Time as Kinship

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Introduction

Climate change poses risks to many communities and peoples throughout the world. Extreme weather events, significant changes in plant and animal habitats, and severe sea level rise—among other changes—are intensifying. Indigenous peoples are among the groups who have been vocal about the economic costs, social disruptions, and threats to cultural continuity that are exacerbated by climate change. I write this essay based on my perspective as a scholar, relative, and organizer working specifically on how Indigenous peoples can prepare for and mitigate climate change impacts. *I want readers to reflect about the assumptions they make about time and climate change.*

There's a growing concern that renewable energy solutions to climate change can be harmful in their own right, even when they aim to achieve zero carbon energy. Indigenous peoples are among the communities, countries, and peoples who have stated this concern based on their recent experiences. Governments and corporations implement technologies associated with wind, solar, hydro, or biofuel energy in ways that can degrade the environment, pose risks to people's health and cultural integrity, and hoard economic gains. Advocates of renewable energy have responsibilities for the safety, well-being, and self-determination of communities, countries, and peoples who may be affected negatively.

Why are some renewable energy solutions enacted irresponsibly? I think part of the reason why has to do with how some proponents of these solutions narrate climate change

through assumptions about time. As I'll describe in more detail, I have a sense that when people relate to climate change through *linear time*, that is, as a ticking clock, they feel peril, and seek ways to stop the worst impacts of climate change immediately. Yet swift action obscures their responsibilities to others who risk being harmed by the solutions.

Linear time is not the only way to narrate climate change. Indigenous persons have articulated climate change through changes in kinship relationships. Kinship time, as opposed to linear time, reveals how today's climate change risks are already caused by peoples' not taking responsibility for one another's safety, well-being, and self-determination. Any solutions to climate change will be enacted within a state of affairs that's already rife with irresponsibility. Kinship, as an ethic of shared responsibility, focuses attention on how responsible relationships must first be established or restored for it to be possible to have renewable energy projects that respect Indigenous safety, well-being, and self-determination.

Time and Climate Change

The *climate system* refers to any abstract portrayal of how long term weather patterns occur. Studying the climate system provides insights into the history of weather patterns and into how best to anticipate future weather. There are various factors that signal or cause alterations in weather patterns, including, among others, the average temperatures across seasons, urbanization and agricultural practices, atmospheric concentrations of greenhouse gases, rates of deforestation and regeneration, and the circulation of ocean currents. *Climate change* is just a label that describes trends in weather patterns using different signals and causes.

Climate change is about changes, alterations, transitions, trends, and patterns. Climate change, then, is about happenings that unfold through time. Talking about climate change is an exercise in telling time. To illustrate how time and climate change are entwined, consider two

descriptions of climate change that come from different sources. Each description of climate change is an act of time telling.

First description:

Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organization. The relevant quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. Climate change [is a] change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.[1] There is evidence that some extremes have changed as a result of anthropogenic [human caused] influences, including increases in atmospheric concentrations of greenhouse gases. It is likely that anthropogenic influences have led to warming of extreme daily minimum and maximum temperatures at the global scale. There is medium confidence that anthropogenic influences have contributed to intensification of extreme precipitation at the global scale. It is likely that there has been an anthropogenic influence on increasing extreme coastal high water due to an increase in mean sea level.[2] *Intergovernmental Panel on Climate Change* (IPCC)[3]

Second description:

For Anishinaabeg, Mishipizhu [underwater panther] has always been a guardian of the waters and keeper of balance between the water spirits, land creatures, and sky beings. What is his role today given these human-induced changes in long-term climatic cycles? As the climate shifts and weather patterns are disrupted, there will be stronger Thunder Beings in *some* areas and less of them in others. They will come at different times of the year and disrupt seasonal cycles. This is already happening, and wild-rice gatherers are finding that their lakes are flooded and the rice is stunted in some areas. Their lakes are dry, with no rice in others. Hunters are finding that moose, bear, and other animals are migrating farther and farther north because of the heat in the south. Other animals and birds, traditionally unknown to the Ojibwe, are migrating up from the hotter south. Increased temperatures also mean increased insects and diseases for some game animals like deer and moose. The temperature of the sky is heating up and changing the behavior, habitats, and health of land and water creatures. Mishipizhu has traditionally controlled the well-being of natural resources, especially fish and those others living in and around the waters. In Ojibwe hydromythology, Mishipizhu has always been an enemy of the Thunder Beings. Today they are being aggravated and multiplied by what we call climate change. *Melissa Nelson*[4]

