



Envisioning Indigenous Models for Social and Ecological Change in the Anthropocene

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Abstract

Indigenous societies provide alternatives to hegemonic social institutions that global capitalism spread around the world, contributing to human caused environmental degradation called the Anthropocene, coterminous with the development of the modern world-system. In this work we describe Indigenous communities using ten social spheres, that balance human needs through ecological mindfulness, including spirituality, and then we model how these social spheres can be adapted to contemporary world-systems using a radical imaginary, building off Indigenous works by Fenelon (2015; 2016), social perspectives of Pellow (2017) and Norgaard (2019), and environmental geospatial sciences (Lui, Springer, and Wagner 2008; Jankowski 2009). We identify four social constructs from Indigenous peoples—(1) decision-making, (2) land tenure and resource management, (3) economic and (4) community—which we model for societies in world-systems through the ten imagined social spheres, to present foundations that empower communities to resist the coming climate change futures of the Anthropocene.

Keywords: Indigenous peoples, earth science, environment, climate change, imagined world



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Indigenous societies (broadly defined in Fenelon and Hall 2008: 1869) have ecological systems and social relationships more attuned with local communities and environments inclusive of all forms of life from a holistic perspective (Whyte 2013). These differ greatly from the globally dominant western neoliberal systems (Fenelon 2015), and political relations that govern them (Coulthard 2014). Capitalism places socio-economic, political and environmental pressures on local and regional communities. As recently noted by Sklair (2019), the current state and trajectory of the Anthropocene is defined by ecologically unsustainable decisions (Williams et al. 2015) by relatively few elite corporate entities that threaten communities' ability to control their fate in terms of quality of life for current and future generations (Klein 2015). Furthermore, widely implemented top down centralized systems of decision-making about resource management, allocation and sustainability, dismiss the intrinsic value of including community centered knowledge in developing integrated models that meet the needs of both local and global communities (Beierle and Cayford 2002).

In seeking to transition societal constructs, global consideration should center on how indigenous communities created social structural frameworks that continue to balance human societal needs through ecological mindfulness. This requires careful consideration of the nexus between human-environmental and social-economic landscapes so that they can be reimagined to balance communal use with sustaining ecological earth systems. In derailing the current trajectory of the Anthropocene, this local to global realignment would support balanced systems that serve local, grassroots interests first, while simultaneously benefiting the global community.

Premier among [Indigenous issues] are global climate change, the nature of world capitalism (or now neoliberalism) as dominant economic relations, increasing conflicts over political representations inclusive of opposing differing worldviews, and nature of community where human survival is most evident (Fenelon and Trafzer 2014:4).

Building off Indigenous works by Fenelon (2015; 2016), the social perspectives of Pellow (2017) and Norgaard (2019), and the opportunities presented in environmental and geospatial sciences (Jankowski 2009), we identify four social constructs—(1) decision-making (governance), (2) land tenure and resource management (i.e. water, air, and soil), (3) economic (i.e. distributive) and (4) community (i.e. local to global)—that Indigenous peoples have maintained (Fenelon and Hall 2008), and which can be modeled for their counterpart in global social systems through imagined policies and practices.

We proceed to identify the central components of the Anthropocene, considering relationships with the rise of capitalism in the power networks of the modern world system. We explore differing forms for Indigenous societies, then observing how systems could be adapted, using a radical imaginary, to provide transition toward a more environmentally sustainable world. This approach fundamentally challenges notions of more of the same in global capitalism (McKibben 2019; Wallace-Wells 2019), and instead offers a picture of alternative social

constructions, even if historically altered by colonization, of surviving Indigenous societies, versus a pessimism of “chaos” supercharging the world, (Scranton, 2015).

First we discuss the Anthropocene.

Anthropocene:

We suggest that the modern biosphere differs significantly from these previous stages and shows early signs of a new, third stage of biosphere evolution characterised by: (1) global homogenisation of flora and fauna; (2) a single species (*Homo sapiens*) commandeering 25-40% of net primary production and also mining fossil net primary production (fossil fuels) to break through the photosynthetic energy barrier; (3) human-directed evolution of other species; and (4) increasing interaction of the biosphere with the technosphere (the global emergent system that includes humans, technological artefacts, and associated social and technological networks) (Williams, Zalasiewicz, Haff, Schwagerl, Barnosky, and Ellis 2015).

While significant social science discussion has arisen over the vast effects of climate change during the recent time periods of increasing globalization after the advancement of industrial capitalism, often referred to as neoliberal transnational corporate capitalism, there has been less discussion of how global level changes have been connected to our modern world-system (developing over five hundred years). Nor has there been discussion of any alternatives—transitional, revolutionary or even social evolutionary—predicted to come about as conflicts over the future of a human dominated world arise. Three primary problematics to this discussion addressed in this paper include: (1) the finite relationship of world-systems analysis (Wallerstein 2004; 2013) and capitalism (Sklair 2002; Robinson 2016) with clear definitional analysis of the Anthropocene (Fisher and Jorgensen 2019) versus the more benign use of climate change terminology; (2) the recognition of both pre-capitalist and capitalist activities and related factors that contributed to the beginning of the Anthropocene and that continue to evolve compounding various complexities related to human impacts on Earth Systems (Williams et al. 2015); and (3) proposing a radical shift in how such trajectories can be modified to balance human-environmental needs by mitigating ongoing impacts that threaten the social, economic and environmental factors defining the modern world-system. We identify societal factors that fueled capitalist forms of human dominance and ownership over nature for economic gain leading to adoptions of profit driven systems that contribute to environmental degradation of Earth, and inequality within the social systems. This must be re-imagined by adopting Indigenous models with foci on communities’ local development. As a result, we recognize previous approaches to Earth Systems as interactions between biological, chemical, and physical processes and their global and regional context related to human systems (Lawton 2001; Bowden 2017). Using this lens we address contributions to the Anthropocene and conceptualize how various historical, more sustainable approaches to land and community management, as practiced by numerous Native societies, can be adapted to challenge systems that threaten local, regional and global human and ecological health, well-being and sovereignty.

Several interdisciplinary labels have been employed to make sense of these complexities, especially two terms; Anthropocene and climate change. The Anthropocene has been identified as

a geologic time period, or epoch, where humans have a profound impact on the social, economic, and environmental aspects of the Earth that collectively change the way Earth systems function for current and future generations (Stromberg 2013). This epoch is further characterized by capitalist ideologies that promote extensive exploitation of the Earth's resources that support systems largely centered on industrialism and resource extraction. This is achieved by capital financing coupled with the objectives of States to explore and exploit natural resources for economic gain and security that consequently disrupt the environmental systems needed to sustain life on Earth (Zarsky 1997; Jorgenson and Kick 2006). This overarching anthropocentric world belief system encourages massive exploitation centered on economic, social and political ideologies that humans should control nature (Wildcat 2010; Komlos 2019), leading to geographically dispersed community and global level inequalities.

