

Chapter 2

The Spiral of Knowledge: The Fourth World and Sustainability

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ABSTRACT

Fourth World knowledge systems, often overlooked in discussions of human sustainability, focus on the dynamic relationships between people, land, and the cosmos. These systems are typically associated with non-state nations and people, whose interactions with state entities often involve conflict over ancestral territories. Pursuing balance and harmony for life sustainability is not a primary consideration in these interactions. The author uses the Four Directions metaphor to symbolise the relational connection between human experience, land, and the cosmos, blending qualitative, quantitative, and relational reasoning. This framework has local, regional, and global implications for future sustainability. A conceptual framework is presented integrating Indigenous scientific knowledge with conventional sciences to explain various phenomena. Additionally, ALDMEM is introduced, a mechanism for mediating knowledge system applications, ensuring the consent of Fourth World people and state populations, and aligning with the principle of free, prior, and informed consent.

INTRODUCTION

There is a widely accepted tendency in political, academic, and social institutions to take for granted what we mean when using the word “Indigenous.” “Indigenous” or “Native” are terms of political art and academic convention often used interchangeably as an adjective describing “people” or “people” (Fenstad et al., 2002; Agrawal, 2004; Atleo, 2004; Ryser, 2022). The words Fourth World people use for their collective identity commonly translate to mean “people” or a people of a place, a feature of the Earth or homeland. The author applies the descriptive expression “Fourth World”, commonly understood in the knowledge systems of people globally, unless specifically indicating the word used to identify the people.

The “Fourth World” concept in 20th-century discourse was initially introduced in policy and academic discourse in the early 1970s at the beginning of the global Indigenous “engagement” movement and the height of the North American Indian land rights movement led by Secwepemc Grand Chief George Manuel. The book titled *The Fourth World: An Indian Reality* (Manuel & Posluns, 1974) not only led the emerging global land rights movement but placed the Fourth World imprint on the collective identity of

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what the United Nations would come to identify as 1.3 billion “Indigenous people.” Manuel advanced the idea that Fourth World people are not just nations within states, but they are nations occupying ancestral territories and political space with international states within larger geopolitical processes. Struggling to maintain their ancestral territories and cultural and political identities, they existed simultaneously within and beyond the conceptual limits of the state. The more than 6000 nations, Manuel and Posluns (1974) asserted, were political equals to states, and their knowledge of the ancestral territories was essential to peaceful relations and human sustainability. Our modern usage of the “Fourth World” is derived from the book, but their usage of “Fourth World” is rooted in the Hopi origin story.

In the Hopi oral tradition, humanity emerged over time in four worlds. The Hopi Knowledge Keepers (Kikmongwi), who have the responsibility for preserving and passing on the Hopi cultural and spiritual knowledge to future generations, have, through their traditions, informed us of the worlds of emergence. The First World, called *Tokpela* or “endless space,” Tokpela was the world the “Sun Spirit” Tawa made with the first four men and four women, each speaking different languages. According to Hopi legend, men and women soon forget the Creator Tawa. Tawa had intended that humans live in harmony, but they became corrupt and unbalanced, failing to live in accord with the Creator’s laws and balance with nature and all of life. Tawa saved just a few people who understood the need for harmony and took shelter with the ants underground. Tawa then destroyed the world with fire.

The Second World, *Tokpa*, meaning “dark midnight”, was created by Tawa and his nephew Sotuknang, characterized by the survivors of the Tokpela and their offspring multiplied and migrated across the land. With so much natural life, these people became greedy and selfish and hoarded goods for themselves. Tawa destroyed this world with ice, freezing everything except a few people loyal to the teachings of harmony and balance. These people were sheltered and protected by ants underground.

The Third World, the Kikmongwi explanation, was the Kuzkurza or “Cold World”, also created by Tawa and his nephew Sotuknang. The survivors of the Second World would inhabit this new world—Tokpa. The descendants of these people would become potters and cloth weavers, and they would grow crops for food. As makers of things, the people of Kuzkurza began making weapons and violently attacking each other to steal and take possession of land and resources. Once again, Tawa decided this was not good, so destroying the Kuzkurza with water became the answer, and once again, Tawa saved only a few people who followed the law of harmony and balance. The people took shelter with Spider-Woman in a hollow reed as the waters destroyed the world.

The Fourth World, *Tuwaquchi*, meaning the “world complete”, was created by Tawa and Sotuknang, and it was peopled by the survivors of the third world and their descendants. The survivors emerged from the *sipapu*, the place of emergence and return,” a sacred place in the Grand Canyon in what is now Arizona, United States. The people, as the story is retold, were guided by Spider Woman and *Masauwu*, the Spirit of Death and Earth God, to migrate across the land until they reached their permanent home between the Colorado River and the Rio Grande become the people we now know as the Hopi.

It was this story Grand Chief George Manuel carried to different people he visited around the world and learned that the concept of “world complete” that many people commonly understand the Hopi called Tuwaquchi or Fourth World. He decided that all these different people were the people of the Fourth World²-- the *world complete*.

Using the terms in this way draws distinctions between people who are members of an ancestral community with ancestral ties to a territory. Settler populations and their descendants cannot claim such ancestral ties to a territory as they create an identity. Imperialism or colonialism is implicit in naming these distinctions. “Fourth World people” are distinct cultural and political societies. These people are

colonized, for example, by European kingdoms, Chinese imperial dynasties, and Arabic Emirates from the 13th to the 20th centuries, and they are usually declared to be minority populations within a larger population under a newly proclaimed political jurisdiction comprised of settler populations or sometimes dominated by a ruling nation.³ The term “Indigenous,” though meaning “original,” is a category borne of *statism*. The use of “Indigenous” by the states presumes that the people identified as Indigenous are a minority population under the centralized control of the state. This control is assumed since the state is defined as having the authority to apply and enforce universal laws within a bounded territory by exercising police power through the state's political apparatus. It has become a political term of art adopted by the United Nations, International Labor Organization, states’ governments, and many Fourth World nations to designate the people colonized and re-colonized⁴ by newly formed states. Indeed, neo-colonial processes are at the root of sub-regional and regional conflicts that are widely referred to as “civil wars” when, in fact, they are wars of self-determination or land control between Fourth World people occupying their ancestral territories and the state (Ryser, 1985). The neo-colonial process incorporated people into the new states established on top of Fourth World ancestral territories, sometimes dividing Fourth World territories between the new states.

COLONIALISM AND THE INTERRUPTION OF BALANCE AND HARMONY

Colonialism is only one of at least four expressions of European imperialism since the fifteenth century (Smith, 1986, 1987; Smith, 1999, 2012), with one of those expressions originating from the perspective of Indigenous societies or original nations. European expansionism occurred within Europe for centuries before the fifteenth century and was not limited to European Kingdoms. Waves of imperialism also swept across Asia from China and Manchuria, the Middle East from Saudi Arabia, and Moors that had come from the 7th century to dominate Northern Africa moved into southern Europe hundreds of years before the fifteenth century. After the British and Ottoman Empires collapsed in the early 20th century, the decolonization movement left behind complex political disruption among Fourth World nations, frequently resulting in what is today called “civil war.” These “wars” were most often resistance movements by Fourth World nations to state domination.

