

Ethics in aquaculture

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Aristotle wrote on ethics as the “ethos,” the “living” and the organization of civilizations or societies. For Kant, ethics was based on the moral duty, on acts motivated only by moral obligations. Referring to normative ethics, Ransom (1993) emphasized that moral duty would be a set of general rules capable of orienting the recognition of good and evil, right or wrong: of what to do, or not to, in certain situations. In this context, the following questions arise: when practicing aquaculture, what should the priorities be under the criterion of the society’s common well-being? Or, are aquaculturists not morally responsible for possible derangements of research or production activities? Is our duty limited only to our actions without being influenced by ethical scruples? Is the ultimate goal of aquaculture the full exploitation of natural and human resources at the lowest costs?

In the current industrial society in which we live, productivity and economic efficiency are goals of any production activity. So the dominant axiom arises: “the most efficient, the best!” However, this reminds us of another important question: the best for whom? If “the ends, efficiency and productivity, justify the means, exploitation of natural and human resources,” is it legitimate to do whatever it takes to achieve profitable and productive cultures? To accept it is it not to accept an anti-ethic principle? Those who can do everything in the economic field can also do so in the moral field? To do everything in science and technology is not always possible. Limits can be perfectly drawn by ethical reflections. Not to do it may lead us on the track of certain activities that does not seem to recognize the importance of collective welfare. As Bunge (1980) suggested, if we wish to keep most of modern technology, stimulate progress and, at the same time, minimize the negative aspects, we should make an effort to practice a moral code that covers all technological processes and, also, the resulting individual and social impacts.

Considering that behind all technologies are the so-called basic sciences, such a code must include the moral code of science; in other words, rules that secure the search and dissemination of scientific truth. According to Robert Merton, sociologist, the basic norms of scientific “ethos” would be: universalism, communalism, disinterestedness and organized skepticism (Cupani 1993). In universalism, the impersonal character of science is celebrated. It is a rule that requires that true intentions are evaluated in terms of impersonal and previously established criteria and they cannot be accepted or rejected only because of their origin, such as prestige or the nationality of a scientist. In other words, the scientific value of a statement depends exclusively on its intrinsic value and not on who formulated it. This norm seems to fit particularly the misconceived Latin-American idiosyncrasy that follows the popular saying, “home saints don’t make miracles”. In

communalism, knowledge acquired from scientific research must not be regarded as private property. This rule condemns scientific secrets because it prevents increased knowledge. The scientist or technician that makes a discovery must, by all means, reveal it. Furthermore, the rule that recommends disinterestedness condemns science with intentions other than the search for provable knowledge. Thus, the scientist shall not allow personal interests to interfere in the investigation. Those who do not follow that rule can easily practice scientific fraud and, there are plenty of examples. And, finally, organized skepticism condemns both credulity and dogmatism; all ideas must be tested and are subject to rigorous, structured community scrutiny. In this way, if we do not practice critical sense in aquaculture, we can perpetuate our condition of eternal imitators of technologies or even pseudo-technologies completely away from our reality.

In aquaculture, the environmental impact caused by the activity deserves ethical reflection. The fact that, in aquaculture, fish are cultured and not taken from their habitats by predatory fishing should be enough to name it “the savior of the nation.” However, some people think the opposite, probably because of some contradictions seen in aquaculture: deforestation, pollution, salinization of land and aquifers, and the introduction and dissemination of diseases. Because it is an activity dedicated to food production, aquaculture can go through what other production industries have been suffering: customer rejection. As stated by the Australian philosopher, Peter Singer², the customer becomes more and more sympathetic with environmental causes and “thinks about the consequences of eating to the food animal, the environment and ourselves.” According to the philosopher, the way we eat makes animals suffer and causes a worldwide epidemic of obesity, which enormously affects human health and the planet. For our luck, food of aquatic origin is regarded as healthy, good for the heart, brain and blood. Nevertheless, if public opinion is convinced that foods of aquatic origin are produced with the suffering of animals and/or environmental devastation (mainly the latter), aquaculture can suffer what swine and poultry farms in the US have: no more customers.

There is no doubt that aquaculture can cause environmental impact; however, do the ways aquatic organisms are cultured make them suffer? In other words, can fish, shrimp, oysters suffer? What would be suffering for animals that do not seem to have conscience? Whatever the answer may be, it is quite unlikely the customer will feel any remorse about the way aquatic organisms are reproduced, cultured, harvested and processed. The species that are cultured, apart from ornamental fish, are not part of our circle of emotional relationships as happens with dogs, cats or parakeets, with which

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we identify and recognize feelings of friendship and even love. Although the customer seems not to care about the welfare of cultured animals, universities and funding agencies do, especially with those used for scientific research. Curiously, the ethical principles of the Brazilian "ethic commissions for research animals" seem to apply only to vertebrates, fish inclusive, but leave those without a spinal column out; like shrimp and mollusks.

Going further into the social field, a development plan without ethics could also result in impacts to society. For example, agriculture in the context of the "Green Revolution" – a model that favored and still favors the cultivation of a single genetically enhanced crop – promoted mechanization and caused a major social impact, such as unemployment and migration of rural workers to the big cities. Furthermore, it is hard to understand why, particularly in Brazil, a country that produces more than 100 million tons of cereal grains and seeds

annually, hunger still persists. In fisheries, the social consequences of exclusively profit-driven developmental policies are similar. For example, in Peru, a country with a population of almost 30 million people and with eight million tons per year of fisheries production, enough to feed every inhabitant with 250 g of protein daily, 40 percent of the population is malnourished. It is even worse because 90 percent of the fisheries are transformed into fishmeal or exported to other countries to be used as an animal feedstuff, instead of reducing hunger (Vinatea and Muedas 1998).

Ethics needs to be addressed. We must anticipate the revolutionaries and the critics from the establishment by pondering current ethics as a whole, not only the environmental implications. At the present time, when thoughts change radically, when humanity asks more and more about its role in the world, ethics should become the main item when preparing developmental policies, scientific research and technological studies for aquaculture. If we do not do it now, nature and so-

ciety can condemn us sooner than we expect.

Notes

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