As dominant western-based societies have expanded over much of the globe under systems of colonization, neo-imperialism of capitalist markets, and the 20th century systems called neo-liberalism, with never-ending extraction of natural resources, large-scale agricultural markets, industrial growth – the globe has come under threats to overall stability... placing this discourse into adapted world systems analysis...[According to Chase-Dunn (2013)] “another way to look at the core/periphery hierarchy is as a multidimensional set of power hierarchies, that includes economic, political and military power forming a continuous hierarchy that is a relatively stable stratification...” (Fenelon 2015: 145)

While the Anthropocene reflects these human hierarchies over nature, climate change has largely been identified as a way of analyzing, through historical and currently in situ data, the extent to which certain human activities have influenced the rate of physical changes to specific components of Earth's spheres (air, soil, water, etc.). This occurs where humans use earth's resources to promote largely individualized (i.e. human and corporate) socio-economic well-being. Over time these activities impact earth systems by diminishing the quantity and quality of natural resources that support human and ecological health globally. Examples include the excessive rates of CO₂ emission from burning fossil fuels that increases acidification of marine systems (Brierley and Kingsford 2009); eco-regional responses to changing weather patterns (i.e. floods, droughts) that support food and water resources vital to maintaining cultural norms and health in Native American communities (Hoover 2013); or overall anthropogenic carbon impacts across earth systems (Givens and Jorgensen 2015). Temporal characteristics of climate change are typically presented as a recent phenomenon fueled largely by the compounding long term effects of industrial activities, advances in technology, deforestation to support population growth, and the expansion of global markets driven by globalization. Such an approach fails to consider long-term effects on social (families, cultural and community life) and environmental (i.e. impairments to land, water, air quality) spheres of human activity. These considerations are often present in smaller systems, such as Indigenous societies where quality of community living dynamics is prioritized over economic growth (Raworth 2017) and physical expansion.

In terms of the Anthropocene we consider the anthropogenic driven movement from an agricultural mercantile capitalism with massive homogenization of animal and plant systems. This is often centered on developing capital driven systems that cannot be isolated from the other systems becoming global; what Wallerstein called “Geoculture” (1991) across multiple works, (1974; 1980). We observe development of a transnational capitalism, usually controlled by a hegemon, that seeks out and destroys resistance, while extracting resources especially during colonization. These processes employ state directed capital markets serving hegemonic interests, generally attacking and marginalizing Indigenous nations or peoples, especially larger systems, (Aztecan, Mayan, Hodenosaunee, confederacies, Incan, Arawakan, mound-building Mississippian, and so on) that were further weakened by widespread disease.

The shift from holistic Indigenous land management approaches to resource commodity management approaches contributes to deteriorating Earth systems that characterize foundation of the Anthropocene. Community oriented land management balances human and ecological needs by creating a positive feedback loop where resource extraction is minimal, and the waste created is natural so it can be returned to the Earth to support ecological functions. This was in sharp contrast to a commodity-centered resource management focus on exploitation to create products, (natural and synthetic) that are removed from a community, transported and consumed on a global scale leading to artificial byproducts that create harmful externalities at the site of extraction. This creates two dynamics. The first is represented in the transition that evolved into corporate models of top down, human dominance exploitation of resources primarily for profits of a few at the expense of all (humans and nature). The second is a lag effect which is revealed decades and centuries after the impact activities occur, resulting from cumulative strains and impairments to natural resources and all Earth systems over space and time (Scranton 2015).

Indigenous systems, such as the Aztec urban environments of aquatic wildlife for water purification called *chinampas* (floating gardens), were destroyed during colonization, dismissing Indigenous values, rights and knowledge about land management. This led to a global landscape change based on colonial ideologies where taking of land was widely embraced as an objective of state expansion (Whyte 2017). The results were a shift in human-environmental relationships, one where land management was not a balance between human and ecological needs, but based on the ownership of resources for economic gain with little insight into how the extraction of resources and settlement of land would impact Earth systems by creating diverse complexities within human-environment relationships (Wildcat 2010).

In light of the collective human activities that have fueled the Anthropocene and related climate change, we propose recognition of native, Indigenous based land management practices as viable approaches for realigning resource consumption to prioritize community level needs. This approach requires shared historical knowledge from all peoples and recognition that through sustainable management practices, all communities experience an equitable quality of life.

Recent examples include environmental lag effects associated with the Dust Bowl era in the United States. We argue the ecological impacts that created Dust Bowl conditions occurred far before the large scale population migration from east to west in an effort to seek ownership of

western lands (Hornbeck 2012). The lag effect conditions did not solely arise with settlements; instead a combination of local, regional and global factors were at play. Lee and Gill (2015) note a large scale sea surface temperature change in the Atlantic and Pacific creating multiple years of dry conditions in the Great Plains, coupled with genocidal removal or “relocation” of Indigenous populations from their origin lands to reservations, and large scale over hunting of wildlife. The Homestead Act of 1862 and the Canada Dominion Land Act of 1872 further fueled movement of settlers from the east to western areas who were seeking private land ownership that encouraged destruction of native vegetation and of wildlife (i.e. bison) that had sustained Great Plains ecosystems for centuries (Samson, Knopf, and Ostile 2004). The pinnacle of these activities resulted in intentional destruction of species, the largest mammalian species loss in world history, by the United States military in order to subject the resisting tribal nations of the plains, and to prepare for transition to cattle-based economies of scale. Over time, this paved the way for developing meat markets with railroads, vastly changing the ecosphere under agricultural constraints and economic domination. These changes dismissed the value of local knowledge about the landscape where Indigenous communities had ecological relationships (Norgaard and Fenelon 2020) creating an expansive system that helped to sustain human-environmental relationships for hundreds if not thousands of years.

Without this knowledge, western United States settlers implemented dry agriculture practices with little knowledge of local and regional soil nitrogen cycles and water conservation; a vital component to ensuring balanced agriculture and land management of biological resources including plant diversity on the landscape that reduced soil erosion. Also, the role of wildlife in resource management was removed from landscapes, giving way to invasive flora and fauna impacting carbon and nitrogen sequestered by plants and soil, changing soil moisture content, and reducing water infiltration rates and conditions conducive to supporting ecosystem diversity. Furthermore, ideologies of private land ownership, not communal, (Bonfil Batalla 1996) promoted early capitalist models of resource ownership, followed by the taking (i.e. extraction) of resources and exporting them to more populated regions (Whyte 2017). This further highlights how our work identifies systematic mechanisms in which Indigenous communities were able to sustain large, geographically expansive populations, while minimizing impact to earth systems and resources.

The “disappearances” of Indigenous people not only led to a demographic paradigm shift, but notable shifts in the global carbon cycle. In the “Great Dying,” Koch, Brierley, Maslin, and Lewis (2019) find a demographic loss due to pandemics of 56 million people in the Americas by 1600, which also led to a loss or destruction of landscapes inhabited by indigenous societies, (coupled with a little ice age period). This culminated in increasing land based carbon uptake and secondary succession of forests, and a lowering of global surface temperatures in the two centuries prior to the Industrial Revolution, 1610 CE. An important perspective emerges that highlights the intense, but sustainable, agricultural activities of Indigenous civilizations prior to the genocidal destruction of nearly 60 million Indigenous people living in societies characterized by vast, self-sustaining populations over highly diverse ecoregions of the western hemisphere. When these populations (20+ million in Mexico’s central valleys alone) “disappeared” due to conquest death and spread

of disease, so did their agricultural systems, leading to a reforestation that reduced carbon uptake (i.e. sequestration), and thus cooled the region and ultimately the globe.

We observe that human systems can have a great effect on both the environment and climate change, even in a disparate direction from global warming, when effects are on a continental scale. Thus, with a rise of agricultural capitalized systems leading to industrial capitalism (Wallerstein 1974; 1980) concomitant with a newly developed “wilderness” of peoples greatly reduced in number, we can observe the opposite—clear cutting of forests for monocrop agriculture meant for trade, fossil fuel burning for an early and late-stage industry (Jacques and Jacques 2012). This can be linked to causing a warming because of the social system being imposed on the environment and societies undergoing capitalist domination, creating the conditions we now call the Anthropocene.