The first description of climate change is from a group of authors who are members of the Intergovernmental Panel on Climate Change. It tracks climate change according to linear units of time. Linear time means the narration of duration, span, or movement through identical

units like years or centuries. The description occurs within the context of a report seeking to inform people, including policy-makers, about potential risks of climate change to human populations. It's hoped that the information in the report about risks will help people feel that they have a responsibility to take measures to adapt to climate change safely and to mitigate dangerous impacts.

The second description is from scholar Melissa Nelson, who is discussing climate change based on Anishinaabe intellectual and scientific traditions. Noticeably, Nelson's description doesn't feature units of linear time in it. Instead, the description tracks change according to shifts in kinship relationships. I'll return to Nelson's description shortly. Though let me take some time to describe what I mean by kinship, starting with accounting for what I don't mean. By *kinship*, I don't mean relationships shared only by members of small families or of biological lineage groups.

For me instead, kinship means something different. Kinship refers to a category of relationships that people have with one another. Specifically, kinship relationships fall under the category of relationships grounded in responsibility. Responsibility refers to bonds of mutual caretaking and mutual guardianship.[5] When members of a society practice responsibilities to one another extensively, there's a high degree of interdependence. Such interdependence serves the purpose of facilitating a society's responsiveness to changes that affect its members' safety, well-being, and self-determination. Whether a hurricane, pandemic, or trade embargo, a high degree of interdependence in the form of shared responsibilities can be a crucial coping strategy.

Now back to Nelson. Nelson's description discusses kinship in terms of multiple responsibilities, including that of Mishipizhu to the environment and humans to diverse plants and animals. Mishipizhu is a "guardian", "keeper of balance" and is responsible for others'

"well-being". Nelson's description covers why interdependence through mutual responsibility matters when there are various ecological tensions, such as that between Mishipizhu and the Thunderers. Humans' interventions into the climate system are disrupting the interaction between the responsibilities and tensions. The changes unfold at an abrupt and escalated rate across landscapes, as Nelson describes.

The two descriptions invoke different conceptions of how to narrate the duration and span of climate change, that is, the time in which climate change unfolds. Time unfolds in the first description through the passage of uniform linear units; time unfolds in the second description through shifts in kinship relationships. In comparing these conceptions of time, I devote the rest of the essay to identifying lessons for understanding responsibility for mitigating climate change.

Climate Change as a Ticking Clock

Linear time is a typical way of describing how trends in the climate system are unfolding. Some climate change trends, portrayed in linear time, include the following: annual measures of global average temperature that are scaled up across century long intervals; figures showing how increases in concentrations of greenhouse gases have occurred in the centuries following the industrial revolution of the late 1700s and early 1800s.

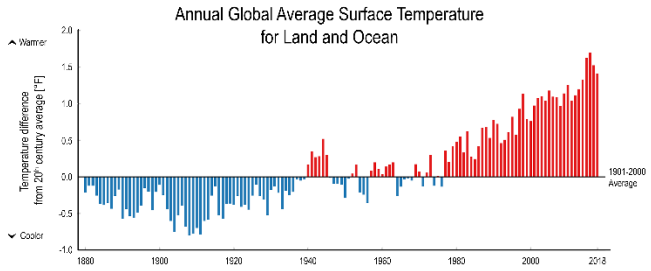

Figure 1: U.S. Global Change Research Program 2018

The bars on the graph show the number of degrees by which the average global temperature for each year differs from the average global temperature during the last century (1901-2000).

https://www.globalchange.gov/browse/indicators/global-surface-temperatures

Figures of climate trends cast in linear time like figure 1 are everywhere now. The majority of such figures are intended to create scientifically credible information. The makers of the information intend for people to have a good basis for considering the degree of their responsibility to take action to address climate change. For the trends portend risks to life everywhere, ranging from the infrastructure damages caused by sea level rise that are economically costly, to the declines in certain fish species due to warmer water temperatures, to the expansion of disease vectors that have harmful and deadly consequences for animals, humans, and plants.

