

# *The Study of All Existence: Toward Global Symbiosis*

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## *Crisis and Catastrophe*

There is a long history of stories about events that threaten the end of the world or about life after a major catastrophe.<sup>1</sup> The Naxi *Annals of Creation* and the Mesopotamian *Gilgamesh Epic* tell of floods that all but end life on Earth.<sup>2</sup> H.G. Wells's 1897 story, *War of the Worlds*, is about Martians invading Earth, but who themselves are killed by a terrestrial epidemic. The 1954 Japanese film, *ゴジラ* (Godzilla), is about a marine reptile mutated by nuclear radiation that attacks humans. We love to be horrified by such fantasies, but these stories also grab our attention because there is a

strong element of truth in them: *Human life is precarious.*

Although real natural disasters frequently occur, causing major loss of life and a breakdown of society, their impacts tend to be limited and local, as with the 2011 Tōhoku earthquake and tsunami or the Maui wildfires of 2023. Of more alarming concern are mega-calamities of a global scale, as happened 250 million years ago, when climate change led to the 'Great Dying,' during which 96 percent of life on Earth went extinct. This was but one of several such events, including the asteroid impact that eliminated most of the dinosaurs 65 million years ago.<sup>3</sup>

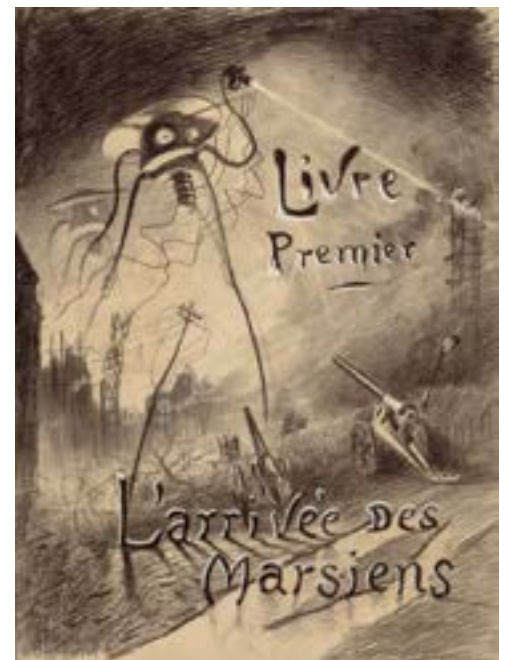


Image 1: Left – Cover of the *Translation of the Entire Text of the 'Yao Annals of Creation,'* c. 900 CE. This was the Naxi origin epic in the Dongba language (colour text) and Chinese (black text). It recounts the challenges their ancestors faced in south-west China and eastern Tibet in their struggles with natural forces. Courtesy of the U.S. Library of Congress and the National Library of China. Right – 'The Coming of the Martians,' an illustration from a French-language edition of H.G. Wells' novel, *The War of the Worlds*, by artist Henrique Alvim Corrêa. H.G. Wells, *La Guerre des Mondes*, Brussels: L'Vandamme, 1906.



Image 2: On the afternoon of 5 November 2015, the small town of Bento Rodrigues in the Brazilian state of Minas Gerais was engulfed by a wave of toxic mud when a nearby tailings-dam burst. The incident caused 20 immediate deaths and more than 600 people were displaced. The pollution spread downriver and into the Atlantic with ruinous effect on habitats, wildlife, and human settlements. It has been described as the worst single environmental disaster in Brazil's history. The local economy was highly dependent on mining, adding irony to the agony. Photograph by Tommaso Protti, 6 December 2015.<sup>4</sup>

In human times, the eruption of the Toba super-volcano in Indonesia 75,000 years ago led to the demise / transition of many human societies around the world, especially from the effects of ash ejected into the atmosphere. Bubonic plague wiped out over 50 percent of the Eurasian population in the 14<sup>th</sup> century CE, while European colonization of the Americas two centuries later brought Eurasian diseases and systems of oppression that killed, dislocated and marginalized Indigenous populations. These events led to a loss of collective knowledge that is still being reconstructed.<sup>5</sup> It is expected that such catastrophes will happen again, and scholars ask what we should remember so as to be able to re-establish our civilization.