Imperialism involves the invasion of the territories of pre-existing nations, deemed as “tribes,” “primitives,” “nomads”, or similar terms signifying inferior otherness. Long before the emergence of the modern state in the 17th century, nations struggled to maintain their cultural and political identities against invading and assimilative forces. Those assimilative forces were military victors and invasive migrating people who came to control the historical narratives that eventually became the origin stories of today’s states, with the nations (or their remnants) becoming subsumed discursively into those narratives. Some of those nations are recognizable to us today; aside from the original nations of the Americas (México, Maya, Anishinabe, Lakota, etc.), Scotland, Frizland, Waripiri, Euskadi, Maasai, Palestinians, Dinka, Bedouins, and Catalonia are examples of countries and people who maintained their national identities but have been incorporated into states. Many more are far less well known—such as the Kurds of Kurdistan, the Rohingya of Myanmar, the Naga of India, and the Otomi of Mexico—but they can be found on all the world’s continents except Antarctica.⁵

These historical circumstances and political/cultural clashes created a need to understand how the world and relations between people were changing. There had been no conceptual framework to explain what had happened between nations and emerging states or what changes began to unfold in the 20th

century when nations that had been captives in empires acted to extricate themselves to become internally autonomous, independent states. The need for a theoretical framework that provides concepts aiding in elaborating social, economic, political, geopolitical, and cultural understanding of the nation remaining as newly distinguishable national identities distinct from states became palpable by the mid-twentieth century. These nations had become a strategic and geopolitical fact as state after state convulsed with political and military conflicts over land rights, collective rights, self-determination, and cultural determinism. In Burma, Russia, Somalia, South Africa, Canada, Nicaragua, the Philippines, Rwanda, Mexico, Indonesia, the United States of America, India, Chile, Bangladesh, Japan, Norway, Nigeria, and Israel, the nations captured within the struggle against state assimilation and claims and encroachments made by the state and corporations into nations' territories.

In this broader context of developing political lexicon, national and international movements, regional and sub-regional conflicts, and emerging international multi-state inquiries "into the situation of Indigenous people", scholars began to formulate a theoretical framework within which the disparate influences might be better understood and explained.

FOURTH WORLD KNOWLEDGE ROOTS

Fourth World leadership evolved in the 1970s as nations' representatives began to engage international mechanisms concerned⁶ with "Indigenous rights" and "human rights." As nations' representatives engaged each other, it became apparent that a common vocabulary—a Fourth World socio-cultural-political lexicon—would contribute to a better understanding of what increasingly recognized as a shared experience. At the same time, it also became apparent that a commonly understood conceptual framework would be necessary to engage in cross-cultural dialogue (nation-to-nation and nation-to-state) on various topics. Such a framework would not only bridge the thinking of nations but aid in structuring dialogues between nations and states (Cobo, 1982; Martinez, 1997). Scholars and policymakers among Fourth World people recognized that this theoretical framework must provide concepts helpful in understanding nation-to-nation relations, nation-to-state relations, and particularities such as problems of climate change, human sustainability, land rights, education, collective rights, social change, self-determination, political organization, territorial and natural resource use, organization of society, the arts, horticulture, health, and food accessibility.

While international relations theorists⁷ continued to assert that nations and states are to be considered the same and that Fourth World nations are to be considered ethnic groups, the emergence of stronger political identities in the Fourth World necessitated a separation of these terms to provide geopolitical clarity. Through the efforts of a few political leaders and scholars, the shape and content of Fourth World knowledge systems emerged in the 1970s and 1980s, moving past much of conventional 19th and 20th-century political theory.

Since Manuel's seminal book was published a half-century ago, a body of scholarly work built on Fourth World knowledge systems has begun to develop. Applied in the fields of Fourth World Geopolitics (Ryser, 2012), studies in human development, change, and environmental sustainability, developing Fourth World scholarship bridges international relations theory, environmentalism, human sustainability, and studies about Fourth World people, offering a conceptual framework that recognizes the international political character of dominated people while de-naturalizing the modern state system. It also recognizes the struggles for political self-determination of nations far older than 500 years. From this perspective,

Indigenous people in the western hemisphere would be only one subset of the taxonomy we call Fourth World nations. Even though Fourth World scholars conceived their scholarship in ancestral North America, it is not widely known within Indigenous academic studies. The goal of this chapter is to advance Fourth World knowledge systems as a research methodology appropriately suited to understanding the particularities of sustainability in the context of the geopolitical/neoliberal world order of consumerism and development while demonstrating the conceptual utility of the Fourth World knowledge systems in their application to modern knowledge construction.

FOURTH WORLD KNOWLEDGE SYSTEMS ROOTED IN INTERDEPENDENCE AND SUSTAINABILITY

Fourth World political activists frequently call for diplomatic representatives, scholars, states' governments, and international institutions to respect Indigenous knowledge. References are made to the importance of Indigenous knowledge in understanding how to deal with the adverse effects of climate change, ensure the sustainability of populations, maximize the benefits of food and water to rapidly growing populations, and resolve conflicts between political adversaries in domestic and international arenas.⁸

Little is said about the structure, principles, rules, and concepts of Fourth World knowledge systems rooted in the culture of balance, harmony, interdependence and sustainability of each distinct people and the environment and how any of these Indigenous knowledge systems may relate to each other and can be applied to vexing social, economic, and political problems. Indeed, some of the most determined advocates demand respect for Indigenous people and their knowledge, and it is hard to explain the very system of knowledge they say must be respected—much less how that knowledge will be applied. The absence of such clarity leaves states' representatives and academics promising to respect such knowledge without having the slightest idea of what knowledge they are respecting.

LOCUS OF KNOWLEDGE

There are different types of knowledge that knowledge function differently when “owned” by an individual, a family, a community, or within a trans-community⁹ environment. Having an understanding or familiarity with a fact, subject, place, situation, or experience is knowledge. Access to “personal knowledge”—as in knowledge owned by an individual or a family—is strictly prohibited in some societies. Other forms of knowledge associated with the community or trans-community environment may have virtually no access restrictions.

One type of knowledge answers the question of “how” something is done, a second type of knowledge is “knowing” that something is true, while a third kind of knowledge answers the question of “that” is true.

Knowledge of “how” to do something explains or asserts a process. Knowledge-based on “how” is a distinct kind that may be expressed independently of facts or may depend on demonstrable facts. While knowing how to do something depends on factual evidence about how a thing is done or explained, applying “how” knowledge does not necessarily require implicit or explicit facts.

A second type of knowledge answers a question by knowing something exists or is true. One of India's most distinguished twentieth-century scholars, Sarvepalli Radhakrishnan (1888 – 1975), wrote cogently about a second type of knowledge he interpreted as “knowing” or “intuition.” Intuitive knowledge or

“knowing” that something is true can be achieved through “immediate apprehension”- as in, “This flower is beautiful!” Such knowledge is not dependent on facts or reasoning. Knowing something is true relies on inspiration and immediate cognition (Radhakrishnan, 1929; 2008).

A third type of knowledge answers the question “if,” resulting in a conscious action to produce a result. This knowledge confirms the reality of a form of knowledge that may be a fixed or transformational reality—which is to say knowledge “if” is actualized or it takes a new or different form that must be considered new knowledge.

