

Using Care Ethics to Examine the Salmon Decline Caused by the Grand Coulee Dam

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Introduction

In 1941 the Bureau of Reclamation completed construction of the Grand Coulee Dam on the Columbia River in the United States' Pacific Northwest, ultimately contributing to the decline and near extinction of salmon populations within the Columbia River watershed. Dams were constructed all throughout the Columbia River Basin at that time in order to generate electricity for the region, and while the region undoubtedly benefited from the jobs and electricity created by such projects, dam employment was severely detrimental to the area's large scale aquatic ecosystems and the people who depended on them (Dauble et al., 2011). Many people today believe that the Bureau of Reclamation had an obligation to prioritize the health of the region's wild salmon runs and that its failure to do so is a major issue. However, most arguments target the inefficacy of the technologies employed or lack thereof as the underlying causes of such a devastating decline in the proliferation of salmon, such as the low-survival rate fish ladders and fish-transporting helicopters that attempted to fly salmon up and over the dams (Raymond, 1988). This approach seems logical when considering the accessibility to miles of spawning grounds upstream of dams to be the root cause of the issue. However, evaluating only the technological side of the problem poses the risk of leaving society unequipped to hold entities such as the Bureau of Reclamation morally responsible for their actions.

I will analyze the case of the Bureau of Reclamation's decimation of pacific salmon runs in the Columbia River Basin through the ethical framework of care ethics in an effort to show that the Bureau of Reclamation can be held morally responsible for the devastation they have caused the region. In particular, I will substantiate this claim through the examination of the four

pillars of care ethics theory, focusing on how the Bureau owed a duty of care to the millions of people whose livelihoods depended on the proliferation of salmon but ultimately failed in its attentiveness, responsibility, competence and responsiveness to uphold that duty (Sander-Staudt, n.d.). Additionally, I will employ the concept of collective responsibility in order to shed additional light on the complexity involved with holding individuals responsible in this instance but the capacity and necessity to hold the Bureau as a group accountable for their actions.

Background

The Bureau of Reclamation was tasked by Franklin D Roosevelt's administration to construct the Grand Coulee Dam during the Great Depression as a part of FDR's "New Deal" in an effort to drive economic recovery by putting people to work, providing electricity, and supplying water for irrigation (McGee & Schlect, 2018). The dam was to be constructed on the Columbia River in Washington State where wild salmon runs on the order of millions of fish still proliferated and served as a crucially abundant food source and contributor of nutrients to the region's ecosystems (Levy, 1997). The construction of the Grand Coulee Dam, among hundreds of others in the region, presented a paramount problem because of the monumental obstacle it posed to anadromous fish returning to their spawning grounds to produce the next generation of fish. In addition to blocking off thousands of miles of upstream spawning grounds, hydropower dams raise temperatures and alter currents of waters that are critical to the survival of salmon. It was well understood prior to the dam's construction that it would wipe out the annual runs of some two million salmon and steelhead that return to the upper Columbia, yet the project proceeded regardless. Since the construction of the Grand Coulee Dam, salmon species in the Columbia River Basin have been pushed to the brink of extinction, several species have been

listed as endangered, millions of people have been affected by salmon decline, and tens of billions of dollars have been spent in an attempt to mitigate the adverse effects of the dam on threatened and endangered salmon and steelhead (Jacobs, 2019).

Literature Review

The case of the damming of the Columbia River has been examined and debated by stakeholders and scholars since the dam was first constructed to identify the underlying cause of the fish runs' devastation, as well as to identify the course of action that has the region's best interest. The majority of the analyses of this case focus on the insufficiency of fish passage technologies and hatcheries to compensate for the loss of the wild fish runs' access to spawning waters upstream of the dam, as well as water policy and economics as a driver of the dam's operation.

