

Pawan Kamlesh
ENVR S-147 Response Paper #1
July 6th, 2018
Dr. Andrew Tirrell, TerzahTippin Poe
Harvard Summer School

1

EFFECTS OF COGNITIVE DISSONANCE ON THE FISHING INDUSTRY & POPULATION IN HAWAII

The term “cognitive dissonance” is used often to describe the feeling of discomfort that result from holding two conflicting beliefs (Cherry,18). When there is an inconsistency between belief and behavior, something must change in order to eliminate or reduce the dissonance. According to this theory, people experience tension when their belief or attitude do not match their behaviors. They tend to seek consistency in their belief and perceptions. When there is a discrepancy between belief and behaviors, something must change in order to eliminate or reduce the dissonance (Guns, 2018). Cognitive dissonance applies perfectly to Hawaii’s fishing industry. There seems to be a gap in Hawaii between the public’s awareness, the danger of overfishing and increasing consumption of the fish. Local people always feel and believe that overfishing is unacceptable and it destroys the Hawaiian Eco system yet due to the commercialization and very large tourism industry supported by the state government in past 40 years, cognitive dissonance plays a big role in keeping the unsustainable fishing industry in huge crises.

Fishing has always been an important and vital industry in the United States.

Commercial fishing operations, including seafood wholesalers, processors, and retailers, all contribute billions of dollars annually to the U.S. economy. Recreational fishing and the manufacturers of fishing equipment are the major industry in the South Eastern

United States . The fishing industry generates about nearly \$ 90 billion annually and supports over one and a half million jobs (The Hamilton Project, 2014).

It is estimated that over two-thirds of the world's fish stocks are either fished at their limit or overfished. The United Nations food and agriculture organization (FAO) has estimated that seventy percent of the fish population is fully used, overused or in serious crisis. (World Wide Fund, 2015). The annual total global catch of fish is 124 million metric tons, which is equivalent in weight to 378 Empire State Buildings (Over Fishing, Oceans are Dying, 2010) Over fishing and its exploitation is the greatest threat to the ecosystem today. We have no other option but to recover and balance this critical situation. Unlike other parts of the world, the United States has controlled the exploitation in its shores and carefully monitored for past two decades and turned many of its fisheries around to healthy level from once being in a highly overfished state. But this has not been true to the state of Hawaii. Hawaii is the only state which comprises of thousands of remote island few thousand miles from the continental United States. Due to being an island chain, it is natural that Hawaii is dependent of sea food. But what has caused Hawaii to change from Sustainable fishing 50 years back to unsustainable fishing under the lens of cognitive dissonance in 2018? There are many factors leading to this change.

In the State of Hawaii, the industry is divided in to commercial, recreational and subsistence catch. Hawaii's coastal fisheries have undergone enormous changes in the past 100 years. Traditionally, Hawaiian had a *kapu* system (traditional fisheries management system). Due to rapid growth in tourism industry in past forty years and increasingly urban resident population in Oahu Island, growth in fisheries industry

became enormous. According to Shomura, Hawaii's resident and tourist population was about 8.1 million in year 2000 compared to 150,000 in 1900. This drastic change in the population within 100 years means that there has been a huge human impact relating to nearby ocean waters. Shomura refers to one-hundred-year Hawaiian fisheries history as a focal point for exploitation. In 1900 human-induced discharge into the ocean contained very few chemical and pollutants but by the year 2000, there was an influx of large fishing vessels capable of reaching distant waters and able to fish for several months at a time. Due to this, the catch in year 2000 went up to 23.4 million pounds compared to less than 6 million pounds in 1900. The estimated value of the catch was about \$ 59 million in year 2000 (Shomura, 2004).

Hawaii State Division of Aquatic Resources maintains a database concluding that the major coastal commercial fishery in Hawaii is for *akule* and *opelu*, which accounts for more than 80 percent of the entire coastal catch by weight. Reminder catches are goatfishes, squirrelfishes, surgeonfishes and parrotfishes (Shomura, 2004).

There are four reasons for the decline. The first reason is relating to license.

Because Hawaii is one of the few states that do not require a saltwater recreational fishing license and due to that catches are much higher than projected in the estimated data. This has to change. Government of Hawaii must update and change their scientific and statistical database to give us more accurate findings.