Linear measures of time have the capacity to generate a sense of imperilment and urgency. What I mean is similar to the difference between playing a game like chess with or without a timer. Though forgive any dis-analogous elements here that expert chess players will readily point out. When a stop watch is winding down for myself to make a chess move, I narrow the focus of my attention and fall back on taken-for-granted strategies without time to question how I got them or whether they are even the best ones. I experience feelings of stress (i.e. perilousness). If I lack experience in chess, a timed game like speed chess can be extremely challenging. Whereas an untimed game is different. The absence of a ticking clock opens up a wider range of options to reflect on and the chance to question taken-for-granted strategies. If I use our imagination further, I can imagine a chess game where I can consult others widely, take my long-term health seriously, and balance the game work load with caretaking duties to my family and society.

Keeping the analogy in mind, consider some examples of linearity. The Intergovernmental Panel on Climate Change's *1.5 Degree Report* gives human societies two decades to reduce their carbon footprints to a level significant enough to avoid a 2 degree rise in global average temperature. The report warns that keeping to a 1.5 degree increase will likely require that renewable energy supplies "70-80% of electricity in 2050" . Such an energy transition will be extremely challenging to achieve within the short measure of time of about 30 years.

The Kyoto Protocol is well known for its "commitment periods," such as the first one staged to start in 2008 and end in 2012. So too does the Paris Agreement have various deadlines for countries to meet for emissions reduction in their national plans and for reporting to other countries. Given a lack of faith among some people about countries' abilities to meet these deadlines, geoengineering technologies, like solar radiation management, are being researched, as have the potential risks associated with them.

In the aforementioned instances, linear, sequential time generates a sense of a clock ticking.[6] The passage of years and decades threatens more intensive droughts and rain events, rises in sea-levels, and expanding disease vectors, among other changes. And time is running out for humans to respond to these changes and mitigate one of the principal causes: human contributions to increasing concentrations of greenhouse gases in the atmosphere, whether through dirty energy sources, like coal, or through industrial land uses, like intensive agriculture. The clock is ticking. Depending on what humans do, the clock may appear to be ticking faster or slower, or there may seem to be more or less time left.

The ticking climate clock is one way that a conception of time affects how certain people experience climate change. Linear, unit-divisible narration conveys a sense that solutions to

climate change require swift action and disciplined commitment. To me at least, what appears to be in peril is some taken-for-granted state of affairs that is threatened by climate change. Since time is running out and there's seemingly little time to respond, taken-for-granted strategies get employed to protect the taken-for-granted state of affairs from disruption.

There are a number of these strategies. Financially privileged individual persons must quickly restrain their current consumer spending, shifting to spending on renewable products and energy. Corporations and governments must lower the cost of renewable energy, creating new markets that are affordable for consumers, organizations, and governments. Governments of countries with high industrial footprints have to slow their economies down right away, creating immediate investment opportunities for measures like clean energy or forest conservation. Global south countries and Indigenous peoples must stop the urge to build their economies with extractive industries that feed dirty sources of energy, supply unsustainable consumer habits, and require environmentally-devastating land-uses.

Disciplined commitments, while stringent initially, are supposed to at some time lead to a transition to new economies that handle carbon better or need very little of it, and enjoy better standards of living for all. But ultimately the swift actions must rely on the taken-for-granted strategies practiced by dominant nations and corporations. Some of the famous solutions to climate change mitigation are attempts to find ways to lower carbon footprints quickly with minimal disrupting of what is perceived to be the current state of affairs. The Clean Development Mechanism, for example, seeks to create markets whereby developing countries can trade and sell credits from renewable energy projects to industrialized countries, the latter of whom had obligations under Kyoto to meet certain levels of carbon footprint reduction. Such a market is deemed to be needed because some of the industrialized countries are not ready to depart from

their current non-renewable energy systems. There is a falling back on taken-for-granted strategies, such as market strategies, for ensuring quick action through disciplined commitment.