Ageless knowledge systems constructed by Fourth World people and their earlier ancestors remain very much in evidence in medicine, architecture, water engineering, music, food security, governance, sculpture, population control, mental health, horticulture, animal husbandry, agriculture, history, literature, economics, and international relations. It would be folly to suggest that these many endeavours are not rooted in the earliest knowledge systems of humankind. Scholarly understanding of the application of knowledge systems in these and many other aspects of life is the task repeatedly enshrouded in mystery and intellectual bigotry. Fourth World knowledge offers a perspective, a set of concepts, and a worldview. It also points to methods for applying ancient knowledge from different Fourth World perspectives to shared problems of communities and humanity.

FOURTH WORLD THOUGHT EPISTEMOLOGICAL FOUNDATIONS

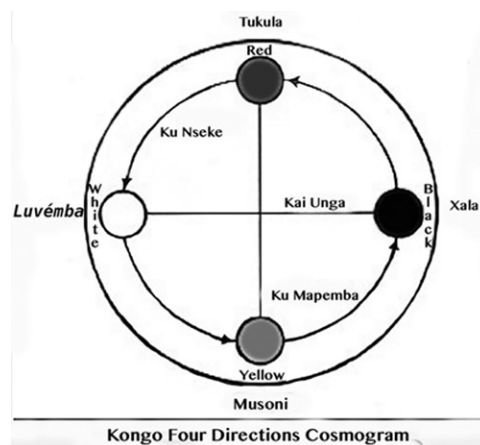
Fourth World knowledge systems state that the concepts of comparison, relational reasoning, a balance between contending forces, and equality of kind (that human beings are part of all living things and not the dominant living thing) will—when applied in life and thought—ensure comity between people, between people and living nature, and with the forces of the cosmos. Fourth World knowledge systems also assert that human cultures—as with the cultures of other animals, plants, rivers, mountains, and lands—are defined by this evolving and dynamic relationship between people (animals, plants), the land, and the cosmos.

Fourth World knowledge systems assert that history, memory, and thought processes are multi-dimensional—where two-dimensional thought (linear past progressing to the future, fatalistic, cyclical, or providential) is seven-dimensional. Tracing thought diagrammatically; the process is more like a spiral¹ where motion and change move in all directions simultaneously in time and space (UNGA, 2007).

Four Directions

The knowledge systems of the Fourth World are captured in the visual and tangible metaphors depicting the directions from which the Sun and the Moon traverse the sky and the places where people, foods, and other animals can reside together. The *four directions* are symbolically rendered as horizontal and vertical lines intersecting at their midpoints (See Figure 1) from the basic Kongo people's¹⁰ Four Directions cosmogram) demarcate space pointing to the planet's polar north and south, the rising sun and moon, and the “tree of life” (the stars making up the Milky Way Galaxy). The vertical, polar line is in dynamic motion, moving slightly back and forth, mirroring the earth's wobbles in space. The horizontal line points to the east and west and moves up and down on its axes, reflecting the seasonal changes owing to the earth's changing angle relative to the sun as it follows its orbit around the sun.

Figure 1. *Nkisi: Kongo Four Directions cosmogram from South-Central Africa*



(Author)

The Kongo's *Nkisi* is a traditional symbol from South Central Africa, specifically from the Kongo people who live in the Democratic Republic of Congo, Angola, and Congo-Brazzaville. The *nkizi* is a circular diagram representing the Kongo worldview and their understanding of the universe. Among the Kongo this four directions symbol has a deep symbolic meaning, representing the interconnectedness of all things in the universe and between all things on the land. The central cross represents the unity of the physical and spiritual worlds, and the four quadrants represent the four elements and the four directions. The colours used in the cosmogram are also highly symbolic, representing different aspects of the Kongo worldview and harmonizing life. The *nkisi* serves as a powerful reminder of the importance of respecting and honouring the natural world and the interconnectedness of all things in the universe.

As with the Kongo many other Fourth World people symbolize the four directions, for example, as a medicine wheel,¹¹ calendar,¹² four distinct symbols,¹³ and prayer ceremonies in the four directions toward the rising sun, setting moon, and the polar north and the south. The four directions dynamic symbol not only operates on a single two-dimensional plain but is further amplified by three additional directions demonstrated by passing a line through the middle axis of both lines extending toward the centre of the Earth, the middle of the intersecting lines and outward toward the centre of the galaxy. In its simplest form, this remarkable metaphor reflects the relationships between fixed physical points in space on the planet's surface and with the galactic points in motion inside and outside the planet.

The Toltecs assigned *Four Texcatlipocas*¹⁴ to the four directions; they assigned every aspect of life to all the four directions where human beings live—the planet's surface—and their relation to the cosmos. Toltecs assigned metaphysical attributes of life to the direction below (the underworld or centre of the Earth), the centre axis around which all things exist and the direction above where all things originate. While all seven directions essentially define and position the human experience and the experience of all living reality, the four directions provide the most tangible guidance for human beings standing on the ground. Each of the four directions has a colour, a sound, a plant, an animal, a dance, medicine, a shape, a climate, an environment, soil, water, and a name suited to each direction.

The Fourth World is embedded in the knowledge systems of Indigenous people worldwide who share these “four directions.” Rendered in its totality, one must come to terms with the actual use of knowledge to understand the knowledge systems in terms of use, accumulation, and construction (Yeo et al., 2013). Despite their origins, the four directions-based knowledge systems reflect similar themes and structures, and differentiated micro-systems reflect the *adapted*, “on-the-ground” realities of the different people. Each Fourth World knowledge system directly informs Fourth World people’s experiences and thoughts, thus linking balance and harmony to daily living and understanding relationships.

BWANGA: THE VITAL FORCE

The vast continent of Africa is home to generations of people carrying the genetic markers of human beings extending back more than two million years from the present. The Center for World Indigenous Studies Fourth World Atlas Project estimated more than 1000 distinct Fourth World nations located in the 54 African states. This pervasive “vital force” profoundly influences many of these nations particularly south of the Sahara Desert; it is the force that animates, strengthens, and weakens all life—unifying all things. It is Bwanga. As Temples (1959) observes:

The vital force can be intensified and compacted and can exteriorise itself at what we may call a nodal point or vital centre. This vital centre, this nodal point, this particularised manifestation or sign of the vital force, is called “kijimba” by the Baluba. A wild beast may be pierced by ten arrows without dying, while another beast succumbs to the first shot. This is because the one arrow has touched the vital centre, or one of its vital centres (p 39).

It is the *vital force* that forms relationships between all things, and its *kijimba* confirms that relationship. Knowledge of the force is confirmed by *kijimba*. However, there are two kinds of knowledge: absolute and immutable and relative and speculative. Tempels (1959) further notes:

... if anyone wishes to take for himself, or to make use of, the vital force of an inferior being, he should try to procure for himself a like “kijimba” which signifies and materialises the vital relation between the other being and himself. It is, moreover, the “kijimba” that one finds as the chief element, the active principle, the source of energy in every “bwanga” (p. 39).