Physicist Richard Feynman noted that a single premise from which society could rebuild itself is the atomic hypothesis, because of the huge amount of derivative information that can be expanded from it. Astrobiologist Lewis Dartnell sees encyclopaedias as primers for rebuilding society and has encouraged such a knowledge-base for modern society. Gender researcher Chaman Pincha advocates for the need to involve women and children in disaster plans – for a full range of social well-being. And educator William Grassie asks what concise template of knowledge would be best to start a ‘civilization recovery plan.’ He proposes a big-history framework.<sup>6</sup>

While thoughts about how to recover from major cataclysms are important, my own focus is on how to help us think about ways that a big-history perspective could help us to detect the approach of calamities and to at least mitigate their worst effects. I see it not so much as a recovery plan but a counter-measure, or, to phrase it in a more affirmative fashion – as a way to cultivate global symbiosis.<sup>7</sup>

### *The Great Provincials*

As a geographer, I look at many global contexts, but, as an anthropologist, I focus on humans and humanity. Big History bundles these categories together, and so we have an on-going dialogue in our field as to what its key contexts should be. Many big-historians advocate for a strict universal holism, in which humans are just one relative component in the cosmos. This meta-holism is certainly key to understanding the complexities of existence, but, when it comes to actualizing such understandings, our focus needs to be squarely on humanity, since we are the root cause of the Anthropocene crisis. Political-scientist Lowell Gustafson elucidates many of these issues in his analysis of macro-polity in ‘Big Politics.’

More specifically, it has been and still is the decision-making of many world leaders and their associates in business, government, education and other sectors of civil society that have brought about and deepen the looming catastrophes we face. As physicist Priyadarshini Karve notes: ‘... the world's top 20% richest people consume nearly 80% of the total annual resources [of the planet].’<sup>8</sup> Nonetheless, all humans are in this crisis together and everyone will suffer in varying degrees. A more positive side of this view is that all people, in all walks of life, regardless of their positions in society, have a key role to play in safeguarding our planet and its denizens.

Global contact between human populations has proceeded for centuries in a chaotic and violence-strewn fashion. As Caledonian leader Calgacus said 2000 years ago of the Roman Empire: ‘To ravage, to slaughter, to usurp under false titles, they call empire; and where they make a desert, they call it peace.’<sup>9</sup> While we have global agreements, they often are limited and do not remedy the root causes of many devastating tragedies, from resource wars in central Africa to the Bhopal chemical disaster. Nor do treaties usually deal with basic or personal human values.

In the Palaeolithic, survival dictated choice, resulting in relatively egalitarian but isolated societies. Later settled communities, along with domestication of plants and

animals, led to a greater growth of collective knowledge, surplus production, intercommunication, and work specialization. It gave rise to the *varna* and *jati* systems of South Asia, feudalism in Europe, Andean family-land networks of *ayllu*, and Fengjian governance in Confucian society. Social structures varied further with the rise of global idealism, as expressed by institutions as diverse as religion, corporations, nation-states, and scientific disciplines.

Among the lessons derived from studying social systems is how many traditions are of relatively recent origin. Only four sets of parents take us back a century. By such calculations, we are but 200 generations removed from the Egyptian pyramids, 400 from the rise of agriculture, and 8000 from the migration of modern humans out of Africa. Those 16,000 people are the size of a village – even the National Stadium in Beijing holds almost six times that number!<sup>10</sup>

Nonetheless, in those few generations, humanity developed extraordinary social abilities that far surpass other life forms on Earth. Traditions also shift rapidly within and between societies. Think of how personal visits have been largely replaced by mobile phones, e-mail, webcams and other forms of digital communication in only the last thirty years.<sup>11</sup>

It is well known that we humans are prisoners of biology, as, for example, when more than 99.9 percent of the spectrum cannot be seen – so we need technological assistance from Geiger counters to detect x-rays and infrared telescopes to see the oldest stars in the universe. Likewise, we are prisoners of society – a handicap that is not given much thought. We live in a cocoon of customs fostered from birth by our family, neighbours, schools, and governments.