But what does rapid, disciplined commitment get us in terms of an energy transition that would mitigate dangerous climate change? We don't yet know for sure. But a growing literature increasingly suggests that environmental injustice against numerous communities, including many Indigenous peoples, is an outcome. In fact, one taken-for-granted strategy is that governments and corporations believe they can take swift actions without genuine benefit sharing with and consent by Indigenous peoples. Consider some of the scholarship around Indigenous peoples' resistance to wind power in the Isthmus of Tehuantepec in the Mexican state of Oaxaca.

Since the 1990s, the Isthmus of Tehuantepec has been targeted for wind power development by the Mexican government and major multi-national corporate investors. Isabel Altamirano-Jiménez documents how the concept of urgency to address climate change has been used by leaders of private industry to justify the financial investments and intensive land use. The region has many hundreds of turbines now, and there are plans to expand. In the available research, a number of plans are geared to benefit private industries, some of which have histories of pollution and high carbon footprints. Wind power development is connected to Clean Development Mechanism.[7]

Altamirano-Jiménez' extensive study describes the history of Zapotec peoples' resistance over centuries to Spanish and Mexican colonialism, including efforts to defend the practice of their own legal orders, cultural identities, and land tenure systems. Historic and current colonialism has greatly challenged Zapotec peoples' autonomy in relation to projects proposed by the Mexican government, development banks, and multi-national corporations. Wind power

development takes place within a situation where social, economic, cultural, and political oppression–sedimented for generations–creates barriers to Indigenous consent in the authorization of projects that offer few benefits to the communities who bear great risks to their land tenure, health, economic viability, and cultural integrity. Altamirano-Jiménez writes that "Indigenous peasants do not oppose wind power itself; rather, they demand to have a share of the benefits as well as to be consulted collectively"[8].

Recently, Cymene Howe and Dominic Boyer have published on the Mareña Renovables wind power project on the isthmus. Cast in linear time, the project intended to prevent the emission of 879,000 tons of greenhouse gases, being the largest wind development in Latin America.[9] Howe's work describes the linear goals of the project to rapidly reduce the carbon footprint swiftly.

Consistent with Altamirano-Jiménez' analysis, Howe's work discusses how some members of the Indigenous peoples of the region resisted the specific development due to their concerns about the desecration of their lands, being economically exploited and marginalized, being threatened during the development process when they raised concerns, and not having a chance to engage in respectful consultative activities with wind power proponents.

Howe writes that "Renewable energy matters, but it matters more how it is brought into being and what forms of consultation and cooperation are used".[10] The Mareña Renovables project was eventually stopped in 2018, a major factor being the failure to consider the rights of Indigenous peoples, including the right to free prior and informed consent.

Projects for renewable energy can fail in their responsibilities for protecting the safety, well-being, and self-determination (i.e. consent) of Indigenous peoples. While my work focuses on Indigenous peoples' issues, numerous other communities and peoples can be affected

negatively by renewable energy, as growing literatures show everywhere in the world. In the aforementioned case in Oaxaca, the motivation to beat the ticking clock by lowering carbon footprints rapidly obscured the importance of acting responsibly in relation to Indigenous peoples. The current relationships among Indigenous peoples, Mexico, and private industries are strained by generations of the latter two parties' failure to behave responsibly, including betrayal of consent and disregard for Indigenous safety and well-being. Instead of working to change these relationships, the feeling of swift action was associated with wind power proponents taking for granted the current state of relationships, falling back on implementation strategies that played into generations of discrimination against Indigenous peoples.

Kinship Time

The essay started off with a kinship-based description of climate change offered by Melissa Nelson. Many Indigenous knowledge gifters, artists, and scholars are communicating climate change through kinship time. I'll discuss how telling time through kinship does not obscure responsibility in the way that linear time telling can. While kinship has been invoked by many persons in many fields and many pathways of life, I'll use it here in a particular way. As mentioned earlier, kinship refers to relationships connecting members of a society together through responsibility. Kinship relationships serve to facilitate a society's responsiveness to changes that affect its members' safety, well-being, and self-determination.