Fourth World Africans store, retrieve, and communicate knowledge orally embedded in slogans, ceremonial or spiritually derived language, poetry, leadership lists of reigning monarchs, narratives or tales, commentaries. The “four directions” defined in the image of the Kongo Cross incorporates a directional red pyramid pointing to the north (toward the Sahara Desert), and black pyramid pointing to the south (toward the southern part of the African continent), and coloured circles (See Figure 1) contain deep meaning connecting the people, the land and the cosmos.¹⁵

The knowledge systems briefly discussed here share several commonalities: the intimate relationship between the personal and impersonal, comprehension of universal life force, the unity of all things physical and metaphysical, the four directions metaphor, and the origins of all things ultimately centering on the founding of land on water—an island. By comparing the four systems we see that each spring from “local” (individual, family, and community) conceptions, and that the local radiates to trans-local environments to continental systems. There has for centuries been a sharing between cultures, a cross-cultural conversation that built continental-wide systems of knowledge while energizing the evolution of individual, family, community, and sub-regional knowledge complexes facilitating human adaptation to localized environmental and social changes. While observers and scholars generally refer to “Indigenous

knowledge” as “localized,” limited, and functional, the reality is that all knowledge systems function in a dynamic human cultural environment where exchange and sharing is not only practiced, but also necessary to achieve continuity. Cross-cultural fertilization of ideas and experiences is a normal dynamic for any successful culture, and it is notable that the expression of knowledge will have localized attributes, but such knowledge sits within a broader knowledge paradigm.

INTEGRATING FOURTH WORLD KNOWLEDGE FOR SUSTAINABILITY

Shared living among different people and their environment depends on a shared understanding of knowledge systems. While human reasoning is universal (Goel & Dolan, 2001; Haskell, 2008; Stenning & Lambalgen, 2012), it takes different forms and may be influenced by different experiences. Inquiring into the nature of material and immaterial realities has occupied human beings from the beginning of time—peering out into the forest, at a mountain, or into the sea while also casting a gaze on the sky. The sense of wonder and the search for explanations caused the mind and body to reach for methods to answer the rapidly forming questions as events and phenomena that came into vision. For some people, formalized religions and theologies provided conceptual and practical structures to explain the mystical. For other Fourth World people, relying on natural mental powers, dreams, and analogies is an essential method of inquiry. Still, others turned to syllogisms to reason answers to questions, and some chose to employ methods to determine cause and effect, concluding that if one experiments frequently.

In addition to the rationalist methods just discussed, dreaming, waiting, comparing multiple variable relationships, counting, watching, stressing (as in physical stress), visioning, taking entheogens, analogical reasoning, and relational reasoning are some of the key methods for testing and applying Fourth World thought (Lyman & O'Brien, 2001; Hummel & Holyoak, 2005; Crone et al., 2009).

Relational Reasoning and Expression/Narrative Analysis

Indigenous evaluation is relational and multidimensional. It is a rational process expressed in a phrase, “relational reasoning”, relying on the more familiar concept of induction. The relationship between multiple domains (i.e., events, locations, objects, movement, time, sound, colour) is iteratively assessed while working toward a predicted goal (Ryser, 2012). Where a factor is not productive, it is set aside, leaving the remaining “domains” that increasingly acquire meaning about each other and together contribute to the explanation, description or affirmation of a particular *truth* (Landy & Goldstone, 1991; Goel & Dolan, 2001; Hummel & Holyoak, 2005; Crone et al., 2009; Son et al., 2010).

Fourth-world scholars and positivist scientists deal with facts but often express them in stories or narratives. Stories circulate throughout cultures, providing meaning for both personal and external phenomena. Identity is closely associated with the narrative, and the narrative reveals perceptions and meaning. Within individuals and cultures, various ways of knowing and borders of knowing are permeable (Ryser, 1997).

Storytelling (History, Present, Future - Simultaneity)

Story imposes, eliminates, and controls time and space so that the mind—the Spirit—can learn, explore, remember, alter, expand, and contract ideas, experiences, and perceptions. Through this miraculous process, it is possible to transport oneself or a group of people to another land, another time, and another dimension, rendering what may be impossible in the material world wholly and completely possible and accessible. Using the “story medium” in Fourth World society serves as a learning process, remembering history and foretelling the future as much as explaining the present. A researcher employs storytelling in two circumstances:

1. To imagine or contemplate how a problem can be understood and solutions tested
2. To create a simulated environment for a group of individuals serving as sources of information to reveal their perceptions, experiences, memories, predictions, and contemporaneous perceptions.

In the first circumstance, a researcher may wish to examine how to traverse a great distance over land and sea to achieve a particular goal. Developing a story that places either the researcher or an alter ego in the position of carrying out the mission allows the researcher to consider the aids and obstacles on the path to the goal. By so doing, it becomes possible to consider, examine and otherwise experience how a problem can be solved.

A researcher can structure an approach to solving a problem by following the story to its logical conclusion. In the second circumstance, a researcher may employ a story to help community members develop a common understanding of a problem they jointly seek to solve. Participants in a group may be presented with a story that offers many options for solving a problem considered by the story protagonists, allowing each participant to identify with one or more story members. By doing so, each participant does not risk anything personally but can “experiment” with solutions without risk.

Storytelling has many different functions in society, but in research, it serves as an important method for understanding and explaining material and immaterial phenomena such that a researcher can consider remote intergalactic problems without leaving earth, solve structural problems confronted by architects and engineers and examine the mysteries of the mind. The story has played an important role in research and society for millennia. A good storyteller can make dramatic and successful contributions to human understanding and meeting human needs (Hart, 2010; McDonough, 2010; Fleischhacker et al., 2011; Kaya & Seleti, 2013; Sinclair, 2013).

Dreaming, Meditation, Waiting

Dreaming, meditation, and waiting perform a function similar to storytelling in that these methods of obtaining information and understanding bridge the gap between the material and immaterial realities (physical and metaphysical) essential to reality as a whole (Stone, 2004; Zauditu-Selassie, 2007; Hart, 2010; Sinclair, 2013). When practised skillfully to acquire knowledge, dreaming, meditation, and waiting collapses time and space such that the past, present and future exist simultaneously. Under this condition, the “dreamer” may access knowledge not otherwise available in the material world. This

can be a powerful research method when considering health, emotional, and social problems such as psychological breakdown or social upheaval.

Dreaming can also contribute to solving problems such as finding food and water in a barren location or understanding how best to find a plant or capture an animal that may give itself for food. Dreaming can also play an important role in understanding how to respond to a natural calamity such as a flood, drought, sudden freeze, or other climate change. Finally, a dreamer may contribute to defining and explaining how best to defend against an enemy or define the best approach to resolving a dispute without resorting to violence.

Waiting is associated with inspiration or a moment of realization. A researcher may not readily comprehend the answer to a question, but by consciously and intentionally “waiting” the answer may become apparent. This method is particularly appropriate in studies involving complex relationships between individuals or events that may require compression of time and space to fully understand the implications of interactions.

Stressing

When stressed, the body adjusts to maximize the benefits of core support. In many societies, these core supports contribute to what is understood as “visioning” or intensified contemplation that allows consciousness to extend well beyond the body. Stressing may be accomplished by running for a long duration, running up a hill until exhausted, swimming vigorously for a long time, enduring heat, cold fasting or experiencing pain for a period. Stressing has the ability to concentrate the conscious self-such that a problem or question can become more clearly conceived and comprehended, thus allowing for the possibility of solving a problem or obtaining an answer (Logsdon et al., 2009; Korn, 2023).

