

Term Paper: How the Connection Indigenous Communities Share with
Mother Earth can Heal Her

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Introduction

Topic Description

This paper will discuss what is being learned from Indigenous communities, and how their practices can help restore the environment. The part of their practice I will focus on most in this paper is called Traditional Ethnic Knowledge (TEK). I will define what TEK is and how it has been used by the communities that created these systems, how it is being treated today, and how it can be utilized in the fight against Climate Change. I will also discuss some of the road blocks to the implementation of TEK on a wide basis. I will also look into how these practices are being implemented in modern society, or where there are opportunities to implement them to help save our one home in the universe. Last I will propose a solution based on current writings that are within the space.

Rationale

Research into TEK and how Native peoples have lived with nature is important because we're in the middle of a climate catastrophe. I believe learning to live more harmoniously with the earth is the only way to save it. Humanity has survived through climate catastrophes before, and we can do so again, but we need to study every type of science and ancient wisdom, not just rely on what western science has today. The superiority bias that comes from western science must be put aside as we look into how Tribal sciences are

informed, and how they perceive the environment. By finding the areas of overlap between western and Native science, we can find a more ethical approach to fixing climate change.

The research that I'm going to magnify is the ways that Native peoples live and have lived in harmony with the environments they call home. I will look for things to learn from these Native sciences and ways to use them at scale to heal the earth. By also showing examples of how it has affected the earth in times past, and how it can continue to do so if we find ways to work together with these various cultures.

Root Causes

The causes of the climate catastrophe are varied and wide, but the general sentiment for all of them boils down to greed. It is something that can come out of any individual if they are not actively trying to tamp down the temptation within themselves, or if the community doesn't hold them accountable. This greed has led to heavy environmental destruction, and is supported by colonialism, capitalism, and falsified reports from western scientists who sold their credibility for a quick buck. The companies who encourage more destruction and resource extraction continue to brandish false claims, and have now actively started campaigns of green washing to try and make it appear they're doing things that will offset the problems they're causing.

Capitalism is the secondary offender after Greed. Capitalism, especially as it is set up now, feeds greed, making those who have the most more likely to continue to make more than those at the bottom. Those at the top in these systems, like owners of the fossil fuel companies, are the ones that are most likely to push to preserve the status quo, rather than pushing for the change that is necessary to

keep climate change at bay. Just earlier this year fossil fuel companies posted their largest profits ever with Shell taking the lead at “...a record \$9.1 billion in earnings. That’s compared to \$6.4 billion in the fourth quarter of 2021.” (Bove, 2022) This was not the only oil company to see these profits, and they have shown time and again that they do not care about the environments they destroy to find the resources they sale.

Colonialism supports capitalism in it’s endeavor to drain resources from the earth. It has had it’s finger in that for countless centuries. Some of it’s most memorable atrocities were done in the name of the East India Trading Company, as well as the Atlantic Slave Trade. Colonial powers sought to control the world in search of things that would make the benefactors of their trade more wealth. This lead to stealing land from people who became oppressed, changing the ways that the land was cultivated, all for the end result of more money coming in for those in power. Colonialism continues today. It is not done simply by a country anymore, instead a capitalist will do so through bribery, “Modern capitalism figured out that you don’t need to enslave people, you can just pay them slave wages.... You don’t need to occupy countries, you can buy off their elites with education, jobs, and points-based migration.” (Samarajiva, 2021) As a result of this bribery there is little change actually allowed to go forward. People all over the world are seeing this, from the United States to India.

The bribery leads directly to corruption and falsified information that helps keep things just as they are for the wealthy elite, rather than lead to a sustainable future. At COP26 fossil fuel lobbyists made up the largest delegation to the conference. "The likes of Shell and BP are inside these talks despite openly admitting to upping their production of fossil gas... if we're serious about raising ambition, then fossil fuel lobbyists should be shut out of the talks.” (McGrath, 2021) As these elites are

continued to be allowed to control the narrative, we will continue to only see them wanting to preserve the status quo, nothing more.