There is rarely clear consideration of the temporal characteristics of natural and pre-human versus anthropogenic short and long term impacts prior to this “pivotal” period. It is well documented that these communities embodied a human-environmental balance where needs were aligned with natural cycles and related ecological functions (Fenelon 2015). True impacts of the removal of indigenous people show it also eliminated community level knowledge and hundreds if not thousands of years of management knowledge with long term ecological services that support communities. This was “replaced” by populations moving into once occupied tribal lands and implementation of activities that misaligned with ecological systems, including the agricultural production for local consumption first, versus the need for communities to provide food resources for others across a global scale. This dynamic shift created hierarchical preferences centered on humans first, through establishing agricultural practices and related landscape changes that were largely short sighted and not proactive in seeking environmental balance. Rather, they centered on short term needs and quick profits, that evolved into meeting large scale, global population needs supported by transportation and trade networks linked to financially supported state ideologies, intensifying capital exploitation of markets without concern for community or environment (Wolf 1982).

Whyte (2013) notes that this ideological shift is largely related to how Indigenous communities approach human-environmental relationships through a localized community model. This consists of tribal systems where communities observe natural patterns, and more importantly, share knowledge from elders to youth creating community level ecosystem knowledge. Diving deeper into these distinct differences, Fenelon and Hall (2008) consider indigenous issues of:

...cultural traditions built around community; consensus-driven forms of local governance; undifferentiated, holistic spiritual values that usually embody social prestige in generosity and reciprocity rather than compensation and accumulation; and worldviews that positively interact with the Earth’s environment and land, rather than destroying it through natural resource exploration (2008: 1868).

Thus we make an observation that these two paradigms of nationalist economies and the environment stand opposed conceptually, with the capitalist model as dominant in hegemonic

relationships, and Indigenous systems subordinated in all social sectors and suppressed as valued knowledge. Here we differentiate our analysis and projections from those based in western epistemologies, even when drawn from such elegant constructions as metabolic rift theory (Foster, Clark and Holleman 2011), or when adapted to “world ecology” constructs (Moore 2003) that attempt to define capitalism in precise temporal terms. In identifying environmental destruction during extraction and exploitation (Korzeniewicz and Payne 2019), most analysts fail to see Indigenous systems and peoples as significant societies with agency before, during and after colonization processes have engaged them in conquest and domination.

Recent developments linking Marxism with Indigenous peoples in social theory that appears to bridge the chasm between these worldviews are still western European centric. So, when Foster Clark, and Holleman observe that:

Marx took very extensive interpolated extracts from Morgan’s masterwork *Ancient Society*, which was based on the latter’s studies of Native Americans in the United States....focused first and foremost on: (1) the communal, consanguine (kinship-based) community, including its basis in the gens or clan, its democratic form, and relative equality of women; and (2) the associated communal property forms, constituting the natural economy with its non-commodity trade... (2020),

we observe that Indigenous social structures have been linked in terms of their differences, similarities and conflicts with European systems (see Fenelon, 1998). However, these social structures vary greatly for many Indigenous societies, even as their subordination and destruction become central components of western societal invasion and domination (Fenelon 1998), and resultant systems are generalized or over-essentialized in ways that make it difficult to identify alternative social formations that could be adapted to non-capitalist local-to-global systems. Therefore, we must identify specific Indigenous societies and how their social constructs interact under colonization and domination in the modern world-system.

Capitalism, the Modern World System, Indigenous Peoples and Analysis

We note that global warming is influenced by increasing carbon levels, identified by Jorgensen et al. (2017) as within anthro-shift models now moved to the forefront in determining the relationships of capitalism with severe environmental degradation, especially from global or world-systems perspectives (Fisher and Jorgenson 2019). We include inequality measures within closed systems, on a national level (Piketty 2013) seen from a global perspective as between core countries from capitalist societies, with nations from peripheral, or semi-peripheral regions, using world-systems analysis. And we identify surviving Indigenous societies (Chomsky 2013) within “third world” countries and their continuities with “highly developed” countries for alternative social formations (Fenelon 2015).

Of course, the colonizing systems imposed on Native nations and Indigenous societies of the Americas, continued predation and resulting depopulation on a massive scale the world had never seen before (Fenelon 2016); followed by settler colonialism by the English, continuing the genocidal destruction for express purposes of land appropriation and resource extraction. The

large, continental systems had the reverse effect of the Great Dying on the broader environment; in that forests were cut down, agricultural systems were adapted for mercantile trade and organized for centralized markets. This included cultivation and trade of textiles (i.e. cotton), expansion of railroads, and activities supported by fossil fuels (i.e. industrial and urban power sources), which contributed toward an increasing warming of the Earth's climate.

Korzeniewicz and Payne (2019) argue that initial growth during the "long sixteenth" century does not follow orthodox world-systems theory, with "core and peripheral activities" less clearly bounded, and coercive labor exploitation a defining characteristic of the most profitable economic activities. They also refer to "peripheralization" as a process that is too general for describing the movable and dynamic sugar plantations and their markets to Europe, opting for a kind of "coreification" that elites (World-Magnates) and states (colonizing powers, i.e. Portugal) operate in the *longue durée* for building wealth. While this powerful discussion does elaborate on racialized enslaved and wage labor as a critically important "key role of sugar in the world-economy during the formative stages of the modern world-system," (2019: 398) these scholars, as nearly all other analysts do, leave out the intrinsic land-holding wealth and often sophisticated societies of Native nations and Indigenous peoples, upon which the entire system was built.

A primary feature of the agricultural to industrial capitalist expansion was the changing social institutions of soon-to-be hegemonies, critically built on race-based enslavement for labor, genocidal conquest-colonization by race (Indians), and ethno-national suppression (Tribe Nation) in developing, rationalizing, and maintaining or recreating maximized systems of oppression, exploitation (land and labor), and race-based institutional inequality and injustice. These are the same social institutions which are key to this paper, in determining suppression and destruction of Native nations or Indigenous peoples (identifying the "traditional" social systems that were often destroyed) and in radically imagining aspects or practices of those institutions, modeled after Indigenous systems, in our modern societies, in ways that are not only ecologically friendly and environmentally sustainable, but which could begin to reverse the most threatening forms of climate change during the Anthropocene.

Institutions (capitalist) and Reproduction of Inequality and Environmental Injustice

The social institutions of transnational neoliberal capitalism found in hegemonic domination around the world, and which were (and are) based on inequality and injustice over peoples defined by their racial and/or ethnic identification and placement at the bottom of the stratification order, are outgrowths of conquest, colonization, and intensified domination over pre-existing Native nations. These societies, ranging from complex civilizations such as the Aztecs Triple Alliance to tribal confederations such as the Haudenosaunee, or many transhuman mobile decentralized communities such as the Dakota or Lakota (Sioux), were subsumed in the expansion process, with attempted erasure of their histories and social organization, (Fenelon 1998; Wolf 1982). Previous analyses and histories of this continental if not global domination over Indigenous nations or societies, have focused on wars and treaties, such as the Lakota identified as the Sioux Nation in the Fort Laramie Treaty of 1868. The United States also made concomitant attacks on Lakota culture and society, as in Coercive Assimilation (1883-1934) attacks on Sun Dances in the 1883

Indian Offences Act (Fenelon 1998), American laws against the Lakota in the Major Crimes Act (Supreme Court loss in *Crow Dog ex-parte*) in 1885, and further takings of land in the 1888 “agreements” and state formation in 1889. These reduced treaty rights and set up the Indian Police and Courts, (under sovereignty), leading to starvation and police-militia suppression of traditional life. These attacks also targeted the quasi-Christian, non-violent Ghost Dance movement of 1890 revitalization: Wallace, 1956), arresting movement leaders, with suspension of rights, and transfer of responsibility to the Secretary of War. This led to the killing of Sitting Bull on Standing Rock and massacre of fleeing families at Wounded Knee creek, on Pine Ridge, intended to be the death knell of Lakota resistance, that we refer to as Culturicide (Fenelon 1998).