Stressing the body increases natural hormones that prompt the body to act in an urgent situation or what is commonly called “fight, flight or freeze.” This result can be turned into the process of discovering new knowledge. In traditional societies, the “sweat lodge”, with its intense humidity and heat, can clean the mind and spirit, producing mental clarity and spiritual transparency that changes the unknown or obscure into a known and apparent. Vision quests where an individual may become isolated without the comforts afforded by community and home may have similar mind cleansing and spiritual clarity. Similarly, the Sundance ceremony consists of daily practice, a sacred pipe, monthly prayer ceremonies and an annual ritual of stressing the body through fasting and prolonged exposure to the elements. All of this contributes to healing the body and sharing healing powers with others who are sick. Stressing is a method for cleansing and revealing powers that cross from the Spirit world to become available for ordinary people mediated by a specially designated group member.

Narrative Analysis, Portraiture, Metaphor

The spoken word, sculpted object, pictogram, or painted image constitutes symbolic or metaphoric devices containing meaning. Such expressions in the research constitute data sources that can be structured to become subject to analysis. Narrative analysis is employed in Fourth World research as well as conventional research. The object of analysis is frequently the “story,” shared everyday experiences, oral histories, and these sources may be aided by a stone marked with memory gashes or a piece of wood with marks on it, as in the *alchuringa* used by the Aborigines in Australia to tell stories that repeat a theme or particular body of knowledge or pictograms used the Mexíca, Egyptians, and other people

on walls or forms of paper or bark containing drawings that symbolize elements of a story, history, or knowledge to be retold.

Comparing

The act of comparing involves recognizing whether there are similarities and dissimilarities between objects or factors upon which one focuses attention. Comparing allows the discovery of truths that are not apparent when considering an object or factor alone. The comparison may give rise to understanding contrasts that richly enhance similarities that were not otherwise apparent. The researcher must use this approach cautiously but always recognize the idea, object, factor or changing circumstance that is not otherwise apparent without comparison.

Comparisons are useful, for example, when a researcher wishes to evaluate characteristics or a pattern of factors that may explain the effects of social or cultural changes in a society. To conduct a useful comparison, one must establish criteria for sameness, difference and irrelevance. This evaluation method can explain the political experience of a Fourth World nation seeking to prevent the destruction of their forest by comparing the experience of one or more nations with this problem to the situation of a nation that is the research focus. A comparison may reveal decisions or actions that could or should not be taken to solve the problem. As with other rationally derived conclusions, those resulting from comparison rely upon persuasion for others to use the results. The comparison relies on additional methods of inquiry to confirm observations and other tests based on the senses.

Comparison is equally useful in architecture, where useful information may be gleaned by comparing structural or design practices from ancient structures to develop a modern structure. Similarly, a comparison may amplify otherwise invisible reasons for medical conditions, agricultural failures, or successes. Simple comparisons involving only a few variables are common, but comparisons involving many are less common.

Retrodiction

This is a process of taking systematic steps back in time, considering, comparing or establishing relations between pairs or multiple factors, objects, ideas, events, stories, arts and other manifestation of physical or metaphysical manifestations to establish or predict what may happen in the future, define what is occurring in the present or explain the meaning of an event or what actually occurred in the past. Physical, economic, political, and cultural fractures from a period much before the predicted outcome can be defined by examining and drawing relationships between apparently unrelated historical, documentary, artefact, symbolic, social, and sources of information and working back in time to discover how or what may have existed that can be used to predict what can occur in the future if similar circumstances exist.

Retrodiction may be compared with “reverse engineering” or reconstructive reasoning. Understanding what occurred in the past requires careful reconstruction based on known factors that can help explain earlier knowledge. Retrodiction can be used as a single method or in combination with other methods to consider what a people may respond to climate change based on how earlier generations responded to changing climate. Similarly, food security may be examined for future policy considerations based on successful or failed experiences from the past. Retrodiction may also be used in research focusing on historical sociology, archaeology, evolutionary biology, psychology, and political change.

Analogizing, Analogic Reasoning

Analogy is an approach to thinking and explaining by comparing different factors to discover similarities as the best source of evidence to estimate unknown aspects of a new alternative. In other words, the ordinary process of associating an object with qualities “A” and B” that are shared by a second object, and the first object also has a quality “D”, the second object will also share the qualities of “D.” By this we mean that one may draw an analogy as a conclusion from multiple case examples organized by a question to form an answer. When there is closer agreement between alternative factors, there is a likelihood of stronger evidence supporting a conclusion. This approach is not much different from reasoning by logic (Sowa & Majumdar, 2003).

Remembering, Sharing

Memory is a powerful tool in research that may seem self-evident, but the approach is often discounted. Remembering can be triggered by an event, symbol, or social interaction where individuals share their thoughts. The capacity to remember is an essential part of research when a researcher must contend with many factors that are to be relationally evaluated or retrodicted by considering variables from the past to predict what may exist or come into being in the future. Remembering is perhaps the oldest method of providing reliable information about the past, present, and future. The method for distributing outcomes from remembering involves sharing that may be carried out through oral storytelling, dance, sculpture, drawing, and painting.

Talking Circles, Community Participation

Community is an essential ingredient in research. The best means for reconstructing or structuring social interaction (community) is to involve participants in a process that directly causes collective thought; actions and inspiration of a group can be captured. The Talking Circle is much like a focus group, but questions of a facilitator don’t necessarily guide it as in a focus group. Using story and group or individual simulation recognizable to members of Talking Circles can trigger and encourage inspired observations, thoughtful analysis, production of new ideas and effective personal responses. Analysis of words and expressions generated by participants then reveals new meanings useful to the Talking Circle members and the researcher.

Dance, Song, Image Rendering

Various forms of expression need not solely depend on words (symbolically rendered or orally rendered). Observing or participating in dance, song, and construction of images can demonstrate new knowledge or explanations that may otherwise be inaccessible to the researcher. The researcher may learn much more as a participant than as an observer, so it is important to seek opportunities to become a primary participant and not merely a secondary observer.

Dance is frequently a method for revealing qualities, behaviours, and stories when oral storytelling is insufficient. Song performs the same function, as does the making of images. These methods demonstrate information and reveal the results of inquiries by lending body, voice, sounds and images as approaches to “directly” explain or show the results of what is already known. While dance, song and images play

important ritualistic roles in society, they also teach and shape society's and its individuals' social and intellectual character.

Methods of Learning

Group discovery, observing, practice, relational reasoning, trial and error, mirroring (shadowing), oral literature practices, ceremonies, and institutional structures (political, religious, social) are instruments of learning within Fourth World knowledge. These approaches use the Four Directions metaphor to remember the new knowledge acquired. Investigations into learning necessarily require the involvement of the community that benefits from the learning outcomes. Consequently, conducting group learning through Talking Circles (allowing for community participation), in addition to reviews of historical information, can reveal patterns that indicate aspects of learning that are not understood. Employing comparisons, counting, and observations that can be examined in a group where critical assessments become possible beyond the understanding of a single person.