For decades Indigenous nations on every continent have called for an end to the casual destruction of Mother Earth. Attacked by racist means, the ancestral TEK of these tribes were seen as inferior to the colonizer's views, and the credibility of TEK was swept under the rug as superstitions from "barbaric" races of peoples. By also attacking and removing tribes from their lands, relocating them to reservations, and attempting to genocide the people much knowledge was lost or forced into hiding.

After fighting for centuries for survival, voices are now breaking through the din of the current narrative, and they have a way to help heal the only home all humanity shares, and change the destination that we are heading to. We must listen to them and apply the things they know, returning to a harmonious existence, no longer consuming it's every resource because we think we're dominate over life, when we are simply just a broken cog in the machine. By highlighting findings from researchers and those who live the teachings of Native sciences we can make the world better, cause the best is yet to come, we just need to set our course to that time.

Literature Review

Because of the problem of Global Climate change we need to look into every kind of science and idea to help us reduce the harm humans are currently causing to the planet. There is a big problem in this area, "There is a lack of respect for traditional knowledge among some scientists and government agencies. [Western] Scientific knowledge often takes precedence over traditional

knowledge.” (Roberta, 1996) This a problem that stems from Colonialism, which has also made “Aboriginal people... reluctant to share their knowledge because they fear it will be exploited or used against them.” (McGregor, 2004)

Aboriginal communities have had their own forms of Traditional Ecological Knowledge (TEK) for centuries. It has been portrayed in many movies, “However, these ways of life are not reducible to a Western gloss such as “harmony with nature” which is at best imprecise, and at worst a caricature reducing six million inhabitants of the Americas’ diversity of lifeways to one or two general themes as framed by non-Natives.” (Dunstan, 2016) The diversity of the tribes themselves have different areas of expertise, and each of these individual communities have their own knowledge that must be treated respectfully and when they are, they become “a pressing avenue of inquiry ... in studies of indigenous peoples and the environment is the ways in which traditional and sacred knowledge are transmitted, transformed, and brought into articulation with other ways of knowing nature, including (but not limited to) western ecology and international environmentalism.” (Dunstan, 2016)

“Indigenous environmentalism arises in a context of environmental racism – the disproportionately high environmental impacts faced by people of color. Within Native America specifically, scholars have used the word ecocide to describe the total assault on native land bases under colonialism, with its attendant devastating impacts on life-ways and survival. Indigenous environmentalism is different from some other environmentalisms in responding within a context of ecocide.” (Dunstan, 2016)

Definition and ideas

One of the biggest problems from the outsider perspective is how we have been taught to learn. We are told that it is normal to box everything into separate categories, learning only in a sequential manner. Instead “...Indigenous Knowledge must be viewed as a circle and as a process of regeneration and re-creation. It must not be constrained by linear thinking.” (McGregor, 2004) Another way of looking at it is that “Indigenous science pursues a rather meandering path around things and over obstacles, a roundabout way. In the Western mind-set, getting from point A to B is a linear process, and in the Indigenous mind-set, arrival at B occurs through fields of relationships and establishment of a sense of meaning, a sense of territory, a sense of breadth of the context.” (Cajete, 1998)

As such, “Their understanding and application of relating to their land represents models for the art of relationship that must be re-taught through modern education(Cajete, 1994),” but at the same time we must remember that “Indigenous Knowledge is not simply a product or commodity; it is a process as well....Indigenous Knowledge represents an integration of person, place, product and process.” (McGregor, 2004)

Teaching TEK by western scientific methods is viewed as impossible. “Capturing a single aspect of traditional knowledge is difficult. Traditional knowledge is holistic and cannot be separated from the people. It cannot be compartmentalized like scientific knowledge, which often ignores aspects of life to make a point. However, traditional knowledge parallels scientific knowledge.” (Roberts, 1996) Because of the difficulty in separating the knowledge from the peoples with which it originated, we must respect the source of that knowledge when we discuss, learn or use it.