The previously identified laws and policies—tribal courts and police, land held in individual severalty, religion as a means of unifying community, and later setting up “elected” tribal councils (controlled by the BIA)—were put into place in the twentieth century and identified as ten Social Spheres of the Political: Law Enforcement, Defense and War, Trade Economy, Land Tenure, Property, Education, Religion, Language, and Family sectors. Using Tables 1 through 3 below we turn our focus to examples of native social structures and compare them to American based social structures. Broadly identified, these are the Political—tribal councils and law enforcement; the Economic—land tenure, capitalist dependency, all property individual ownership; and the Cultural—churches, hegemonic schools, and single family systems. Each of these play important roles and can be used as a lens in which to view and understand the complexities inherent in cases such as resistance movements in South and Central America against deforestation and destructive dams, armed movements such as the Zapatistas in the central highlands and forests of Chiapas, Mexico, or the NoDAPL movement at Standing Rock against oil pipelines, that centered community life in holistic environments as central concerns.

Since the variability and complexity of the social institutions of Indigenous peoples far exceeds what we can describe or analyze in this paper, we use a single case study.

Indigenous Institutions (Lakota) and Methods of Analysis

We proceed by identifying Lakota social institutions, using comparative-historical Indigenous methods (Deloria and Wildcat 2001) for environmental sociology, (Norgaard and Fenelon 2020) where we compare Lakota social structures (Fenelon 1998: 107) with American social institutions from U.S. policies to identify the ten social spheres that we then refer to more generic traditional Indigenous societies. We employ Fenelon’s (1997) individual analysis of the Lakota over two hundred years to become the Standing Rock Sioux, where he identifies general problematics of Indigenous societies reduced to Indian reservations. After that analysis, we make critical connections to global systems of power and control as transnational capitalism in direct exploitation of the environment (Fenelon and Hall 2008), using the same ten social spheres with world-systems analysis of core, periphery and semi-periphery cases that stand in contrast, or opposition to, an extended radical imaginary of adapted Indigenous archetypes.

First, we identify the social constructs within Native Nations or Indigenous societies, which because of the variance and particularity among our cases, we describe as individual, cases within temporal/spatial dynamics of the conquest/colonization/domination process, which for this

analysis is Lakota Oyate, known as the (Great) Sioux Nation (Fenelon 1997). This “case” was previously broken down into ten social spheres¹ that are methodologically useful for us to observe as Lakota “traditional” Indigenous structures, where we hypothesize the social spheres applied to a hypothetical general society. We refer to these in our comparative chart (Table 1) “Lakota to American social structures,” that also allows us to observe the invasive, colonizing process destroying or dominating the socio-political constructs first—political, defense systems, law enforcement—with intermediary or mediating intra-governmental institutions such as tribal councils, Indian police/courts, militia/U.S. military that are deployed by the United States to perform cultural domination.

Table 1: Lakota – Euro-American Comparative Social Structures with U.S. Policies

<u>SOCIAL SPHERE</u> (social structure)	LAKOTA (Traditional)	AMERICAN (Institutional)
Political	<i>Oyate Ominiciye</i>	Federal "Elected" State
Law Enforcement	<i>Wa-wayanka, Naca</i>	Judicial, Police, Militia
Defense & War	<i>Tokala-Akichita</i>	Standing Army, Militia
Trade Economy	<i>tokin-wiyohpeya</i>	Business, Corporate class
Land Tenure	<i>Maka-wakan</i> (community)	Legal—all land "owned"
Property	Person, group, <i>Woyuha</i>	Individual private "ownership"
Education	<i>Woun'spe, Wicoyake</i>	Institutional Schooling
Religion	<i>Wakan, takuyepi</i>	Christian Church
Language	<i>D/N/Lakota</i> dialects	English (only?) Civic use
Family	<i>Tiwae-ye, Tiyospaye</i>	Nuclear family focus

Adapted from Fenelon, James V. *Culturicide, Resistance and Survival of the Lakota ("Sioux Nation")*. New York: Garland Publishing (1998).

The next three social spheres /constructs are especially important for our analysis, as economic structures are integral to environmental degradation as well as potential adaptations in order to mitigate the effects of climate change in the Anthropocene. These three – land tenure, trade relations, property, (values) – are also central components of a capitalist society that maximizes exploitation (and extractive) controls for profiteering and predatory functions, including commodification, privatization and elite stratification. These are in contrast to the systems of community level decision-making and distribution networks found in Indigenous

¹ The term “social spheres” was first suggested by Fenelon’s Culturicide dissertation committee members in Sociology at Northwestern University in 1994, to its completion and defense in 1995.

societies and our Lakota (nation) case – interestingly observed in the Marxism to Indigenous article by Foster, Clark, and Holleman (2020).

Finally, we also observe the four (4) social sphere constructs that make up a Culturicide analysis, rarely discussed in world-systems analysis or globalization studies of large processes like climate change, yet critically involved in survivance for Indigenous societies and with our adaptive comparative structural (hypothetical) analysis for the radical imaginary to resist and revitalize in a rapidly deteriorating world environment. These four systems – religion (which also determines values structures); education (transmits historical / environmental TEK knowledge or awareness); language (shapes thought / worldview that affects social practices); and family (kinship system with responsibility to relatives, community and environs).

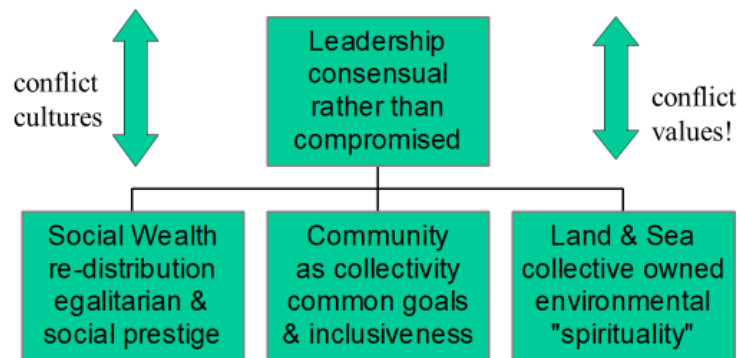
We have identified how social spheres, structures, or institutions, operate interactively, as a whole, with a focus on the health of the community and all its members, with responsibility toward people, animal and plant life, the environment and the earth itself, within a deep spiritual context that stands in opposition to a highly commodified, commercialized, monetary valued, stratified capitalist system, controlled through a hierarchy of transnational, corporate interests at odds with communities, having their own value system.

Before we move on to “imagined”/adapted social institutions at the heart of the paper, let us identify how Indigenous societies interact in resistance and revitalization, to dominant capitalist systems. We borrow a base model from “Indigenous People’s Relationships in Resistance to Globalization and Neoliberalism” (Fenelon and Hall 2008: 1883), with a focus on Indigenous survivance and re-orientation toward Land, Community, Economy, and Leadership, as experienced by Wampanoag, Adevasi, Maori, and Zapotecan communities.