Kinship relationships are philosophically complex to understand. It's not just enough to believe one has a responsibility. For each responsibility we may have, the responsibility matters mainly if certain qualities adhere to it. A quality of the relationship refers to what features of the bond make it achievable in practice to greater or lesser degrees. Qualities include reciprocity,

consent, trust, transparency, and confidentiality, among others. It's important to note again that—here—kinship is not the same thing as close family relationships or shared biological descent. Rather, kinship is a category of relationality that can connect anyone together within a society and can even be extended to diplomatic relationships across societies.

Consider a basic example. A mentee/mentor relationship does not require family or biological connection. Mentees and mentors work well together when their relationships have high degrees of reciprocity, consensuality, trust, transparency, and confidentiality. The aforementioned qualities take time to nurture and develop, and involve all relatives in a relationship. Mentors should demonstrate that they are trustworthy and respect the self-determination (consent) of mentees. A mentee should respect a mentor's time, expressing reciprocity. There should be shared understanding about qualities of transparency and confidentiality.

If the qualities of responsibility grow, mentees and mentors can address together more difficult challenges within the boundaries of their relationship (e.g. professional, social, religious, etc.). Mentees, in turn, become mentors themselves, carrying forward qualities of relationships to their responsibilities to others. Or mentees recommend mentors to others, which can expand the circle of support. What may have started as a single mentee/mentor relationship becomes a supportive network that over time achieves increased capacity to address challenges that affect the safety, well-being, and self-determination of the mentees. But in contexts where relationships between mentors and mentees have been governed by hierarchy and oppression, it may be challenging to establish genuine degrees of qualities like consent, reciprocity, or trust in the short term, even if both persons are committed.

Imagine if we consider all of the relationships we have with others that involve or should involve mutual responsibilities. Imagine further that we start telling time through the duration, span, and movement of kinship relationships. When time is experienced through kinship, the ticking clock goes away. Duration is perceived according to the degree of current kinship relationships, the history of kinship relationships, and future possibilities of kinship relationships. How long will it take someone to advance in a particular workplace? The time for someone to advance will feel smoother in workplaces with longstanding excellence in mentorship that respects reciprocity, trust, consent, privacy, and confidentiality. Or advancement will feel to be a long way away when qualities of mentorship responsibility are lacking. Sometimes kinship relationships are so present that there is a sense of there being a culture of reciprocity or consent in a workplace that is enduring, even if no one can remember exactly what year the development of such kinship began. There are high degrees of interdependence in such enduring cultures.

But in workplaces where mentorship responsibility is largely absent, change can feel like the whole world is crashing down. Without support and good faith guidance, employees can be crushed by performance expectations, the adoption of new policies and software systems, and interpersonal conflict. A bad performance review, in this context, is experienced through time. It can feel like an abrupt shock that escalates and intensifies an employee's sense that nobody has their back (reciprocity), their perspective does not matter (consent), and that management is not taking their best interest to heart (trust). It can lead someone to take drastic measures to repair their situation or move elsewhere. Interdependence does not exist. Contrast that with workplaces with cultures of kinship that engender interdependence and respect for professional boundaries, where employees have a sense of security knowing that their mentors are committed to

reciprocity, consent, and trust, and hence committed to providing guidance and listening that will lead to success, even when there are hurdles and challenges.

When time is told through kinship, we get a different narration of climate change. I'm just moving back to climate change from the example of mentorship in workplaces. Diverse Indigenous scholars and writers have described in English-language texts kinship-based narrations of climate change. While here I use kinship, sometimes related terms, though different in their specific usage, are preferred, such as genealogy or clan. This essay cannot afford the level of detail required for genuine comparisons and contrasts of different Indigenous traditions. But in the examples I'd like to share here, time is told through kinship relationships that entangle climate change with responsibility.

