, but as a result of the above-mentioned moratorium and the ensuing success in the restoration of several whale species, many experts who oppose whaling on a principled basis do this now, not for conservation goals, but with explicit reference to the ethics of whaling. Indeed, this argument has also entered the deliberations of the IWC (2011e). Many seem to feel that ethics has something important to say on the subject.

Yet, when taking a closer look at the community of ethicists, e.g. bioethicists, the conclusion must be that there is no generally accepted argument against whaling as such. Most ethicists would concede that if whaling threatens the survival of a species, then it is unethical to continue to harvest that species. However, whether survival is threatened is obviously dependent on the species in question, and if a certain whale species such as the minke whale are shown to have recovered to a level that allows risk-averse sustainable harvesting, then the argument from threats to survival fails. However, other arguments are also put forward. The well-known bioethicist Peter Singer is well aware that arguments based on diminishing stocks fail if the stock recovers. However, he puts forward the claim that killing whales is wrong because it implies needless suffering of the animal:

I did not argue that whaling should stop because whales are endangered. . . . Instead, I argued that whales were social mammals with big brains, capable of enjoying life and of feeling pain, and not only physical pain but very likely also distress at the loss of one of their group. . . . Causing suffering to innocent beings without an extremely weighty reason for doing so is wrong. If there were some life-or-death need that humans could meet only by killing whales, perhaps the ethical case against it could be countered. But there is no essential human need that requires us to kill whales. Everything we get from whales can be obtained without cruelty elsewhere. Thus, whaling is unethical. (Singer, 2008)

This is a position to which one may subscribe. As Singer argues convincingly, this then also extends to most other vertebrates; in fact, he originally drew the line “somewhere between a shrimp and an oyster” (a position that he now believes is still too liberal). Therefore, when holding this position, one needs to refrain from eating all meat and become a vegetarian or vegan.

Not all ethicists agree with this radical conclusion. Others hold that the method of killing is the crucial ethical consideration, thus basing their ethical attitude on a serious concern about animal welfare. The weapons and ammunition used in Norwegian minke whale hunts are highly effective in causing very rapid death (Knudsen, 2005; Øen, 2006; Knudsen *et al.*, 2007). Hunting wild animals always involves a larger risk for only wounding an animal than applying slaughterhouse techniques to domestic animals. We have not been able to find any scientific documentation that hunting whale is worse (or better) and creates more pain and distress than comparable hunts on big terrestrial mammals. On the other hand, hunted animals will usually be killed without realizing that they are being hunted, and they have been spared the long-term stress during their husbandry phase and in the slaughterhouse before they are killed (Øen, 2006).

These are the main considerations from an ethical point of view of which we are aware. There may be others, but important for our discussion is the fact that there is no unanimous and coherent ethical position on whaling. People may rightfully differ in their opinion.

Of course, the most powerful rejoinder to criticism of whaling nations like Japan and Norway is to point to cultural bias: singling out whales among larger mammals for special ethical consideration and protection is not based on scientific criteria but on cultural prejudices alone, like singling out cows in Hinduism. The lack of acceptability of beef eating or moose hunting in some countries is on a par with the lack of acceptability of whaling in others. Even Singer concedes that this is a powerful argument which can only be countered by abstaining from meat eating altogether.

### The role of science

Science provides the foundation for credible decision-making in the protection of marine environments as well as laying the foundation for the sustainable harvest of marine resources. Only through adequate knowledge about the species and their interactions in the marine ecosystems can the oceans be used in an environmentally sustainable manner in feeding the growing population of the world ([www.ices.dk](http://www.ices.dk)).

Scientific journals play a basic role in communicating scientific results. Values such as “scientific excellence, work of

outstanding quality and international importance, originality and interest across disciplines” guide scientific journals (*Biology Letters*, 2010). Two quality-assurance systems are usually in force: (i) peer reviews evaluate the substance of the study—relevance of methods, data, and data handling before publishing etc., and (ii) criticism and validation by other scientists who follow-up and concomitantly thereby check the published results. These two methods for quality assurance interact and have been demonstrated to work well. However, this crucial role in quality assurance requires that the scientific journals are aware of their responsibility to encourage the free flow of knowledge. Censoring papers before peer reviews, be it based on commercial interests, political or religious faith, or other personal reasons, will invariably undermine the quality assurance system and result in biased results. In the long run, one needs to fear for the loss of public confidence in scientific results. This is particularly important in areas of political, religious, or cultural differences. It is, for instance, clearly shown that results from research on whales is influenced by the source of funding and that conflict of interest may have led to a misrepresentation in both the primary and the secondary literature on the effects of noise on marine mammals (Wade *et al.*, 2010).

We do not venture an opinion on the scientific quality of the Japanese scientific whaling programmes, but it is obviously a serious problem that the quality of these programmes is questioned due to their low rate of peer-reviewed publishing (Gales *et al.*, 2005; Parsons *et al.*, 2006) at the same time as Japanese scientists report serious problems in getting their work published (Fukui *et al.*, 2005). It is paradoxical to criticize researchers for not publishing their results in peer-reviewed scientific journals when at the same time their possibility to do so is obstructed.