A full discussion of the model presented in Figure 1 is borrowed from Fenelon and Hall (2008), showing how transnational capitalism invades, controls, intersects and dominates each of these societal systems, through social spheres or constructs identified earlier, which collectively work against environmental concerns, especially on a local community level. Whereas Indigenous societies value land as communal, a redistributive economy as egalitarian, decision-making as council driven responsibility to all kin (*mitakuye oyasín*), all life (*mni wiconi, makoche*), and community as the heart of their value system, there is near constant conflict with dominant state forces.

Figure 1: Indigeneity and Autonomy in Conflict with Dominant Society Model of Indigenous Relations in Four Categories of Leadership or Decision Making, Economy, Community, and Land or Environment, in Conflict with Dominant Society, Modern States²

Dominant Society / Nation-State capitalist domination & social repression



From here, we compare each social sphere individually, noting that it is not possible to actually isolate any sphere or structure from its interactions within the other spheres. We start with the Political spheres (Table 1A), where traditional Lakota *Oyate Ominiciye* (operating as council of overseers for other social spheres), *Wicasa yatapika* (respected elders appointed to councils), and *Wakicunze* (family lodge leaders operate spiritually), are compared to the political leadership of the U.S., which is centered on the federal level as a nation-state of “elected” leaders called a democracy; but in reality is an elected representative republic with centralized, hierarchical decision-making, responsive to corporate economic interests that operate in a downward direction to state political systems, especially as the Executive (presidential) directs or controls the political (economic) activities and interests within individual states, often based on political orientation. Herein we contrast councils and local leadership, with clear value systems, against large federal or even state governments, and look to reverse power relationships where community or local councils can determine socio-political concerns of the environment as it affects their communities.

² Indigeneity and autonomy in conflict with dominant society was developed for indigenous relations by Felon on-site while with International Honors Program in 2003 and presented at Latinos in the World-System meetings at the University of California, Berkeley, by Felon and Hall (2004).

Table 1A (3). Political Social Sphere (isolated)

Political	<i>Oyate Ominiciye, Wicasa yatapika (Wakicunze)</i> (family)	Federal (nation), “Elected” leaders, State (system)
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Next, let us look toward Law Enforcement systems (Table 1B), which include the judiciary as well as criminal justice and policing functions, that are driven by value systems that are more inclusive of all life (human controlled plant and animal ecospheres). Herein the *Wa-wayanka, Naca* and *Wicaka champe'* (elder societies that determine social mores, applied laws, restorative justice or community restoration systems) review many issues/cases of enforcing laws that restore positive if not harmonious relations, which is important in terms of selective environmental harm and its effect on the community; as compared to mainstream top down judicial systems, where enforcement (punitive in application, inclusive of financial sanctions, retribution toward individual citizens or corporations) with police at all levels answer to legal codes that favor elites in policy and practice, with limited local militias (unofficial in the United States) especially evidenced in maintaining or restoring supremacist ownership patterns toward land/property.

Table 1B. Law Enforcement Social Sphere (isolated)

Law Enforcement	<i>Wa-wayanka, Naca, Wicaka champe</i> (elder societies)	Judicial courts, Police (legal code), Militia (local)
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Next we turn toward Defense and War systems (Table 1C), linked to the aforesaid militias, historically located in Revolutionary and Civil Wars of the past, and in local regions such as the KKK or Jim Crow South, neo-Nazi fascist organizations, local outgrowths such as Posse Comitatus in the northern plains and western states, para-military groups connected to formal and informal militias, all of which are heavily linked to National Guard units and even regular militaries. Herein we note local community systems of soldier-police (*Tokala-Akichita*) who operate in “common defense” and are run by *Itancan* (leaders appointed by local councils, who can remove them), compared to the Standing Army of professional military leaders and Militia conscripts, in hierarchical organizations that answer to powerful leaders linked to the modern “power elite” (Domhoff 2013) rather than individual or even regionally grouped communities such as those living in large ecospheres with deep and far-ranging “institutional” relationships to corporate and elite power structures operating on transnational levels. We do not suggest that large military systems should be entirely dismantled, even as we note that pre-World War Two military systems, called the War Department before a meteoric rise of the military-industrial complex warned by President Eisenhower and designated by C. Wright Mills (1956), are clearly not necessary and are used to enforce neo-imperial and transnational corporate goals.

Table 1C. Defense and War / Social Sphere (isolated)

Defense & War	<i>Tokala-Akichita</i> "common defense" <i>Itancan</i> (leaders)	Standing Army, Militia conscripts “institutional”
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Next, we observe very similar constructs with three Economic social spheres or structures (Table 1D). This analysis links the social spheres of Trade Economy, in a focus on exchanging trade that benefits both individuals and kinship groups (*tiyospaye*); Property which includes personal “ownership” of individual things such as horses, but in terms of sharing or generosity (*woyuha ki*) with people closest to a lodge (*tiwaye*, family) or inner circles, (group/tribal belonging); and Land Tenure which does not have personal ownership, but viewed as stewardship (*wakan makoche*) over a bio-region or ecosphere for a community (*onspaye*, live together share in common). Compare all three of these systems with those of American mainstream operating out of capitalism, where all property is individually owned including trade relations by corporations or companies (that may answer to investors, also individual ownership), with some minor variation of government lands (contested by militias and private developers) where there can be national forests, grasslands, or mountain areas, but still under resource extraction completely dominated by the private sector, exclusive of group ownership, sharing redistribution networks, or responsibility to a public sector. This calls into question the entire system of economic governance, since it is now generally agreed that any environmental changes must occur on the regional, national, or global level, (Klein 2019) without answering to individual or corporate interests.

Table 1D. Economy Social Sphere (isolated)

Trade Economy	exchanging trade <i>tiyospaye</i> sharing	business public/private corporate “capitalism” class stratification
Land Tenure	<i>Wakan</i> (sacred) bio -region (no-owner) community	Government legal, Personal boundary all land “owned”
Property	Individual, group <i>Woyuha</i> (<i>ki</i>) socially determined	Individual & government, private "ownership" legally defined

These social relationships to capital controls within the economic spheres of trade economy, land tenure and property ownership, are also linked to the power elite (Domhoff 2013; Mills 1956) indisputably driven by profits and systemic growth that contribute toward environmental degradation, atmospheric climate change and species extinction related to the Anthropocene. Social systemic differences within the economic spheres drive the primary forces contributing to denial of climate change (Klein 2019), away from limited resolutions that create redistribution networks and reduced private / corporate ownership of material, land and markets.

Finally, we turn to cultural constructs or spheres (Table 1E) important in terms of value systems, critical toward transforming the broader society, yet rarely analyzed comparatively as differences between Indigenous and mainstream social systems, driven by capitalist ideologies. First we discuss Education, Language and Religion socialization that reproduces inequality and justice systems based on private property, wealth, accumulation and neoliberal globalization.

Table 1E. Cultural Social Sphere (isolated)

Education	<i>wounspe</i> culture <i>wicoyake</i> history <i>ouhunkaka</i> (values)	schooling (public/private) curriculum basis, Institutional
Religion	<i>Wakan wi-wanyang wacipi</i> solidarity - " <i>takuyepi</i> "	Christian dominant, Church ritual Institutional
Language	<i>D/N/Lakota</i> dialects <i>Teton,</i> <i>ISantee, Wiceyena daku-ye</i>	English (only) Civic-social use, Socio-economic base

Education systems are ostensibly developed as neutral, fact-based organizations that teach objective truths and sciences, but actually reproduce hegemonic thought and value systems, found in orientation toward notions of “freedom and democracy” within the social sciences (Giroux 1983), although they are based in destruction of Indigenous societies and rationalization of inequality and injustice that arose within the system (Adams 1995), including race-based slavery and ideologies of wage-labor meritocracy, in contrast to Indigenous education (Fenelon and LeBeau 2006), with strong focus on holistic ecologies (Cajete 1994).