Andrea Tunks writes about the ancient origins of climate change in Māori traditional philosophy:

> The Māori creation story metaphorically gives birth to the Tangata Whenua perception of the environment, including their concepts of climate. It begins with Te Kore, the single ancestral spiritual source which gave birth to Te Po and the many realms of night and darkness within which the Earth, Papatuanuku, and the Sky, Ranginui, were formed. The whakapapa (genealogy) from Te Kore unfolds like a great web, the descendants of Ranginui and Papatuanuku assuming pivotal roles in the creation and control of the natural world. This web forms the inherent spirituality of all things in the universe and is the basis of their interconnection. The whanaungatanga or relatedness amongst all parts of the web is reflected in purakau where ongoing relationships, care and responsibility mark the actions of the different entities charged with ruling the environment. The

> intricacy and delicacy of this webbed relationship includes the notion that human actions can adversely affect the climate. The spiritual entities Māori identify metaphorically *create* the climatic conditions within which they live.[11]

For Tunks, in this recounting, the climate system is considered as the genealogical web of mutual responsibility. The climate system is based on ancient, enduring relationships. Later on in the essay, Tunks describes human interventions into the climate system as going too far when they violate responsibilities, such as through excessive forms of pollution that experienced as escalation and intensification. The violation of responsibilities can be experienced as the "wrath" of "entities responsible for climatic conditions"[12].

Larry Merculief writes in the report on Indigenous knowledge and climate change in the Arctic:

> All parts of an ecosystem are understood to have a consciousness and this consciousness requires the individual and community to act with reverence and reciprocity. If a hunter or others do not properly honor the creature that gives itself to the hunter for food, then its spirit will not return to take physical form. This means the forever loss of one reindeer, one bear, one seal or one fish. Yet applied to the millions of fish, marine mammals, octopi, and other sea creatures caught by massive commercial fleets of ships, plus the death of millions more sea lives discarded that die as so-called 'by-catch', it does not surprise Arctic indigenous peoples that great ecosystem changes occur along with crashing populations of fish and marine mammals.[13]

Merculief describes kinship through consciousness (e.g. self-determination, consenting/dissenting) and reciprocity, which issues responsibilities such as "reverence and reciprocity" ("giving itself"). The duration of time, in terms of the return of animal populations, for example, is experienced as a function of the degree of kinship qualities. Merculief notes how Indigenous persons understand the exponentially large effects of disrespecting kinship as intensification and escalation.

Samantha Chisholm Hatfield's work with diverse collaborators on climate change, she has privileged the voices of knowledge keepers in Siletz and other Tribes in the pacific northwest region of North America. She writes that "Our study found that the tribal understandings of time are defined by cues and patterns observed in the natural world. As such, time is then relied on, operated in, and based on a 3D construction rather than the westernized linear time system." For Chisholm Hatfield and coauthors, systems of indicators are how time is experienced: "seasonal patterns are observed as the intricate system of connectivity and integration among plant, animal, insect, and human experience. These cues for human behavior include weather events, like the first appearance of snow on a certain mountain, botanical indicators like when berries emerge, and animal behaviors like the emergence of a certain species of ant".[14]

One the example of one of the elders in a study, Oscar Hatfield, shared the following:

> …in the spring, you got carpenter ants, big black carpenter ants, and [eel hunters] didn't go eeling until they saw those carpenter ants, they came out to mate, grow wings and fly off and start new colonies and stuff and that was what they marked when the weather was right to start eeling.. they marked other things the same way, but you don't do that

> anymore because our weather's changed so much that you can't mark anything like that; there's no way to do it' Oscar Hatfied (CTSI Elder)'

The paper interprets this as "in the above example, the carpenter ants have no direct biological connection to the spawning times of "eels" (pacific lamprey) or water levels." But that is not the point. For

> When a changing climate alters long-established associations between phenological events as in the examples above, the consequences are not merely an inconvenience or a set of information; instead, they challenge the fundamental belief about how elements of the natural world are connected, as well as the timing of when traditional patterns occur and behaviors are performed. Bonds between species such as those between carpenter ants and eels, between salmon berries and blue back, represent a fundamental order of the universe; when these bonds dissolve, the sense of order begins to fray and several interviewees expressed confusion, dismay, and concern, as in the last part of Hatfield's remark.[15]

Again, Chisholm Hatfield's points speak to kinship time, where changes in responsibility can be experienced as escalation and intensification.

In these accounts of knowledge of environmental change, whether in the work of Tunks, Merculief or Chisholm Hatfied, what is important is not some physical causal connection between the indicator and the phenomena. That is, it's not important that there's a connection within linear time. Rather, the indicators serve to mobilize large kinship networks. Harvesting

and gathering are major social events that involve complex partnerships of kin relationships. When these participants are interdependent, the participants support each other's safety, well-being, and self-determination. They are responsive to change together.