Medievalist Jacques LeGoff observed how western European historians six-hundred-years ago were *Great Provincials*, because they saw their rapidly-expanding world-view through the lens of their own local society. As a result, they misinterpreted situations in Africa, Asia and the Americas, which resulted in tragic colonial policies.<sup>12</sup> It is not much different today, as we still suffer from the disconnect that takes place between local, regional and international awarenesses.

The need for a cosmopolitan vision is of critical importance today, as we walk along a knife's edge of conflict in a world teetering left, right and centre, while juggling nuclear weapons and ecological biocides. But, at the same time, it is a profound challenge for us to expand in new social

directions to become global thinkers. The pressing issue of social reorientation also gets to the root of the political divide between *conservative* and *liberal* traditions, ones that seek to envision a pathway to intentional but carefully considered social change.

A conservative approach believes that traditions were established for important reasons, ones that might not be easily apparent today but that reflect fundamental aspects of human well-being. Indeed, traditionalists are concerned that a change in customs might lead to major disruption of individuals and their social systems.<sup>13</sup> A liberal strategy seeks change that will benefit current situations, ones that will lead in turn to wider and ever-changing transformations. Both approaches seek well-being for members of society.

Instead of seeing these two approaches in a dynamic process of participatory change, people tend to break into factions, defending one position or the other. This dualistic contest has especially manifested itself when political, economic and religious beliefs are involved – in elections, media, wars, and other forms of social expression.<sup>14</sup> Such polarization leads to conflict, despite attempts to harmonize factions. As a result, social change usually happens in a piecemeal fashion, with chance playing as much a role as reason.

There also are two broad layers of activism seeking global change. At the top are a few well-financed and publicised initiatives, from the World Bank to the Audubon Society. At the other end are a myriad of poorly-funded grassroots activities, from groundwater replenishment to urban ecology. The top NGOs know little of local projects, while community NGOs are challenged to connect with upper-level agencies. There is a crucial need to better network these efforts if there is to be remediation of current global trauma. But, in order to keep the positive trajectory of human self-awareness moving forward, we have to first ... survive.

### A Few Crises

Historical psychologist Akop Nazaretyan documented how humans managed to reduce violence over the last two million years, despite the development of ever more lethal technologies. He codified this phenomenon as the *Law of Techno-Humanitarian Balance*, by which human populations – those that managed to survive – advanced strategies to constrain the use of harmful instruments. He did

not limit his study to just weaponry but included destructive mechanisms like chemical contamination, reduction in biodiversity and other behaviours that negatively impact humanity.<sup>15</sup>

The climate crisis is perhaps one of the most significant events in Nazaretyan's formulations, since it has resulted from a constellation of lethal technologies and social constructs. Mega-storms and coastal flooding of low-lying, populated areas is happening from Hong Kong to New York. Entire nation-states are expected to disappear under the sea, such as the Republic of Maldives in the Indian Ocean. Global summits have been held in Tokyo, Marrakech, Copenhagen, Rio de Janeiro, Sharm-el-Sheikh, Paris, and elsewhere. But no broad and secure agreements have been reached.

India, for example, is being dramatically affected in the climate crisis. Upwards of 300 million people will be forced by ocean flooding from the coastal peninsula onto the Deccan Plateau. As it is now, the plateau cannot accommodate such a migration and little attention is given to this impending emergency, and certainly no planning is being made for these climate refugees.<sup>16</sup> This is a pattern throughout India, the hazards of which have been recently seen in Shimla, the capital of Himachal Pradesh.

Shimla is a small city of 200,000 residents that runs ten kilometres along a steep ridge system in the south-west Himalayas. A few British settlers arrived there by the mid-1800s, building cottages in the forests between Pahari hamlets. The area grew into a summer capital for British colonials, and it continued to grow after Independence and Partition. Its alpine conditions provide refuge from Delhi and the parched Central Plains, while its spiritual landmarks and forests attract pilgrims and sport enthusiasts. Last year, fifteen-million tourists visited Himachal, and Shimla has become a major investment site for developers.<sup>17</sup>

Besides lying on steep inclines and in a high-intensity earthquake zone, monsoon rains also increase the potential for landslides. This had been mitigated by the dense evergreen forests that have held the slopes together with their deep root-systems. Dealing with landslides has been a long-term way of life in the Himalayas, as traditional settlements have accommodated such events with small, single-story dwellings made of natural materials on stable ground. It is the current development, coupled with the climate crisis, that has created imminent danger.