These ideologies are thought and value constructs arising from Protestant reformation that idealized an Elect socio-economic elite, separation of church and state allowing private capital to become dominant, and value systems not concerned with poverty, social justice or a broader environment, in contrast to collective wisdom of the whole (Cleary and Peacock 1998) in relation to organic worldviews (Standing Bear 1933).

We have observed educational practices, religious ideologies, and values through language, perpetuate capitalist societal values with private property that maximizes inequality and injustice. Next, we observe the most basic foundation of all societies, the Family social sphere (Table 1F), also conditions values and social practices with a direct effect on the local environment which collectively can address how societies cohere together and have approaches toward better living relations in the physical world.

Table 1F. Family Social Sphere (isolated)

Family	<i>Tiwae-ye, tiyospaye onspaye</i> <i>Daku-chiyape</i> relatives	Nuclear family focus, Blood relations (ethnic variation)
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The Family, within Native Nations or Indigenous societies, is made up of kinship systems with responsibilities toward all one’s relatives—rearing children, elders, plant and animal worlds, creation—rather than a nuclear family, based on legal/social formation during development of industrial capitalism, which was separated by intersection of race, class and gender stratification, constitutionally formed in the United States under differing legal constructions of citizenship and ideologies of cultural domination.

Now we identify each of these social spheres as to where the primary problems lie in an ideal type of the current systems operating under global industrial and transnational capitalism.

Table 3. Narrative describing problems of current social (sphere) constructs.

Political: centralized system of (political) control over societal decision-making, economic and cultural effects (i.e. “sacrifice zones” placement—cancer alley, LA, so on) enforcement without local participation, national security effects (refugees, wars, control over resources (Klein 2015))

Law Enforcement: grand expanse (by laws) over centralized economies, (Klein, 2015) (refuting market equilibrium traditional economics) hegemonic powers maximizing global trade profits, enforcing inequalities and private property, Wallerstein “There are no ‘free’ markets,” (monopolistic dominance over trade), national economies legalized over a 300-400 year period of colonization, bureaucratic capitalism of the modern world-system.

Defense & War systems: global power struggles, mid to large defense systems for regional wars, local militias on national levels for civil wars, defense systems answer to powerful political/corporate elites, conflicts over oil, other valuable resources, market profits

Trade Economy: similar to above, capitalism versus trade systems controlled by community councils or local interests, opposition to global markets, issue for global climate change and the Anthropocene controlled by core country economic interests dominating periphery.

Land Tenure: transformational, primary concern private corporate farming, land ownership for agriculture markets, maximized inequality of wealth, negative effects on environments. Land foundational to inequality, Anthropocene relates to fossil fuel extraction and market agriculture.

Property: separate property on lands in 3 categories—personal, corporate, institutional (often governmental); other holdings, grand “socialism” or individual distribution networks (polluting), energy fossil fuels v renewable -centralized decision-making (power) on environmental issues

Education: reductionist or Manifest Destiny histories, (Louisiana “Purchase”) ideologies and worldviews (political and economic), “democratic” or “free market trade” capitalism don’t exist, transmitted to all education systems, elementary curriculum to universities

Religion: Protestantism Elect, Race-Gender-Class systems, capitalism (i.e. materialism over consumption -production -distribution) includes values, problematic simple (“primitive”) religious authority centralized (Christians v Catholicism) relationships in socialism /communism, religious thinking replaced by state ideologies (Doctrine of Discovery, European domination over “nature” Native Americans “savage” wilderness, environmental ideologies)

Language: dominance, suppress alternative perspectives, colonial controls v neo-imperial imposition (English only, anti-bilingualism, reinforce private property, accumulation and status) Religion separates societies from eco-friendly states, (*mitakuye oyasin* universal respect for life)

Family: nuclear family structures in urban systems, (industrial capitalism) complex, rural to urban migration, cities, “transition” from rural (agricultural) systems “feeding” cities, to Wage-labor relationships (RGC) kinship systems, community in socialist and capitalist societies, reducing legal socio-economic structures to family “units” separated from physical world.

An additional way to view such paradigms, is through an environmental justice lens, critically important to this paper’s claims, racially and ethnically (indigenous, see Gilio-Whitaker 2019).³ This can be advanced in terms of wealth and income inequality (Piketty 2013), between Indigenous nations as subordinated “minority” groups, with sovereignty embedded in settler colonialism.

We advance this discussion considering “third world” discourses, using the world-systems language of core versus periphery (and semi-periphery), where scholars have employed the terms “fourth world” when core states or countries, especially those hegemonic like the United States, (Hall 2003) export these inequalities (therefore injustices) to poorer, economically dependent third

³ We note most sublimated Indigenous societies within advanced core countries like the U.S., become dysfunctional through overuse by government controlled “mediating” institutions, with destruction of traditional culture

world countries through neo-colonialism and neo-imperialism, in ways that destroy environments in ravaging economies and development strategies of such dependent countries, which contain a large number of Indigenous peoples, making an “effort to preserve conditions in which our immediate descendants might have a decent life,” (Chomsky 2013) versus the “climate apartheid” enacted by the richest one percent sacrificing 99 percent (Foran and Widick 2013). The great anomaly is that those peoples thought to be “under-developed” may hold the keys to future survival. “The countries with large and influential indigenous populations are well in the lead in seeking to preserve the planet. The countries that have driven indigenous populations to extinction or extreme marginalization are racing toward destruction...” (Chomsky 2013: 34).

As discussed earlier with the model Indigenous survivance and re-orientation toward Land, Community, Economy and Leadership, we identify how resistance, maintenance of traditional systems, and revitalization in the four sectors, Land and Social Economy, and Community and Leadership establish a paradigm of practices that stand in contrast to the Anthropocene which expresses valuation of these same four sectors in terms of making money, accumulation, centralizing power and private ownership of land and labor. We now take that dialogue and relate it to earth science and environments undergoing deep change or degradation.

Rationale for a Radical Imaginary - transitions to Social Institutions that work against Environmental Decline (and Climate change)

We are essentially brainstorming a set of interactive social sphere listings in this model. For now it includes 3 grouped systems elucidated in earlier work, the Political—social spheres 1-3; the Economic—spheres 4-6; and the Cultural social—spheres 7-10. We do this as a set of “ideal types” (first called for by Weber as noted in Eliaeson 2000) which can be applied as groupings, since western epistemologies (and any resistance) can perceive these groupings more easily, along with potential applications. We note that socio-political conflicts occur in all groupings, especially when reducing negative anthropomorphic effects on local environments, over profiteering benefits on national or global levels. (not only found in capitalism, but in centralized socialist economies and authoritarian regimes). Below, we identify social institutions within neoliberal capitalism that represents the Anthropocene, and ideal types from a radical imaginary (whether realistic not).

Perspectives and Possibilities

We identified ten social spheres—using comparison with a singular case study Lakota—where alternative social constructs, interacting across spheres, similar to intersectional analysis (race, gender, class sociology) or more complicated approaches how sophisticated world-systems analysis is conducted, in hypothetical ideal types that we call the radical imaginary. For Political spheres we observe that local systems need to be empowered on the local level (*tiwae-ye* kinship relations to national *oyate* system) that can interact with representatives to non-binding political gatherings that attempt agreement over critical areas such as environmental legislation that has to be tuned to community level concerns but organized on a global level, where we refer to the ancient *Oceti Sakowin* council fires that used this set of relationships.