Oral expressions presented in rituals that follow a recognizable pattern can then provide the learner or learners with expansive understanding, especially when questions and counter-comments become part of the process. Learning in the ways we have described follows a natural path of discovery benefiting from the social and cultural connections of community members or small groups of learners.

Fields of Application

Fourth World thought, and the knowledge systems that undergird the ideas can be applied to stories, dance, ethics, philosophy, athletics, horticulture, agriculture, literary expressions, architecture, planning, construction, design, environment, diplomacy, governance, community and family relations, war, trade, economics, education, health, social organization, entertainment, design, music, development of technologies, and the organization and conduct of business, government, diplomacy and scientific inquiry. The applied theory and knowledge systems may be better understood with this example of applied Fourth World thought and *realpolitik* as applied to the field of Fourth World Geopolitics (Griggs, 1992; Nietschmann, 1994; Atleo, 2004; Ryser, 2012).

POLITICAL: FOURTH WORLD NATIONS

Fourth, World knowledge systems view people as self-defining. Nietschmann (1994) writes, "A people is distinguished by a common history, a common geographical location and homeland, cultural or linguistic links, religious or ideological links, racial or ethnic ties, a common economic base, and an adequate number of individuals asserting common identity." Quoting Sills (1993) and Smith (1986), Seton advances the argument that when people become politically mobilized, claiming the right to self-determination, they appear to form nations. When faced with threats from common enemies, people politically organize and mobilize against these threats. For example, the Dine (Navajo) were a people who traditionally lived in a "dispersed, non-national pattern, organized in clans as basic operational units, until they were faced with a need to form a nation under military leaders who united them to defend their

lives against encroachment and genocidal attacks by Euro-American invaders” (Seton, 1999). Today, the “Navajo Nation” is officially recognized by the United States, though not as a political equal.

One field in which Fourth World thought has significant application is Fourth World Geopolitics—the study and understanding of relations between Indigenous (Fourth World) nations and the world’s 194 states. In this context, early scholarship sought a conceptual framework that could aid the process of understanding rapidly changing relations between Fourth World people and the states.

Fourth World ideas are evident in diplomacy applied to the construction of relations between nations and between nations and states,¹⁶ architectural designs, and even in the development of artificial intelligence in computers where relational reasoning is an essential component of developing program language that emulates human thought processes. The underlying conceptual framework of Fourth World Theory and its application may be better understood by considering the metaphoric organizing symbol that links human beings to the earth, to each other and the cosmos.

Nations occupying ecological niches within externally imposed state boundaries saw early demands for using a theoretical framework at the United Nations Stockholm Environmental Conference in 1972. Through collective recognition of shared realities, under the leadership of Secwepemc Chief George Manuel, the initial contours of the Fourth World were born.

Fourth World thought provides a framework that examines the relationship between Fourth World nations, states, transnational corporations, and non-governmental organizations. Rudolph C. Ryser, Bernard Nietschmann, John H. Bodley, David Hyndman, Kathy Seton, Danielle Elford, and Richard Griggs—preeminent students of Fourth World theories—used it as an analytical lens through which to test the existence of social phenomena where political and cultural changes are rapidly occurring in Fourth World communities. Seton (1999) describes Fourth World ideas as “scrutinizing how colonial empires and modern states invaded and now encapsulate most of the world’s enduring nations and people.” Quoting Nietschmann, she adds, “It also explores how this destructive expansion jeopardizes the world’s biological and cultural diversity and ultimately rebounds to break down and break up states” (Nietschmann, 1994, pp. 225-226). Through ground-level analysis, writings, and maps, Seton (1999) continues that Fourth World rectifies the distorting and obscuring of Indigenous nations’ identities, geographies and histories; “that make up the usually hidden “other side” in the invasions and occupations that produce most of the world’s wars, refugees, genocide, human rights violations, and environmental destruction” (Nietschmann, 1994, p. 227).

Economy

In its most basic form, the economy is concerned with sustainability in distributing goods and services and perpetual growth in the ordinary sense. The wealth of people necessarily involves the value and benefit of land and natural life, as well as human activity’s health and education capabilities. Fourth World thought allows researchers to go well beyond conventional numeric numbers to measure economy (recognizing its unsustainability in terms of human need and nature’s capacity) by incorporating the total human, land, and natural life and goods and services value as a long-term sustainability emphasis. An economy can be evaluated in terms of its effective balance between human, land and natural life and the production of goods and services. Where raw materials are extracted, the economy must, under Fourth World thought, balance those extractions as reductions against increased human capacity or production of goods and services. If extractions of raw materials result in a lower quality of life (health, education),

then extraction constitutes a net loss to the economy. Fourth World perspective requires consideration of all factors to support decisions that advance the quality of life.

Traditional Healing Arts and Sciences

Traditional Healing Arts and Sciences is a broad field, and Fourth World ideas are defined in the field. Studies of nutrition, community health, education, social order, and mental and physical health are all within the frame of Fourth World theoretical inquiry.

Traumatic experiences and other unexpected catastrophes affect the functioning of the whole being physically, emotionally, mentally, and spiritually. Natural rhythms are underlying the integrated functions of mind/body/spirit in humans and animals alike that pulsate, oscillate, and vibrate (Korn, 2013). Chronic disease (cancers, hepatitis, arthritis, heart disease, autoimmune disorders, and emotional imbalances) comprises more than 80% of all human health conditions. They are accessible when research is rooted in the cultural context of the chronic disease. Evident symptoms may indeed be a function of multiple layers of relationships involving individuals, their environment, their family, their friends, community structures, the air, water, and the land. Treating only the symptoms of a chronic disease can only delay the inevitable: decline and death over time. Applying multiple factors to produce a plan for prevention as well as treatment and considering the many variables ultimately allows the researcher, the medical practitioner, or the traditional medicine practitioner to assist the person struck down by chronic disease to recover. In many instances, it may become necessary to heal a community and remove the multiple variables that produce chronic conditions. Understanding the relationships between different and unrelated factors becomes essential for understanding and addressing human health questions.

ALDMEM¹⁷ MEDIATING KNOWLEDGE AND NEGOTIATED CONSENT

Academic and research institutions are appropriate mechanisms between different societies to blend epistemological frameworks to achieve a sustainable future for all living things on the planet. That process is underway, as demonstrated by scholarly contributions to this anthology. However, there are other practical and immediate means by which Fourth World spiralist knowledge systems and the linear, rationalist/empirical knowledge system can be mediated. Fourth World scholars have developed a plan to establish an international negotiating organization called ALDMEM that can directly influence efforts to achieve a sustainable future.

The plan was developed recognizing the need to implement the United Nations principle of free, prior, and informed consent (FPIC) of Fourth World people when a people's interests may be adversely affected non-Fourth World policies and practices. Direct engagement by practitioners of different knowledge systems in the FPIC process can make sustainability in the future a reality.