The article “Shifting baselines in scientific publications: a case study using cetacean research” (Rose *et al.*, 2011) uses bibliometric methods to demonstrate that the focus in whale research during the last 35–40 years has changed from management questions to conservation biology. Bibliometric methods are funded on the assumption that the publication rate reflects the quantitative research activity within the areas in question. Imposing censorship based on non-scientific considerations could distort the data supply and result in false conclusions.

In Norway, the use of experimental animals and field studies on animals are regulated through the “Act on animal welfare” (LOV, 2009) and regulations on experiments on animals (FOR, 1996). Both texts are, to a large extent, harmonized with the directives of the European Union (86/609/EEC, 1986) and the convention of the European Council (ETS, 1986). The legal framework for experiments on and fieldwork with animals is, therefore, similar when comparing Norway and countries in the European Union.

Lethal research on marine mammals is certainly controversial, and the laws that apply vary internationally. This was acknowledged by Gales *et al.* (2009) when they suggested some guidelines intended to reflect internationally acceptable and scientifically valid approaches to the handling and treatment of marine mammals in field research. These guidelines were also supported by the Society for Marine Mammalogy. The authors suggested that for all such research, the work must have been conducted so that it conforms to the laws of the country where the research was carried out. Whenever possible, Gales *et al.* (2009) suggested that ongoing activities outside the research community (e.g. hunts, bycatches, strandings) should be utilized as a source of material for scientific studies of marine mammals.

## Cultural, political, and religious differences

It is probably a reflection of cultural differences that diverse views are held on whale hunting as there are no biological data justifying a different management regime for whales compared with those used for terrestrial mammals. It is, in this respect, important to recognize the right of indigenous people to preserve and develop their cultures and to control their lands (and waters) and traditional resources as a key to perpetuate all forms of diversity on the Earth (International Society of Ethnobiology, 2006).

There are wide cultural and religious differences in the acceptable use of animals. For example, dogs were historically selectively bred for a long list of purposes as guard, shepherd, hunting, and even as meat. In Western urban communities, the main purpose of dog keeping today is probably as pets, and the use of dogs as food in other societies seems cruel to Western suburbanites. However, it is difficult to find a biological difference justifying using pigs as food and not dogs. We see the same situation with horses. Before the mechanization of agriculture in Europe, horse meat was accepted as food. Horse usage for leisure changed this in large parts of Europe, and horse meat today is generally limited to inclusion in minced meat products or as pet food.

Coastal communities have obtained a substantial part of their food from what the sea has provided, including marine mammals such as whales and seals. In Norway, rock carvings document the use of whales as human food going back some thousands of years.

There is hopefully a consensus in the scientific community that animals used in science, both as experimental animals and in field studies, should be treated according to national and international conventions and that pain and suffering should be avoided. However, we do not see any difference, in principle, in hunting deer in the UK and whales in Norway. Both are mammals with similar reactions to pain and fear, and both are used for human food. Methods and qualifications of the hunters can be discussed and probably improved in both operations (Knudsen, 2005). If we want to draw a line between these issues, we do this solely on political grounds or based on personal morality or culture.

## Editorial rights and responsibility

We recognize the editorial rights and responsibility of any scientific journal to define the scope of their publication as well as their criteria for the selection of submitted papers. The code of conduct and best-practice guidelines for journal editors ([www.publicationethics.org](http://www.publicationethics.org)) recommend that editors accept or reject papers based on their importance, originality, and clarity and that the journal should have declared mechanisms for authors to appeal against editorial decisions. Working with a hidden agenda and denying papers based on nationality (e.g. “Norwegian” and “Japanese”) is, however, unethical and unacceptable (International Council for Science, 2008).

## Conclusions

We support the role of ethics, including the role of ethics in scientific research, and we strive for more explicit discussions of ethical issues in the scientific community. We also accept and respect that individuals have the right to entertain moral objections to whale hunting and publicly claim that it is cruel and unethical.

However, as professionals, the editors of scientific journals are responsible for upholding the ethical principles of science. Some such ethical principles are universally embraced, such as, for

example, those relating to the integrity of science or those relating to respect of the legal frameworks for research. If other than scientific considerations or universally embraced ethical principles are implemented as publication policy, these must be clearly stated in the remit of the journal. In the absence of such external goals, we see it as the responsibility of the journal to ensure objectivity and fairness in the presentation of data and research to prevent bias or incomplete information. This also includes allowing interpretations contradictory to a possibly wide consensus.

Caution should be taken in refusing the review or publication of papers solely based on political or moral norms. The use of peer review and anchoring the decision in the European Convention for the Protection of Vertebrate Animals used for Experimental and Other Scientific Purposes would increase transparency and improve the quality of decisions.

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