When evidence emerges that the partnerships are not happening, then people need to get together and determine what's happening because of their "confusion, dismay, and concern", as Chisholm Hatfield writes it. That is, changes in indicators create a context for people to revisit their responsibilities to understand how they can best revitalize responsiveness in a coordinated fashion. Such a philosophy focuses on how to maintain and adjust kinship relationships when there are disruptions.

Last Reflections: Kinship and Responsibility

Kinship conceptions of time are not likely to be associated with negligent proposals for renewable energy that ignore responsibility because they take the current state of affairs for granted. That is to say, telling time through kinship would not produce the problems of consent of the Mareña Renovables project, or, in other cases, issues of reciprocity, trust, transparency, and confidentiality. Kinship time does involve feelings of abruptness and escalation, but they are not taken the same way perilousness and urgency are in linear time. Consider, in conclusion, what I mean by this in relation to environmental humanities.

Imagine, as discussed in the previous section, telling time through kinship. The climate system consists of kinship relationships, as well as various tensions that threaten to disrupt kinship. Kinship promotes interdependence through shared responsibilities. Responsibilities operate best when they have qualities attached to them, including trust, consent, and reciprocity, among others. When climate change threatens the safety, well-being, and self-determination of

members (human and beyond) of a society, there is a need to get to the bottom of the history of how kinship relationships have been affected to get to this point of disruption. The history can be told through changes in kinship relationships.

Industrial economies have been associated with capitalist, colonialist, and patriarchal practices that affected Indigenous peoples, and many other communities, peoples, and countries. Regarding Indigenous peoples, now dominant nations like the U.S., Mexico, and Canada have engaged in or endorsed land dispossession, environmental degradation, gender and sexual violence, and marginalization of Indigenous governments, cultures, and societies. Whether through acts of private citizens, corporations, organizations, or governments, dominant nations over time set up a situation in which kinship qualities are absent, from consent to reciprocity.

While diverse Indigenous peoples have had their own histories, over generations, of changes in kinship relationships, the recent wave of domination of the last 200 to 300 years involved sweeping disruptions in kinship. The disruptions in kinship affected the shared responsibilities tied to the climate system too. The lack of respect for consent that dispossessed Indigenous peoples of their lands to make way for dirty energy is also the lack of respect for consent to the beings and entities of the climate system that must absorb the increased concentrations of greenhouse gases in the atmosphere, which feeds into ecological tensions that raise temperatures and change ecosystems in certain ways.

In this analysis, I see myself and those I know best as already living in a situation where there are low degrees of interdependency because kinship has been greatly altered. As kinship based interdependency declines, climatic disruptions can be experienced as abrupt and escalating because responsiveness becomes hard to achieve. For who do we reach out to as trusted partners for coordinated action? I sense how there's a point where new solutions to climate change, such

as renewable energy projects, are implemented in contexts where the kinship relationships are not present to ensure that diverse people, animals, plants, and ecosystems are protected in terms of their safety, well-being, and self-determination.

Kinship time, then, can cope with feelings of perilousness and urgency. But kinship time focuses us on understanding that kinship relationships are in peril, and we must take urgent action to establish or repair kinship relationships. Or else we will not have the interdependence required for responsiveness that prevents harm and violence. The feelings of abruptness and escalation of climate change impacts are not the product of a ticking clock when told through kinship time. Rather, these feelings arise from knowing that kinship relationships are the basis of shared responsibilities. We do not have to separate climate and kinship systems in our understanding.

So—in kinship time—there's no such thing as a climate change solution that first determines technologically how to lower carbon footprint and then moves onto consider whether it can be implemented consensually, reciprocally, or with high standards of trust. Such projects are trapped in linear time as in speed chess, where they are relying on taken-for-granted strategies to beat a ticking clock. Unfortunately, the taken-for-granted strategies and states of affairs of the dominant nations today are precisely the ones that cannot be disentangled from undermining kinship with Indigenous peoples and many others. Kinship time is no less adamant about mitigating climate change, but the adamancy aims at engendering better situations through establishing and repairing shared responsibilities, bringing about an interdependence that could lower carbon footprint in ways that support everyone's safety, well-being, and self-determination.