Raymond analyzes the Bureau of Reclamation's failure through evaluation of the many technological fixes that have been employed in an attempt to bail out the natural processes that have been overwhelmed by the dam (Raymond, 1988). The original issue that was identified and for which attempts to address it were quickly made was the problem of blocking adult fish from swimming upstream to native spawning grounds. The dam blocks access to more than forty percent of the habitat that was originally available to salmon in the Columbia River Basin (Northwest Power and Conservation Council, n.d.a). Initially, fish were given no option for dam passage. Once the problem was realized, people began employing the likes of several different passage mechanisms ranging from fish ladders and water-filled elevators to dropping fish over dams out of airplanes, the latter of which did not prove to be very successful (Northwest, n.d.a).

While fish ladders proved to be somewhat effective, Raymond notes that the main cause of population decline was actually the mortality of juvenile salmon migrating downstream through dams in their return to the ocean.

In order to offset the mortality of juvenile fish caused by the dam, the Bureau of Reclamation employed measures such as increased numbers of juveniles from hatcheries, deflectors on the spillways of the dam to reduce the saturation of fatal dissolved gases in the water, bypasses at the dam for juveniles, transportation of juveniles around the dam by truck, and supplemental flows from the dam to minimize the number of fish killed by the dam's turbines (Raymond, 1988). None of these actions have substantially reversed the decline of salmon. Raymond points to the flaws in the enhancement technologies devised to prevent dam-related mortality of juvenile fish as the leading cause of salmon decline, and emphasizes that successful technologies of this nature should have been devised prior to the decline of the salmon.

Volkman describes how this case illuminates the lack of consideration of ecological models for management and the need for policy that reflects ecological functions defined by a rapidly evolving science (Volkman, 1997). He examines the unethical nature of the Bureau of Reclamation turning a blind eye to the needs of the Columbia River Basin's ecosystems in pursuit of economic prosperity in the power industry. The Grand Coulee Dam represents a very serious economic asset to the Bureau, which also finances measures to offset the dam's adverse effects on salmon. Because of competition in the power industry, the economic costs imposed by the dam, including costs associated with salmon assistance, can make it difficult for the dam to compete in the market. This means that if costs are too high, paradoxically, funding for salmon

recovery can be threatened. This predicament does not lend itself to salmon populations faring well.

Volkman further notes that ecosystem scientists are suggesting a model by which human activities, in this case the operation of the Grand Coulee Dam, are managed with the goal of protecting ecological thresholds vital to salmon. Volkman's argument highlights flaws in policy and management that put the prosperity of a business venture before the needs of an entire ecosystem, and pins the rapid decline of salmon populations on a lack of ecological modeling for management. The failure of the Bureau of Reclamation to effectively balance hydropower production for ecological purposes without compromising the system's finances points to the role that policy and economics has played in salmon devastation; however, market dynamics are very complex and policy often trickles down from governmental agencies far removed from the issue at hand.

Raymond and Volkman both propose that the case of the salmon decline resulting from the construction of the Grand Coulee Dam on the Columbia River necessitates a change in the operation and management of the dam. While they agree that the devastation resulting from the Bureau of Reclamation's actions is a cause for alarm, neither go on to evaluate the morality of the Bureau's actions. While the salmon recovery features of the dam and the greater economic system that the dam is a part of should no doubt be considered in a thorough examination of this case, I will focus my analysis on how the Bureau's actions represent a failure to act morally. Further, I will highlight the importance of the moral obligations that large entities such as the Bureau have to the general public.

Conceptual Framework

The morality of the Bureau of Reclamation's actions can and should be analyzed through the lens of care ethics as it pertains to the relationships of care that it owes to the communities of the Pacific Northwest. Carol Gilligan's theory of care ethics is a category of virtue-based ethics that places its emphasis on the notion that morals do not come about by simply learning general moral principles, but rather they are realized through relationships. Because care ethics draws attention to the experienced reality of those in mutual relationships which can be viewed from other perspectives, these relationships are characterized by responsibilities and moral obligations (van de Poel & Royakkers, 2011a). In ethical literature, care is defined by Virginia Held as a practice or value (Friedman, 2008). When viewed as an action, care entails all of the activities that we carry out as humans in order to maintain the functionality of our world in a way that benefits the planet as well as our livelihoods (Tronto, 1993). It is also important to consider care as an attitude or motivation. Because care ethics focuses specifically on relationships between people, the recognition of vulnerability and dependence are crucial, especially in relationships with power dynamics. The possibility of these different types of roles in the relationships we are a part of determines to what level we can expect to receive care, as well as whether or not we should take another into account regarding our own actions.