Thus, bottom-up decision-making structures, operating on consensus paradigms allowing non-participation by groups answering to councils with responsibilities to people, eco-spheres, and

constituencies can directly affect extreme climate change effects. Similarly, we identify specific Law Enforcement spheres that would operate out of community council values-norms (Zapatista model at Oventik) with ideal types based on restorative justice and flexible policing practices depending on objectives designated by local interests and orientation toward harmony and reduced conflict in diverse communities. Although Defense and War spheres would employ centralized skeletal systems that could be built up on short notice, they would be responsive to political formation of community councils where militias and organizations reflect local values.

Table 4. Social Spheres (ideological realignment) from Indigenous models

SOCIAL SPHERE:

Political: reduce or eliminate hierarchical, authoritarian or elected imperial forms of centralized administration (50 states in the U.S.) feeding off federal government systems – replacing leaders that are appointed or elected under review by councils of elders or respected peers, each council made up of representatives from communities on its respective level – local, regional, national, international – with decision-making starting on the lowest local level and working up (similar to Lakota *tiwaye* to *oyate* level) with leaders appointed on similar levels (like the Haudenosaunee grandmothers placing leaders on council, with ability to pull them out). Leaders can be stripped of responsibilities, (similar to Crazy Horse losing shirt-wearer status) without undue shaming and/or reduction in rank or status (he kept *Akicita Itancan*, or soldier Leader status).

Law Enforcement: create local response networks for policing and courts, so jurisdiction issues and community justice get resolved first on local levels, with regional (state) and national review that cannot override local decision-making, but can send it back for adjudication. Of course, some jurisprudence will be formed on national or constitutional levels, but without establishing hierarchical systems that proscribe communal land-holding or restorative justice, usually over individual property rights linked to maximized inequality. Basically, we ask: who do these laws serve? (refer *Crow Dog ex parte* leading to Major Crimes Act, or *Citizens United* in contrast to tribal Trust lands of *Cherokee Nation*, or polluting waters in *Winters* decision).

Defense & War: create interactive militias, used to reinforce conflicts over community issues, like *Akicita* soldier-police, with Council reviews for status, (contrast with self-review policing practices under higher civic authority in the U.S.) where militias can be mobilized for national or international conflicts (like Zapatistas), leaving communities as decision-makers on deployment of forces from their population (like Lakota “chief” drumming up war party to steal horses from the Crow, but no one joined, so they smoked a pipe, to fight another day). We realize skeletal militaries would be maintained in today’s world, perhaps with limited international deployment, but wars over oil or hegemony would need participatory agreement from local authorities.

Trade Economy: This is where communities determine their own economic and environmental interests, including curtailing corporate /government involvement, where community coalitions pull out of trade agreements or business pacts based on their citizenry concerns, like traditional *Oceti Sakowin* operating on the northern plains (Political above, Fenelon, 2019) in Council Fire representatives could walk out (*walk away*) or come to agreement (smoke sacred pipe, see 1868 Fort Laramie treaty – Red Cloud v Sitting Bull) with lodges following, or not, interests ranging from *tiyospaye* to *onspaye* to *oyate* levels, evidenced in NoDapl pipeline movement at Standing Rock’s Native Nation to community (Cannonball) level, or national coalitions like *Wet’suwet’en* over armed Canadian RCMP incursions, solidarity movement blockading railroads, as band reserve “chiefs” agreed to getting fracking oil money, Hereditary Chiefs opposing; similar to coal plants in Navajo country, or dams and oil companies in the Amazon.

Table 4. Social Spheres from Indigenous models (Continued)

Land Tenure: Land held in sacred stewardship for community /tribal people, (Vine Deloria Jr 1999) arguably central to our case, in terms of health of the people (*wicozani*) or mother earth (*unci ina maka*). Standing in opposition to private ownership (elite or corporate) of western society, contributing to conflicts in other spheres—political and economic—we note how this has played out in other societies, including Mexico “...breaking up communal lands. The Liberals made *private property sacred... communal ownership* of land in Indian communities became an obstacle to be removed.” (Bonfil-Batalla, 1996:100) Also addressed in Zapatista uprisings in Chiapas, duly noted for Maori by Marsden (2003) as lack of monetary value systems (racialized in U.S.) placed upon land and environment.

Property: Property entails personal, real estate and corporate forms that rounds out 3 economic social spheres. The ideal type of most Indigenous people (rarely found in traditional form today) would be some material things belonging to individuals, as in a sense of the animal world being controlled by a lodge (as in horses), with no land or corporate ownership, and all property subject to redistribution networks, such as Lakota “giveaways” (Pickering 2000) social prestige linked to cultural social spheres, providing a value system based on sharing more than ownership. These outward values are reflected among “Maori social values are based on social obligations which always entail a measure of self-sacrifice, a commitment not simply to one’s family unit, but to extended family (*whanau*), to the tribe (*hapu*), and to one’s people (*iwi*).” (Marsden 2003: 43) Like the Lakota, Indigenous societies rarely put property above community or environment.

Education: arguably a most necessary social system is education, since hegemonic approaches wiped out traditional teachings (*Woun'spe*) passing on cultural traditions by specialists including elder storytelling, (*Wicoyake*) recounting history of the people (*oyate*), from origin to conflict to contemporary life (*Ouhunkaka*) where values illustrate sacred lands (*He sapa*) and waters (*mni wiconi*), orienting humans ensconced in environments containing all life forms on mother earth. Linking these approaches, modern society can develop educational systems, like earth science, for future generations (Zapatistas), a critical sphere in considering long term climate change.

Religion: Religious re-orientation relates to values in the Family, also in community relegation of broad nationalist concerns or individualist notions of deities, better reflected for people and environment in Lakota practices—energy (*Wakan*) running through life, purification (*Oinikaga*) releasing desires to control others, community worship related to earth, sun and moon, (*Wi-wanyang wacipi*) spirituality (the SunDance) through sacrifice, in solidarity for one’s relatives (*takuyepi*). Try to reconcile religious denominations answering to economic (money) interests, found in ancient biblical (tribal) practices—Jewish seven generations and in Christian values (Palacek 1979). These are described as *Sacred Lands* by Deloria (1999).

Language: Language expresses values and cultural norms that relate to the environment, how we see land (*makoche, ina*; as whole like our mother), water (*mni-wiconi*; health or life), and inclusive of all one’s relations (*mitakuye oyasin*) of plants, animals, stones and mountains. Such language is different than English, which Gattegno told us arose from an island nation deeply concerned with trade, evidenced in the Sapir-Whorf hypothesis on shaping worldview. Maori Marsden expresses it through (*Kaitiakitanga*) holistic worldview as one of guardianship rather than that of “resources” without reference to (*whakapapa*) genealogical descent, which determines (*tapu*) sacred relations to (*tino rangatiratanga*) cultural sovereignty over the land. (Hall and Fenelon 2009: 43-45) Thus language shapes relational views towards the environment and resulting social (sphere) structures and actions.