The Indigenous nations were not as they have been portrayed for far too long, the noble savage who are so in tune with nature that it seems almost like magic. Instead “Native people traditionally

lived a kind of communal environmental ethics that stemmed from the broadest sense of kinship with all life. The underlying aim of the science of ecology, therefore, the understanding of the web of relationships with the “household” of nature, is not modern science’s sole property. Understanding the relationship scientifically is not enough. Living and nurturing these relationships is the key. This is the ecology of the Native community.” (Cajete, 1998) Because of the study of nature and all it includes, it is more apt to describe them as ones who understand the ecosystem and the interplay between the levels of life, if we were to only speak in western scientific terms. This is seen in the “...aboriginal point of view, one lives Traditional Ecological Knowledge rather than studies it.” (McGregor, 2004)

Examples

Some tribes are already fighting colonialism, asking for recognition of their life-ways. In Canada, the Anishnaabe tribe formed a “...Blockade... [this] is “a complex phenomenon predicated on Anishinaabe people’s desires for self-determination, recognition of rights, and the power to decide what takes place on [their ancestral] land(Willow, 2009).” Many members of the Dine tribe have also been protesting in a grassroots effort, mixed with outside members, coming together as Mountain Defense, to fight for the San Francisco Mountains. “Given such vastly divergent assumptions about even basic aspects of the natural world, cases of fluidity between western and indigenous knowledge should be carefully examined to determine which views gain prominence in the resulting discourse, or how the seemingly in-commensurable are made commensurate.” (Dunstan, 2016)

In some parts of the world, there have been scientists who have had the opportunity to learn from TEK and applied it to their fields of inquiry, these include people who have learned from Iñupiat about whales and their sense of smell (Zhang, 2017), or how beavers affected spawn rates of salmon

affecting the beluga whale population in the ocean. (Robbins, 2018) The myth of primordial wilderness has also been challenged as incorrect, and studies by western science has backed up what has been taught in TEK for generations on how the people affect the wilderness around them in positive ways that can be very helpful to Mother Earth. (Robins, 2018; Popkin, 2021; Courtois, 2022) The tribes also do extensive research into the whole effects of anything that would affect the environment prior to approving a project, such as mining, on their lands, making sure that wildlife would be preserved and not endangered in the process. (Courtois, 2022)

Solution

A few steps must be followed if this is to become a part of the solution in the fight against Global Climate Change, starting with why “It is important to understand and dismantle the process of colonization and how it has impacted [Aboriginal] communities.” (McGregor, 2004) The ideal standard in this case would be to fully decolonize the lands which were taken, restoring freedoms to the tribes. Due to the genocidal nature of the war waged against them, tribes in some areas have instead been working with the national governments and the governments are respecting their ways, while returning some measure of their autonomy. This is happening in Canada and is called the Indigenous Guardians program. “Guardians are trained experts who work on behalf of their indigenous nations. They are our eyes and ears on the land. They monitor water quality, care for indigenous protected and conserved areas, conduct research on climate impacts, and help restore species like caribou Salmon and moose. Their work is rooted in Indigenous and western sciences, and their training includes everything from [geographic information system mapping and spending time with indigenous elders and knowledge keepers.” (Courtois, 2022)

After we have been able to show the world the validity of TEK, we must make sure that these tribes and people's ways are respected. This can be fulfilled by making sure that "Aboriginal people[s]... maintain ownership over their knowledge, [thus] necessitating the development of creative systems of working with Aboriginal communities." (McGregor, 2004) By keeping the knowledge with, and taught by the community it is from we do not take the power away from them, and thus honor their societies and their traditional ways.

This leads to my proposed action, as seen in the fight for the San Francisco Mountains in Arizona studied by Adam Dunstan, "Mountain Defense [has been] an example of what I term hybrid environmentalism, environmentally-related social movements which have large numbers both of indigenous and non-indigenous participants collaborating regularly on joint actions and statements, wherein indigenous peoples figure prominently within environmental movements alongside non-Native environmentalists not only as "allies" but as unified organizations and movements." (Dunstan, 2016) By mixing the western science with the understanding of Indigenous Knowledge, we can get behind a movement and combat this threat that looms overhead. By going in this order, we can make sure that Native Communities are involved and free to do with their knowledge as they see fit, while working together for the betterment of Mother Earth.