Second reason for decline, is intensive fishing pressure on highly prized and vulnerable species has led to substantial declines in catch as well as size and has raised concerns for local fishers and scientist about the long-term sustainability of these stocks.

Here cognitive dissonance plays a big role. Being from Hawaii, I have seen how local

Hawaiians were deeply concerned about the over-fishing leading to crises around the Hawaiian Islands. Locals both from the Hawaiian and Asian communities have told me that causing this huge ecological imbalance is against traditional Hawaiian and Buddhist belief system. Both traditions strongly encourage sustainable living as well as respect to the environment. In fact traditional Hawaiians belief has a beautiful mythological creation story relating to mother nature that their origin is from the *Taro* root plant and that all living being on earth are sacred and we must consume according to our necessity and not for monetary gain.

Third reason is the lack of legal enforcement and fines created a culture that does not abide or respects the fisheries management regulations (Shomura, 2004). This is a big problem in Hawaii. Government of Hawaii must not only create a fisheries management regulations and guidelines but also enforce it strictly with strict heavy fines. New policy must give an offender only one chance with small fines but second fine one must be regulated with hefty fine.

The fourth reason is that most homes and businesses are connected to centralized waste treatment centers near the Pearl Harbor bay (Honolulu) and due to that treated water is discharged in a large amount into the ocean. Due to lack of enforcement, in recent years, the Hawaii Department of Land and Natural Resources, Division of Aquatic Resources, has implemented strict guidelines and measures to manage and protect these valuable species. New measures included enforcing quotas for certain species, creating marine surveys and marine and artificial reef protected areas. Now the state has many protected marine areas, which in past fifteen years has shown a substantial increase in the size and population. New legislations under the federal government created new laws to

protect marine species. The new laws included the Marine Mammal Protection Act, the Endangered Species Act and the Fishery Conservation and Management Act. These regulations involved the state government to implement the law along with monitoring and protecting the marine ecosystem.

Few years back, I talked with the few local buyers; they told me that they are aware that Hawaiian marine ecosystem is endangered. And even if it was, unfortunately they really do not know how to protect or what to do for the marine sustainability. Here again, cognitive dissonance dominates their view about the environment. They know their belief contradicts their behavior. Another Factor that contributed to the overuse was fish consumption by the Japanese people in Hawaii. Fish is a staple delicacy especially in Japanese community and this contributed to fish dependency leading to the crises. I absolutely think that more awareness in the community can come from the marine environmental groups under the blessings of the University of Hawaii and coercive legal methods may can be used by the government of Hawaii would be a right way to change the mindset of local community. The local and tourist population must change their two conflicting beliefs to sustainable living and protecting their marine environment. A right direction may be going back to the way local Hawaiians lived for over 1000 years, a sustainable way of farming and marine protection. Reducing the amount of both seafood and meat intake will lead us towards marine sustainability,

In conclusion, Hawaii has worked to turn the table towards sustainable direction but not as hard as we all expect it to be. Locals must not rely on cognitive dissonance and more focus on all the recommendations mentioned in this paper. Moreover, we need new current data base and proper statistical and scientific analysis to measure the catch each

year. The local community needs to be involved and should think about delayed gratification instead of instant profit. It is a joint effort, but with positive vision and communities help, Hawaii can be a beckon or example for marine sustainability.

PAWAN KAMLESH

Reference

Kearney, M., Harris, B., Hershbein, B., Boody, D., Parker, L., Lucido, K. (2014). What's the Catch? Challenges and Opportunities of the U.S. Fishing Industry. The Hamilton Project, 3. Retrieved from

www.hamiltonproject.org/Challenges_opportunities_fishing_industry_policybrief.pdf

“Decreasing Fish Stocks” World Wide Fund. July 2015. World Wide Fund Global

Retrieved from

http://wwf.panda.org/what_we_do/endangered_species/cetaceans/threats/fishstocks/

Shomura, R. A Historical Perspective of Hawaii's Marine Resources, Fisheries, and Management Issues over the past 100 years. National Marine Fisheries Service, Honolulu Laboratory and the University of Hawaii. 1-11.

“The threat of Over Fishing, Consequences at the Commercial level” March, 2012.

Darhmouth Journal of Sciences. (Accessed 3rdth July, 2018)

Cherry, Kendra, Guns, Steven. (2018). Cognitive Dissonance. Cognitive Psychology

Retrieved from

<http://www.verywellmind.com/what-is-cognitive-dissonance-2795012>