[1] IPCC (Intergovernmental Panel on Climate Change), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, ed. C.B. Field, V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, and and P.M. Midgley M. Tignor, A Special Report of Working Groups I and Ii of the Intergovernmental Panel on Climate Change (Ipcc), (Cambridge, UK: Cambridge University Press, 2012), 557.

[2] IPCCibid., 7.

[3] ibid.

[4] Melissa Nelson, "The Hydromythology of the Anishinaabeg," in *Centering Anishinaabeg Studies: Understanding the World through Stories*, ed. Jill Doerfler, Niigaanwewidam James Sinclair, and Heidi Kiiwetinepinesiik Stark (East Lansing, MI, USA: MSU Press, 2013), 224.

[5] See the further reading at the end for some recent sources on kinship from Indigenous studies.

[6] Mark Rifkin, *Beyond Settler Time: Temporal Sovereignty and Indigenous Self-Determination* (Durham, NC, USA: Duke University Press, 2017).

[7] See Sofia Avila-Calero, "Contesting energy transitions: wind power and conflicts in the Isthmus of Tehuantepec " *Journal of Political Ecology* 24 (2017): 992; Alexander Dunlap. "The 'solution'is now the 'problem:'wind energy, colonisation and the 'genocide-ecocide nexus' in the Isthmus of Tehuantepec, Oaxaca." *The International Journal of Human Rights* 22 (2018): 550.

[8] Isabel Altamirano-Jiménez, *Indigenous Encounters with Neoliberalism: Place, Women, and the Environment in Canada and Mexico* (Vancouver, BC, Canada: University of British Columbia Press, 2013), 206.

[9] Cymene Howe, *Ecologics: Wind and Power in the Anthropocene* (Durham, NC, USA: Duke University Press, 2019), 43. See also Dominic Boyer. *Energopolitics*. Duke University Press, 2019.

[10] Howe, (xii)

[11] Andrea Tunks, "Tangata Whenua Ethics and Climate Change," *NZJ Envtl. L.* 1 (1997): 71.

[12] (81)

[13] Larry Merculieff et al., "Arctic Traditional Knowledge and Wisdom: Changes in the North American Arctic " (Juneau, Alaska, USA: Arctic Council 2017), 5.

[14] Samantha Chisholm Hatfield et al., "Indian Time: Time, Seasonality, and Culture in Traditional Ecological Knowledge of Climate Change," *Ecological Processes* 7, no. 1 (2018).

[15] Hatfield et al, (6)

FURTHER READING

Callison, Candis, *How Climate Change Comes to Matter: The Communal Life of Facts*. Raleigh-Durham, North Carolina: Duke University Press, 2014.

Fiskio, Janet. “Dancing at the End of the World: The Poetics of the Body in Indigenous Protest,”

Ecocriticism and Indigenous Studies: Conversations from Earth to Cosmos, edited by Monani, Salma and Joni Adamson. New York, NY, USA: Routledge, 2016, pp. 101-118.

Robert Innes, *Elder Brother and the Law of the People* (Winnipeg, MB, Canada: University of Manitoba Press, 2013)

Kimmerer, Robin. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis, MN: Milkweed Editions, 2013.

Maracle, Lee. *Memory Serves*. Edmonton, AB: NeWest Press, 2015.

Monani, Salma. "Feeling and Healing Eco-Social Catastrophe," *Global Weirding*, edited by Canavan, Gerry and Andrew Hageman. Vashon Island, WA: Paradoxa 2016, pp. 192-213.

Enrique Salmón, "Kincentric Ecology: Indigenous Perceptions of the Human-Nature Relationship," *Ecological Applications* 10

Zoe Todd, "Fish, Kin, and Hope: Tending to Water Violations in Amiskwaciwâskahikan and Treaty Six Territory," *Afterall: A Journal of Art, Context and Enquiry* 43 (2017): 102

Kim Tallbear, "Caretaking Relations, not American Dreaming," *Kalfou* 6 (2019): 24

Ronald Trosper, *Resilience, Reciprocity and Ecological Economics: Northwest Coast Sustainability* (New York, NY, USA: Routledge, 2009).