I also recommend we make new gardens that are patterned after the ones seen in Indigenous villages, attuned to the environments that we live. In the studies of different forest gardens that were cultivated by native communities, as in the case of a meta study that was undertaken where "...the United Nations' Food and Agriculture Organization surveyed more than 300 previous studies and found that areas in Latin America occupied by Indigenous people had lower deforestation rates and higher carbon stores than other places, including government-protected areas. A 2019 study found that

Indigenous lands in Australia, Brazil, and Canada had comparable vertebrate biodiversity to government-protected areas.” (Popkin, 2021) In her report Chelsey Armstrong and her fellow researchers found that all the sights that were focused on in her study were not only still thriving, despite not being used as their traditional garden sources for more than a century, but they had a stronger wildlife population as well. Tribes were well known to go to the sites of old villages for hunting because of these strong herds. (Armstrong et al., 2021) By protecting the forests, and strengthening their growth, we will also help stop erosion, and help carbon be placed into the ground, rather than it staying in the air.

Analysis

We cannot look at this current issue of Global Climate Change by just western science’s perspective. Western Science has a tendency to minimize the value of other forms of science and understanding, inheriting the issues of western knowledge and thought that has plagued the United states for years. Because of different views on what each has, we see the problem and possible solutions a little differently. Science is seen as just a thing, a body of knowledge, or even compartmentalized data sets that are used at certain times. Where as “from [the] aboriginal point of view, one lives Traditional Ecological Knowledge rather than studies it.” (McGregor 2004) If we continue to isolate the data, rather than teaching communities to live in a way that integrates what is learned with how we actually live, we won’t be able to turn this disaster around. The heaviness of the issue has to be stressed many times, we must see things as a community, not as individuals with our actions having no effect on our neighbors or world at large.

Now this brings me to an issue with applying Tribal Ecological Knowledge to the issue of Global Climate Change. TEK is a different way of thinking, it's not compartmentalized. In an interview with Inuit elders to learn about beluga whales, scientist Henry Huntington was shocked by the holistic approach of the subject, "as the hunters suddenly switched from the subject of belugas to beavers. It turned out though, that the hunters were still really talking about whales. There had been an increase in beaver populations, they explained, which had reduced spawning habitat for salmon and other fish, which meant less prey for the belugas and so fewer whales. "It was a more holistic view of the ecosystem," said Huntington. And an important tip for whale researchers. "It would be pretty rare for someone studying belugas to be thinking about freshwater ecology." (Robbins, 2018)

Since TEK is so different from the traditional western way of science, many "aboriginal people are reluctant to share their knowledge because they fear it will be exploited or used against them." (McGregor 2004) This sense of distrust comes from the superiority the way western science is given by western cultures, as well as the way colonialism has tried to eradicate the way of life of tribal peoples, leaving them with trauma and a need to view outsiders warily. As such, "it is important to understand and dismantle the process of colonization and how it has impacted [tribal] communities."(McGregor 2004) If we can remove the barriers that come from colonization, and the scientific mindset of superiority that comes from colonizer traditions, we can begin to talk more about TEK and using it as a means to support the Earth, and regain a balance with it.

Discussion

The central contributions of my paper are from people who have either studied Indigenous culture, or have lived it. Because the lived experience of the tribes is so different from those seen and practiced by most western cultures, it is important to get these first hand accounts. By listening to these specialists in their particular areas of the lands they inhabit, we have a chance to properly live in harmony with Mother Earth and turn back some of the damage we've done.

Now a lot of this has been addressed in the works that I've quoted, each one has mentioned the hardships of being taken as legitimate by western science, even western scientists who have done studies in this area recognize the disparity, "The disconnect between Indigenous knowledge and Western science has deep roots. By the time ecology became organized as a scientific discipline, in the early 1900s, European colonizers had displaced Indigenous groups throughout much of the world. So the landscapes that scientists interpreted as "natural" or "pristine" often, in fact, once had human residents who carefully managed them. Erasing Indigenous land stewardship also fed into a "fortress conservation" model under which removing people from an area was seen as essential to conserving it. A prominent example is Yosemite National Park, whose development included the eviction of Native people." (Popkin, 2021)

Both the Indigenous Nation's members, and outside scientists that I've quoted, have gone to great lengths to show how native communities are treated compared to the colonial entities that have discredited the beliefs of those communities for far too long. My understanding has been informed by these authors and their writings have changed my view on the subject of Native science, and the way they fit into life in the cultures they inhabit.