Warnings about development began fifty years ago, as traditional homes began to be expanded into hotels to ac-



Image 3: The city of Shimla on the steep slopes of the western Himalayas in the state of Himachal Pradesh. Photograph by Biswarup Ganguly, 2014. Courtesy of Wikimedia Commons.

commodate tourists, along with new concrete buildings and road extensions. This growth was compounded by deforestation, haphazard drainage, and the uncontrolled dumping of debris. Shimla's growth has been largely unofficial, as construction regulations were ignored and penalties for deviance were nominal or even approved retroactively. Although this lack of policy enforcement has been protested, state and federal appeals have been neglected or come to naught.<sup>18</sup>

Regional temperatures in North India have risen over the last 125 years, leading to more intense precipitation during the summer monsoons. As a result, climate change has combined with the reckless construction and administrative disregard to court disaster. In June 2022, Shimla resident and professor of ecology, Richa Minocha, wrote to the High Court of Himachal 'an urgent appeal to prevent the catastrophic environmental disaster which is as such dangerously looming over Shimla.'<sup>19</sup> Her call was prophetic.

In July 2023, heavy rains inundated North India and led to the evacuation of tens of thousands of people, while, the next month, major landslides washed away homes, a temple and roads in Shimla. Schools were shut and over 2000 people were evacuated to relief camps. Much of the disaster is attributed to unregulated construction. It is a pattern expected to worsen in coming decades.<sup>20</sup>

Other cities face similar dilemmas – Moscow, Delhi, Rio, Beijing, Nairobi ... . But this awareness does not deter development. Ventures are in the works to pump water 1000 kilometres from Lake Baikal in Siberia to Gansu in China, while Moscow has begun to intentionally double its urban footprint.<sup>21</sup> City growth not only destroys its own urban area but destabilizes its larger region and has global impacts.

Los Angeles has grown to be the second largest metropolitan area in the United States. There is not enough water to supply its almost 19 million people and their lifestyles.



Image 4: The Collapse of an eight-story building in Shimla, 30 September 2021. Video by Amit Kanwar. For the full video go to: <<https://www.tribuneindia.com/news/himachal/multi-storey-building-collapses-in-shimla-no-loss-of-life-318316>>. Bhanu Lohumi, 'Multi-Storey Building Collapses in Shimla,' Tribune News Service (Chandigarh, Haryana) 30 September 2021

As a result, a quarter of its water is drawn from the Colorado River, which is so depleted that 90 percent of its flow is extracted before it reaches Mexico, where its estuary at the Sea of Cortez runs dry. This situation is destroying biomes throughout the south-west region of North America and is compounded by the droughts and floods of the climate crisis, wildfires and mudslides, pollution and other spiralling events.<sup>22</sup>

The interdependence of such crises has been revealed by ozone studies. Ozone (O<sub>3</sub>) is an ion of oxygen. The ozone layer is found in the stratosphere, 25 kilometres above Earth, which protects life from damage by the Sun's ultra-violet radiation. Excessive UV exposure causes cancer and genetic damage. In the 1970s, scientists detected holes in the ozone layer, which led to international treaties, such as Vienna Convention for the Protection of the Ozone Layer (1985), which reduced the use of chemicals that erode it. This was one of the successes of international treaties.

Excessive ozone closer to the Earth's surface, however, leads to problems with breathing, as seen in urban

centres like Beijing, Lahore, Mexico City, and Cairo. This ground-level ozone is a by-product of pollution. The old industrial nations succeeded in reducing both the chemicals damaging the ozone layer and those that hurt respiration, but recent studies show a rise of ozone in the West and have revealed that its source comes from Asia, which had deferred status in the ozone treaties to help its developing economies. The ozone that is so devastating in Beijing and Delhi is now carried on the wind across oceans and is causing dramatic problems worldwide.<sup>23</sup>

These kinds of large integrated problems cannot be dealt with by just local or regional solutions. Global approaches are needed for global crises, but the international ability to resolve these situations is inadequate. Provincial identities inflame conflict around the planet and block resolution of problems. And this is happening at a time when we are running out of resources, fresh water and ... time.