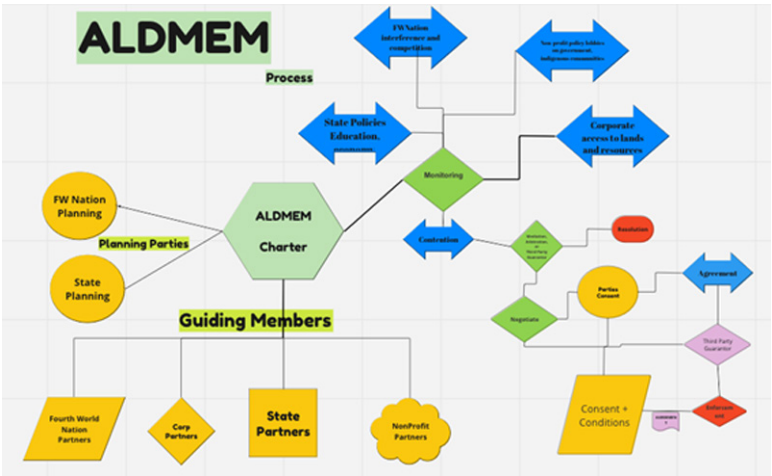
According to international decisions taken by states' governments and agreed to by Fourth World nations, the process must be carried out when states or any of their corporations, academic institutions, non-governmental organizations, or multi-lateral organizations wish to take actions that affect Indigenous nations' interests: wellbeing, culture, economy, environment, or society or exercise of self-determination. States' governments acted in the World Conference on Indigenous People high-level plenary meeting of the General Assembly 2014 Outcome Statement stating that UN member states commit to implementing FPIC. In their commitments, UN member states voted to (para 3) "*cooperate in good faith*

with Indigenous people ... through their ... representative institutions” and to secure “approval of any project affecting their lands or territories and other resources ... through their free, prior, and informed consent.” These statements assert the intention of states to implement the UN Declaration on the Rights of Indigenous People (2007), the ILO Convention 169 (1989), and other international agreements. In addition, Indigenous nations have adopted other international laws to implement FPIC, including the 1994 International Convention on the Rights of Indigenous Nations and the Alta Outcome Document of 2013. FPIC is a necessary concession by States’ Governments and Indigenous Nations to freely negotiate the consent of Indigenous nations based on “political equality.” The laws agreed to by states and nations require that engagements go beyond “consultations” and directly involve the negotiation of consent in the form of agreements.

Negotiated Consent Agreements applying blended knowledge systems can involve the introduction of state-originated health programs, education institutions, economic policies, environmental policies, cultural practices, and access to ancestral territories and the resources in those territories historically relied on by nations to sustain life—matter of importance to sustainability. As important as the FPIC process is, the reality is that there is no authorized mechanism to implement the process to facilitate the identification of problems, negotiate consent, and enforce agreements. However, the ALDMEM plan offers a realistic approach to bringing all the different knowledge systems together to achieve a negotiated pathway for sustainability that benefits all of humanity.

As political equals to states, Fourth World people must sit at the same table with states, corporations, and other entities to establish a new international mechanism to promote and carry out the FPIC process—the only alternative to state-based organizations that alone have great difficulty envisaging effect sustainability. The Board Chair of the Center for World Indigenous Studies, working with the President of the National Congress of American Indians, jointly drafted the following plan for a new international institution called ALDMEM (See Figure 2). The plan is shown in the diagram below, illustrating the key elements and actions the political parties must take to implement FPIC.

Figure 2. ALDMEM for sustainable future



(Author)

The purpose, mission, and goals are the focus of dialogue and implementation by Fourth World nations, states' governments, corporations, academic institutions, and non-governmental organizations invited to the planning table. Recognizing the knowledge systems on which nations and states/corporations operate is essential for mediating the application of knowledge for a sustainable future. Some aspects of the epistemological frameworks between systems of human knowledge can work together and serve as the means for defining effective approaches to a mutually agreed, sustainable future.

FUTURE RESEARCH DIRECTIONS

Researchers employing Fourth World knowledge systems as a conceptual framework for economic, political, educational, health and environmental research have benefited from blending research methods to explain complex problems. Given the success of this research model where conventional sciences and Fourth World sciences work in parallel and a complementary fashion there seem to be no limits to the new directions of research.

Energy and the environmental research are two obvious problem areas that respond to human need. Understanding the relationship between the land, the people and the cosmos may open new areas of theoretical physics as well as methods for drawing on solar and thermal energy. Research in architecture may reveal new and more appropriate habitations developed before the industrial age that will have new applications in the present and future ensuring minimal adverse effects on the environment and maximum energy efficiencies.

New and extensive research in community trauma and individual trauma health can benefit significantly from Fourth World knowledge. Communities that have been torn apart by war, environmental collapse, and social upheaval must be better understood to achieve healing. Traumas in communities may contribute significantly to individual mental health stresses and traumas that may only be effectively treated within a healthy community context. Research into community trauma and into the relationship of individual trauma will respond to a profound human need.

Fourth World knowledge systems may serve the essential conceptual role where researchers examine the social, economic, political, and cultural consequences of climate change especially focusing on refugees from the adverse effects of climate change.

Research into the effective survival of small societies in politically and environmentally stressed circumstances may provide significant understanding for exploring how mass societies may be reorganized. Size of society may be far more significant as a measure of human health and productivity than nearly any other factors and Fourth World ideas may contribute to expanding understanding in this field.

CONCLUSION

Based on these understandings, Fourth World thought has come to explain that comparison, relational reasoning, balance between contending forces, and equality of kind will assure comity between people, between people and living nature, and with the forces of the cosmos. Human culture, as with the cultures of other animals, plants, rivers, mountains, and the lands, forms the structure of life and living defined by the evolving and dynamic relationship between people (animals, plants, etc.), the land and the cosmos. History, memory and thought process are multi-dimensional where instead of two-dimensional

(linear past progressing to the future, fatalist, cyclical or providential thinking) thought is seven or more dimensions and successful comprehension of reality demands employing all seven dimensions.

Fourth World knowledge systems offer conceptual frameworks that embrace the intuitive and the rational or perhaps more specifically, a blend of rational reductionism and inductionism. This blending of methods may permit researchers to understand relationships of elements within an environment of chaos as well as logical and mythological problems. Researchers are encouraged by Fourth World thought as a framework to design studies that are multi-dimensional to present and explain complex problems in ways manageable at the human scale. That is the object of learning—to explore realms not immediately accessible, but to interpret and make understandable those domains and compound domains that define the physical and metaphysical realities. Ultimately the Fourth World working with other systems of knowledge will sustain life well into the future.

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KEY TERMS AND DEFINITIONS

Blended Research: Systematically employing Fourth World research methods with positivist quantitative and qualitative methods.

Cosmogram: A geometric figure depicting a cosmology - a study of the universe's beginnings and its changes.

Culture: The dynamic and evolving relationship between a people, the land, and the cosmos.

Four Directions: A concept noting the rising and setting sun and the earth's poles connecting celestial events with events in human experience and the earth.

Knowledge System: A conceptually constructed body of ideas, observations, and methods for comprehending through understanding and intuition.

Metaphor: A form of speech, observation or other symbol that combines unrelated objects, practices and/or concepts into a singular image (as in graphic), expression (as in story) or physical action (as in dance).

Science: A systematic construction, ordering and expression of knowledge.