Because we give and receive care in so many different ways in various relationships throughout each of our complex lives, care is a difficult concept to firmly define. One definition of care by Joan Tronto and Bernice Fischer outlines four pillars by which we can break down and better understand the practice of care. These pillars are: attentiveness, responsibility, competence and responsiveness (Sander-Staudt, n.d.). Attentiveness is defined as a tendency to

become aware of needs that arise, while responsibility is defined as taking the action to respond to and care for those needs. Responsibility represents an obligation that one may have in a relationship, the extent of which is dictated by the nature of the governing relationship (Verhouk, 2014). In some instances where multiple people or parties are involved in the causes of a disaster, it can be difficult to assign responsibility. In these cases, the problem of many hands can be utilized to highlight how a collective, rather than an individual, can be held morally responsible for an unfavorable outcome within reason when no individual can justly be made to (van de Poel & Royakkers, 2011b).

The third pillar is competence, which dictates that care provided must be good and successful. Finally, responsiveness requires the consideration of the relative positions of others in a relationship and the potential roles of any power dynamics that could lead to a potential abuse of care. In asymmetrical relationships, such as the relationships between parent and child, or between doctor and patient, understanding the roles that dependency and vulnerability play is imperative (van de Poel & Royakkers, 2011a).

In the following analysis I examine the case of the devastation of pacific salmon runs and the communities who depend on them in the Columbia River Basin using the framework of care ethics by first establishing a relationship of care between The Bureau of Reclamation and the people and ecosystems of the Pacific Northwest. I will then employ the concepts of attentiveness, responsibility, competence and responsiveness in order to demonstrate that the Bureau ultimately failed in upholding its moral obligations outlined by the duty of care.

Analysis

The Bureau of Reclamation failed to deliver care to the people within its influence through the pillars of care ethics when the construction and operation of the Grand Coulee Dam on the Columbia River for hydropower generation caused the historically abundant runs of wild salmon to decline to the point of near extinction. The Bureau sought to bring prosperity to the people of the region, but their actions reflect a negligence to pitfalls of this very goal. While the dam did initially create jobs and further benefit the region by supplying it with electricity, the failure of the Bureau to follow through on its promise is evident in their inability to operate the dam in a way that wouldn't decimate the salmon runs. By all definitions of care, the relationship between the Bureau and the people of the Columbia River Basin region constitutes a relationship of care. The ability of the Bureau to maintain and care for the world in a way that lets people live as well as they can provides us a lens through which to examine this case using care ethics. The following sections break out and dive deeper into the areas in which the Bureau of Reclamation failed to act morally by evaluating the four moral pillars that comprise care: attentiveness, responsibility, competence, and responsiveness.

Attentiveness and Responsibility

In care ethics, attentiveness is defined as the tendency to become aware of needs. In order to be attentive, focus must be shifted entirely from one's own doings to those that he or she has relationships with. The challenge herein lies in the fact that people and groups of people must pause their own doings so that their attention can be given entirely to others. An inability to complete just this task alone constitutes a failure in providing care according to Tronto (Tronto,

1993). Responsibility on the other hand refers to taking action and responding to and providing care for those with needs. In the case of the Grand Coulee Dam, the Bureau of Reclamation failed both to act attentively and responsibly, not because there was anything inherently wrong with the dam technology used to generate electricity for the region, but because of the decline of salmon populations, shown in Figure 1, that ensued and greatly affected the needs of the region's people (Volkman, 1997).