Family—Here we use Dakota /Lakota extended kinship relations of deep responsibilities, extended to animal, plant and earthen (stone, earth, waters) worlds: Lakota *taku-kiciyapi* (consider-another-kindred), as all are either *owe* (of-one-blood), or *oweya* (considered-of-blood), with ancestors *oyate unma* (other people)... Lakota are divided into seven *otonwepi* (i.e. Teton), and seven *ospayepi* (i.e. Oglala)... Oglala are divided into seven *ti-ospayepi* (tipi divisions); each *tiyospaye* composed of one or more *wico-tipi* (camps), each camp composed of two or more *ti-ognakapi* (husbanded tipi). Relationship of one Lakota to another is the order: 1, *ti-ognaka*; 2, *wico-tipi*; 3, *ti-ospaye*; 4, *ospaye*; 5, *otonwe*. (Fenelon 1997) Lakota ranged from households to families, neighbor camp circles, extended relatives, large groups “tribe”/“band,” to related alliances on “national” levels. Each level commands greater attention to being a “good relative”—relations with “other people” follows these ordering principles (Fenelon 1998: 21). Families are relational to all kin—human, animal, plants, earthen—with stewardship responsibilities.

The Trade Economy social sector or sphere is most challenging to envision an ideal type—since any alternative construction could be viewed as a challenge to existing capitalist systems, where there is no true regulation. Our economic sphere would have all trade under oversight or controlled by Councils (community driven) under a Consent versus Consultation decision-making format, where concerns, such as toxic waste dumps or lack of potable water for communities, would operate in open consultation with council leaders who require consent before making agreements over development or distribution. Here we refer to counterpoints such as “We don’t Play Golf Here—and other stories of globalization” (Saul Landau 2008) relating to water usage for communities with *maquiladoras*, Indigenous resistance to clear-cutting forests, and battery acid pollution sites in northern Mexico. In addition, we observe counter-insurgent activities by corporations operating in predatory capitalism (Klein 2015), or against popular revolutions with forced redistribution (revolutionary Grenada in 1982 locals re-appropriated absentee landowners, paying out according to pre-revolution tax rolls), or state owned banking, mill, and rail operations, and anti-corporate farming in North Dakota by the non-Partisan League (NPL), where populist community councils made decisions over trade agreements or extractive industries, or Indigenous *ejidos* in Oaxaca, Mexico, where land is community controlled in opposition to private holdings.

The Property social spheres are similar to above, allowing redistribution networks (tax) to reduce income/wealth disparity as Inequality, and class groupings as social Injustice, going back to higher taxes (President Clinton), or earlier Presidents (Carter or Kennedy), with extremely high graduated rates (Eisenhower), as starting points, using generated revenue to provide environmental reparations or replacement systems. We identify Education social spheres that would turn around capitalist value systems to be re-oriented toward local community systems that balance sustainable environmental and ecosphere concerns—clean water availability, lack of industrial pollutants, non-contributing industrialism, renewable energies—linked to understanding global climate change from the Anthropocene. Religion spheres, with spirituality more as local celebration (i.e. SunDance, local evangelical, etc.) is both diverse and deliberative in determining social practices and value systems that hold local communities and environments as primary. Here we connect Family social structure spheres—kinship system in communities—with support systems or structures for child care /elderly living, and food distribution within social needs network not based on ability to pay for services. These interact (children in kinship systems care not by nuclear family regulations) based on notions of Community, rural or urban, reservation or faith-based, homogeneous or diverse, large or relatively small, that oversees the economic, land tenure, and decision-making components of a society resisting domination from a capitalist state-driven economy, that decenters environmental concerns including global warming and climate change that could threaten civilization on a world scale.

Observations and Conclusions

We make observation or conclusions within two major theoretical frame sets: (1) Indigenous societies as social spheres offer viable, if unlikely, alternatives to global capitalism that created massively destructive climate change during the Anthropocene; (2) possible paths forward using a radical imaginary, identifying formidable challenges and positive outcomes of implementation

or replacement of environment friendly social structure spheres, with existing hierarchic world systemic political economies.

Indigenous societies alternative structures (social spheres)

As much of our work has stressed, it is best to begin with the ideationally smallest sphere (component) and work up for an interconnected whole. We find that Family systems relational to social and earth systems are first in resisting the Anthropocene, especially as they are connected to cultural, economic and political systems. Similarly, we find Religion, Language and Education social spheres need to reflect the cultures and values of a dominant society that works to improve the global environment and greater equity for its citizenry. We find three economic measures—property, land tenure, trade economy—need to be redesigned for community control or decision-making (if not community ownership) that ensures healthy attitudes, policies and social practices toward an environmental mindfulness and intangibles, (quality of life, shared governance, holistic worldview) that tend to be oppositional to capitalism. Finally, arguably most important or challenging, is that we find interactive political systems (appointment election of governance representatives, employment of defense/military systems, judiciary and law enforcement predicated on restoring social good) with a social orientation toward harmonious relations in society and towards other nations, produce a more environmentally friendly local to global world-system that lessens negative Anthropocene effects with fewer armed conflicts that can destabilize or reinforce global transformation. We also find that all these social spheres or structures must be addressed simultaneously as a global system.

Paths forward using radical imaginary:

Having put forth our radical imaginary of adapting successful social spheres from Indigenous peoples into and for dominant society social institutions, we need to illustrate possible paths forward using these imagined spheres, within existing world political economies stratified in hierarchical modern world-system, itself in decline (Wallerstein 2013). Such an imagined transition has to take into consideration that hegemonic decline of capitalism is indicative of great threats, or challenges to the contemporary world-system, which Wallerstein among others, predicts would have to be between what he calls “Davos culture” (domination by powerful transnational corporations and the super-rich) and “Porto Alegre” alternatives (based on groups and resistance exemplified in World Social Forum), which we believe are further complicated by the potential for great global destruction emanating from the twin tower forces of “environmental catastrophe and nuclear war” (Chomsky and Polk 2013). This conundrum suggests that revolutionary pasts—socialism and communism that use centralized economies; authoritarian states even if benign or progressive; and/or leftist policies of redeeming or repairing capitalist states—will not work, or will involve violent use of militaries in competition for hegemony or in order to control climate-refugee shifts, exacerbating nuclear war trigger effects for tipping points into global climate chaos. All of these effects are induced by Anthropocene that inevitably point toward the world “...in the midst of a structural transition from a fading capitalist world-economy to a new kind of system. But that new kind of system could be better or worse. That is the real battle of the next 20-40 years” (Wallerstein 2013).

As Chomsky observed a decade ago, “indigenous societies are struggling to protect what they sometimes call “the rights of nature” or their efforts to “protect the planet” which are the only viable alternatives to a decline of the contemporary world-system with current “disastrous effects” from the Anthropocene’s trajectory. We find economic forces and state structures (with concurrent shifts in societal norms) must be realigned to give power to communities, with local knowledge and representation as prominent in decision making processes, recognizing unique cultural-historical identities that embrace holistic knowledge as key to sustaining Earth systems that benefit global needs across environmental, social, and economic metrics. This would require existing hierarchies to be broken down and replaced by networks of “indigenous-based” social spheres or structures that can resolve the complexities facing the world from combined threats of hegemonic decline, nuclear war, climate change and a calamitous breakdown of contemporary civilization. The imaginary presented here is a foundation in which to create empowering grassroots movements that are organized in ways aligned with natural environments, rather than dominating nature for natural resources extraction and maximizing capitalist profiteering for the few. These would minimize human impact for the stability of earth and human sustainability of generations to come. We of course realize how incredibly difficult and challenging this would be, but see it as necessary on a global scale to resist the Anthropocene, so transition toward an environmentally friendly world can work for the benefit of all peoples and life forms. Indeed, this may be our only alternative.

We end with Lakota words: “*o-midakuye oyasin*” meaning respect to all our relations—human, animal, plant and stones of the earth, our mother known as “*ina maka*.”

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