ENDNOTES

1. The Maya-speaking people of the Yucatan Peninsula and the region of what is now southern Mexico and Guatemala characterized their way of thinking, conceiving knowledge as the Hunab Ku. This mode of thought comes from the infinite repetition of four spiraling arcs, indicating the intercon-

nectedness of all life, the four cardinal directions, the four arcs of time and perpetual movement in all directions through space. The Mayan conception is reflected in the knowledge systems of people worldwide. For more on this subject, see Ryser (1998).

2. Author's personal communications with Grand Chief George Manuel.
3. So-called "decolonized" populations throughout Asia, Africa, the Pacific, Melanesia, East Asia, Eastern Mediterranean, Caribbean, and elsewhere were essentially "recolonized" by the leadership of an "installed" (by the former colonizer) nation or by the most powerful nation resulting in a single nation or faction of a nation ruling over other nations now held within the jurisdiction of the new state. Burma, Syria, India, Nigeria, Namibia, Rwanda, Iraq, Afghanistan, the former Yugoslavia, and Indonesia are decolonized states that essentially recolonized nations within newly established state boundaries.
4. To denote that during the decolonization period following 1948 many states were formed with an Indigenous nation controlling the central government that subsequently continued colonial policies over other nations within state boundaries. Burma/Myanmar, Nigeria, Namibia, Afghanistan, Iraq are notable examples of "recolonization".
5. The International Working Group on Indigenous Affairs (IWGIA) in Denmark, Survival International in the United Kingdom and Center for World Indigenous Studies (CWIS) in the United States of America have documented more than 5000 distinct people in the world though the popular press does not regularly report about them.
6. Fourth World nation-oriented NGOs and representatives of Fourth World communities and nations began participating in international meetings of states concerning the Bio-Diversity Convention, Intellectual Property Rights, the UN Working Group on Indigenous Populations, United Nations Convention on Climate Change, International Labor Organization and other regional meetings of states on a wide range of topics. These initiatives called on Indigenous interlocutors to prepare language explaining their policy recommendations and sometimes detailed explanations of the recommendations. Representatives began adopting the language of these meetings and searching for a language that better explained their understanding of problems and solutions from their community or nation's perspective.
7. Notably Edward Hallett Carr (1892 – 1982), who saw his historiographic approach to the theory as providing the foundation for a new international order, Hans J. Morgenthau (1904 – 1980), with his theories rooted in realism asserted that "statism" describing "nation states" as the main characters in international relations excluding roles for non-state actors. Robert O. Keohane (1941 –) is associated with neoliberalism and advocates the principle that states must be primarily concerned with absolute gains over the interests of other states.
8. Representatives of Indigenous advocacy organizations such as the Philippines-based Indigenous People International Centre for Policy Research and Education (TEBTEBBA), Forest People Programme in the United Kingdom, Inuit Circumpolar Council (ICC) with offices in Russia, United States of America, Canada and Greenland joined by Indigenous scholars and political leaders have actively pursued a policy of installing *respect for Indigenous knowledge* language in the Climate Change Treaty and Convention on Bio-Diversity for example.

9. This expression is meant to suggest movement between communities.
 10. The Kongo people are a Fourth World nation spread across several Central African countries. In the Democratic Republic of Congo, the Kongo people primarily inhabit the western and southwestern regions of the country, including the provinces of Kwilu, Kwango, and Bas-Congo. In Angola, the Kongo people primarily inhabit the northern and western regions of the country, including the provinces of Zaire, Uige, and Bengo. In Congo-Brazzaville, the Kongo people primarily inhabit the southern and western regions of the country, including the departments of Kouilou and Pointe-Noire.
 11. Assiniboine, Anishinabe, Lakota, Shawnee, Haudenosaunee, Xochicuautila, Nu-chal-nulth, Sámi, Igbo, Kongo, Yoruba, Lithuanian, Gaels, Kurds, Bedouin, Euskal, Mapuché, Purépecha, Dani, Ainu, and the Nur are among the many nations around the world where the four directions or the encircled symbol constitutes a valued mnemonic. One's memory can be triggered by symbolic information in the four directions concerning stages of life (birth, adulthood, death,); the seasons of spring, summer, autumn and winter (represented as well by the equinox); the qualities of life including intellectual, physical, emotional, spiritual, and relational; natural elements of fire, air, water and earth; the kinship animals of turtle, eagle, bear, deer, buffalo, whale, among others; and plant life, corn (in all its varieties), camote, chia, sweetgrass, sage, cedar, tobacco, and various grains.
 12. The Mayan Calendar (Tzolk'in) is one example of the four directions embedded and defining a calendar. The calendar defines the east, north, west, and south with colours identifying four colours of corn, directions and elements (red – North - air, yellow – East - water, blue – South – earth, and white – West - air).
 13. In Chinese and neighboring people' symbology these are the Dragon (East), Vermillion Bird (South), White Tiger (West) and Black Turtle (North) representing the direction and season with specific and individualized characteristics that have material and immaterial significance. The symbols may vary from people to people in China, Korea, Vietnam, and Japan and there may be added symbols (for the center providing a fifth element) as in the Yellow Dragon of the Center (earth).
 14. Texcatlipocas is a plural form of Tezcatlipoca, a central deity in Aztec religion. He is associated with a variety of concepts, such as the night sky, hurricanes, obsidian, and conflict. He was considered one of the four sons of Ometecuhtli and Omecihuatl, the primordial dual deity <https://en.wikipedia.org/wiki/Tezcatlipoca><https://www.worldhistory.org/Tezcatlipoca/>.
- Tezcatlipoca is often translated from the Nahuatl as "smoking mirror." It alludes to his connection to obsidian, the material from which mirrors were made in Mesoamerica. They were used for shamanic rituals and prophecy, and as such Tezcatlipoca is additionally associated with divination. Some possible synonyms for Tezcatlipoca are: • Smoking Mirror: a literal translation of his name that emphasizes his link to obsidian and vision. • Black Tezcatlipoca: one of his manifestations as the god of the north and of Texcoco<https://www.worldhistory.org/Tezcatlipoca/>. • Hummingbird Sorcerer: another name for his manifestation as the god of Tenochtitlan and the patron of Huitzilopochtli
15. In LandofKam's Blog Derric "Rau Khu" Moore discusses this in "Kongo Cross/Cosmology on Colonoware (retrieved from <https://landofkam.wordpress.com/tag/kongo-cross/page/2/> December 2014).

- ^{16.} This is demonstrated by the application of principles from the Haudenosaunee Great Law. Based in the Great Law the Haudenosaunee, Abenaki, Lenape, Shawnee, Wyandot and Anishinabek among many other nations observed three basic principles of diplomacy: Gáiwoh (righteousness), Skénon (health), and Gashasdénshaa (power). These are applied in direct dialogue and negotiations. The first principle of Gáiwoh when practiced properly requires that human beings in society and between nations be just and their relations must be balanced and just. The second principle of Skénon requires a soundness of mind and body and the establishment of peace (becoming one heart, one heart, one body and becoming one people). Finally, the third principle of Gashasdénshaa affirms the centrality of law and custom backed by such force as is found to be necessary to ensure that Gáiwoh prevails. This is the highest and most practical form of diplomacy and means to bring about political equality.”
- ^{17.} Ancestral Lands Decolonization, Monitoring, negotiating and Enforcement Mechanism