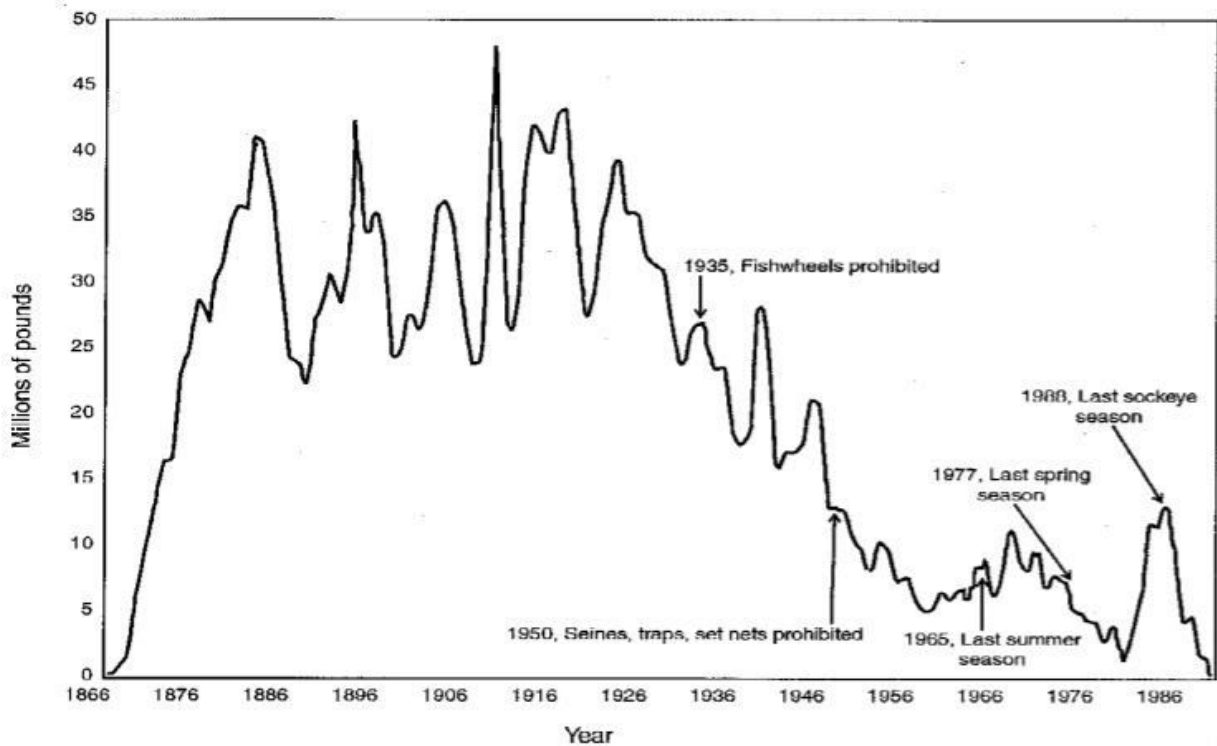


Figure 1 — Commercial landings of salmon in the Columbia River 1866-1993. In-river catch is generally considered the best indicator of population health.

The Grand Coulee Dam project was essentially contracted out to the Bureau of Reclamation under the guidance of President Franklin D. Roosevelt's administration during the Great Depression. The promises of the project, as outlined by the president's administration and ensured by the Bureau, included the creation of a plethora of employment opportunities, hydropower generation to electrify the region, and the impoundment of water for recreational

uses and crop irrigation. When construction on the dam began in 1933, jobs were indeed created. When the dam finally went online after seven years of construction in 1941, its first large generator did indeed begin producing power and several industries received water for irrigation from the impoundment. Up to this point, the Bureau's actions hold up to the definitions of both attentiveness and responsibility. Its ability to identify jobs, electricity, and water for irrigation as needs for prosperity of the people of the region demonstrate the Bureau's attentiveness as it puts those needs of the people at the forefront of a very lengthy and expensive development that will take years to pay itself off. Likewise, the Bureau followed through on the promises that it made to meet the needs of employment, electrification, recreation and irrigation for the region.

Where the Bureau of Reclamation falls short on these principles of care is in their absolute disregard for the ecological implications that would result from the dam's construction and operation. The implications that the dam would have on the millions of salmon that migrate up the Columbia river annually to spawn, as well as the critical relationships between these fish and the people and natural ecosystems of the entire Pacific Northwest that depended on them were well understood at the time of the dam's construction, and the Bureau decided to move forward with the plans for the dam without sufficient planning for how to mitigate the adverse effects that these entities would experience.