This essay can be a great starting point for others, who like myself, have been too bought into the “noble savage” myth that was portrayed in media for far too long, rather than letting us see the whole picture of the tribes that are out in the world. The best thing we can do is to listen to those in the space of the Indigenous communities, and show why giving them back their ability to have say over the treatment of the lands their forefathers have cultivated for so long.

Limits and Strengths

Because I have not been able to do much study first hand, I can only rely on those who have written on the subject before me. This is both a limit, in that I can’t add any personal experience learning a way from a tribe, but this is a strength in that I can highlight the voices of those who have. Another limit is that I do not have a way to show “data points” at this juncture, in a western scientific sense, that could win over a western audience, but Chelsey Geralda Armstrong of Simon Fraser University was able to gather such data, though it is written in a way that most lay members of society will not be familiar with. (Armstron et al., 2021) Because of this we may finally be seeing a change in the near future as these findings are made available to the general public.

Implications

My conclusions that can be learned from my studies are first, we must teach a fuller understanding of Native History and cultures to kids, showing a full respect for it, not relying on tropes or stereotypes to tell their stories. By teaching respect for the proper history we will also be able to teach a more proper respect for their sciences and their cultures.

Second we must let the tribes govern themselves and give them a larger voice in what happens with the land of their ancestors. If we as a society at large can learn to trust the native people's wisdom, we can see a change in the way the earth is going. Because of the emphasis on the world being for all peoples in the majority of tribes, we will also see more protections of resources as has been seen with the creation of Bears Ears in southern Utah, and as restored to its original boundaries by President Biden. (Biden, 2021)

Conclusion

As seen in the way of viewing the areas of research covered in this paper, the Traditional Ecological Knowledge of various tribes in their respective biomes, can be applied to help bring earth back into balance, making it so life can be sustained for generations to come. Evidence has been shown for the ways that all people have affected life on the earth, in negative ways for profit, and in a positive manner where lands and plants were strengthened. Now it is time to emulate the good examples as this evidence shows that these ancient practices are not only good, but vital to the world that we live in. (Popkins, 2021; Robins, 2018; Zheng, 2017)

Now as shown by those within the communities, we cannot just implement these practices. This would not only be rude, it would be immoral to just steal the practices of the people who developed them without giving those people's the ability to guide when or how the knowledge is taught and used. The teaching is done through both initiation and ceremonies within the various Indigenous cultures, some more rigorous than others, but each to stress our relationship with life (Cajete, 1998). If we are not willing to show this respect, we are no better than the common thief. This would make those who

steal the practices no better than the people who took their land from these oppressed populations in the first place.

Part of how we can do better is returning the land to their original inhabitants, where that is still possible. Where this is not we can return it to those who understand a similar way of stewardship in those areas. Where it is not an option to return the land, I suggest at the very least we should do is have the Indigenous communities be stewards under the government, much like with the Indigenous Guardians program in Canada. (Courtois, 2022). This, though unsatisfactory in the long run as it is still a settler government that they would report to, would be able to gain the trust of the people, and hopefully be able to transition to full return after at some future date.

With the evidence that has been gathered in how these practices have affected, and continue to effect the world, we need to start spreading the word now of how this will help the world's course that we are speeding towards. Just as how many Native societies, "Despite [the] dire circumstances, they maintain a hope for the future. (Robbins, 2018)," so too can we keep our own optimism up. As stated by Valerie Courtois of the Innu tribe, "There is a role for everyone in this model. Every person, family, community, nation, is essential to dealing with the crises we're facing as peoples, and as a planet. All actions big and small, that contribute to addressing these challenges will help us get closer to that goal. In fact I'd like to ask you to join Indigenous peoples in helping protect and create a better future, one where we are ensuring our collective future as peoples on this planet. There is so much that we can do together....We can all heal the planet by drawing on the knowledge of our ancestors and blending them with the best tools of the modern world. If we take care of the land, the land will take care of us, forever." (2022)

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