Floyd Dominy, commissioner of the Bureau of Reclamation at the time of major dam construction on the Columbia River, was known to publicly prioritize the development of dams and generation of hydropower over the proliferation of wild salmon stocks. In one quote, Dominy stated his opinion on salmon as such: "I think the salmon-blocking dams were worth it. I

think there's substitutions for salmon. You can eat cake" (Northwest, n.d.b). Such a statement shows blatant disregard to the dependency of Native American peoples on salmon runs as a major food source, one of many groups of people drastically affected by their decline. In fact, several treaties had been signed by the US with Native Americans in the mid-19th century promising tribes the right to take fish as a reparation of sorts in return for the taking of some sixty million acres of land under the United States' westward expansion (Blumm, 2002). This failure to prioritize the needs of the people directly affected by the dam demonstrates putting self-interest above the people in need, violating the pillar of attentiveness. The Bureau also demonstrated a lack of responsibility in care ethics throughout these actions, as efforts were not taken to offset the harmful effects the dam had on salmon until years of pressure from the people in need had already passed by (Northwest, n.d.b).

Competence and Responsiveness

In care ethics, competence as a pillar dictates that care provided to those in need be good and successful. If any care that is provided falls short of being good or is otherwise not successful, then a failure in care results according to Tronto (Verhoek, 2014). Responsiveness requires the consideration of the relative positions of others in a relationship and the potential roles of any power dynamics that could lead to a potential abuse of care. In the case of the Grand Coulee Dam, the Bureau of Reclamation failed both to act competently and responsively as they failed to ensure the continued proliferation of salmon in the Columbia River and consequently failed to ensure the continued proliferation of the people whose livelihoods depended on the salmon.

As was true for the Bureau's display of attentiveness and responsibility, up to the point of the dam's construction, their actions also held up to the definitions of both competence and responsiveness. The successful completion of what was then the largest concrete structure in the world and successful generation of electricity by harnessing hydropower demonstrate the Bureau's competency by exemplifying the skills they use to provide care to the community. Additionally, jobs and electricity were accessible to the general public, ensuring an even playing field for people of the region in terms of benefitting from the Bureau's service.

Where the Bureau fell short in delivering care through competence and responsiveness, however, was in ensuring that construction of the dam would not affect the millions of salmon that the community depended on. The Bureau's half-baked plan to offset the harmful effects of the dam on the salmon population was clearly not successful, undermining the entity's competency (Columbia Basin Tribes and First Nations, 2015). Additionally, the relationships between the Bureau and the people of the Columbia River Basin were sourly fractured when the salmon runs began to decline as a result of the dam's construction. This dwindling relationship represents a lapse in responsiveness on behalf of the Bureau that ultimately led to an uproar of the community against the Grand Coulee Dam.

Conclusion

The morality of the Bureau of Reclamation in the case of the Grand Coulee Dam devastating salmon populations can be made clear by employing the conceptual framework of care ethics to conclude that the Bureau is morally on the hook for the events that transpired. Analysis of this case using Tronto's four pillars of care provides a clear path to reasoning which

values were lacking: attentiveness, responsibility, competence, and responsiveness. The Bureau of Reclamation's actions reflect a clear choice to ignore the moral obligation that it owed to the people of the Columbia River Basin in pursuit of being a lead power supplier of the region for economic gain.

While numerous lawsuits have been filed against the Bureau and other entities responsible for the damming of the Columbia River, where the blame falls and who exactly should be held accountable for this devastation has not been obvious. Utilizing the principles of care ethic offers a reasonable approach to pinpointing the root causes of the issue. This case study points to a grey area that exists around the world between the relentless pursuit of development and acting morally. It is imperative to the prosperity of future generations for our societies to bridge this gap by identifying new ways to ensure that moral responsibilities are not ignored, especially in the case of large entities with far-reaching relationships.

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