**Some Challenges**

A challenge we face is how to empower the least developed

of our identities – our global character – and then arrive at a new kind of planetary civilization. Part of the difficulty in such complex problem-solving is that there are so many possible solutions, especially when we involve people from the world's diverse cultural traditions. Akop Nazaretyan noted this versatility of human adaptation in his *Rule of Redundant Variety*, which describes the many ways people around the globe accomplish the same purpose.<sup>24</sup>

Think, for example, about all the ways there are in the world to organize family life or to carry water from one place to another. The variety and flexibility of human societies could allow us to select from the bountiful traditions on the planet and then reconfigure them to resolve wider problems. Often though, we are not even aware of such options since we are such *great provincials*. And this is why economist Adam Smith described the system of production

and exchange as an 'invisible hand.'<sup>25</sup>

So, how do we select solutions to global problems among humanity's cultural traditions? Some customs are benign, some neutral, some harmful. It is wise to move to safety when seeing snakes evacuate their underground dens, as ancient Greeks noted, since it can herald an earthquake. Other traditions are less grounded in fact but neutral in their impact, such as carrying talismans, like four-leafed clovers or *omamori* as amulets. But some beliefs are pernicious, such as how social stereotypes have led to slavery, the eugenics movement, genocide, and racial discrimination.<sup>26</sup>

Six years ago, we put together a basic exercise in this process between students at J.F. Oberlin University in Japan and Symbiosis International University in India. Two classes worked together to begin a *Guideline for Global*



Image 5: The Colorado River delta, which ends as a dry riverbed in the Sonoran Desert of Baja California (Mexico), 8 kilometres north of the Sea of Cortez. Photograph by Peter McBride, US Geological Survey, 12 January 2009.

*Humanity* by using an educational e-network to bridge the 7000 kilometres between our two campuses. The students discussed and began sorting through what traditions in their respective cultures encouraged global identities, in contrast to those that were at odds with or neutral to planetary visions.<sup>27</sup>

One of the traditions discussed was disposal of the dead. Students mulled over the waste of land where elaborate interments are customary, as in North America. In contrast, India and Japan both practice cremation, which is suitable since they have limited land in relation to their large populations. Burning of the deceased is also reinforced by long-standing religious traditions. A downside is that cremation leads to an increased carbon footprint and, in India, to deforestation and pollution of waterways.

One of the least intrusive practices of burial is surface exposure in remote areas, such as in the Himalayas ... but it is a tradition that has declined because of increasing population and urbanisation. Then the idea of natural decomposition led to a later ecological discovery: Fungi are a primary soil conditioner, and so fungi containers for bodies have been developed. These organic sarcophagi are placed in woodland parks, where they come alive when exposed to the weather and, in this way, human remains join the forest in a matter of months as a living memorial!

It is not that this exercise in 'heritage sorting' is so earth-shakingly important. I cite it to show that such a re-visioning of the world can happen and that we can then make decisions in our own lives and in our own communities without waiting for governments, corporations or NGOs to act. We can do it ourselves, right now. It won't save the world, but it will start the process.

There are many other examples of meaningful networking that can serve as models and inspiration for the process of global decision-making. The International Council for Science, *Encyclopaedia of Life, University World News* and other projects all engage an international audience to develop inclusive goals. Their initiatives also use *network science* for volunteers to search out and share discoveries on distributed computing systems. The key issue is for us to become engaged in the process of planetary transformation at some level.

In our process of developing a global identity, it does not mean that we give up our other cultural identities but that we develop a super-identity that serves as an umbrella for us all. It would be a federation of traditions, a nesting of identities. The wider the choices, the better the opportu-

nities for our future. We also have to always include compassion, as historian Sun Yue reminds us, otherwise, we run the risk of developing a technocratic society devoid of the essence of humanity – altruism.<sup>28</sup>

This leaves the door open for us to more easily adopt new ways of seeing the world and ourselves. Such an agenda would lead us to a new pragmatism, one grounded in both local and global needs. This proposal is a process of *global unfolding*, or *mondalization*.<sup>29</sup> The process can also be referred to as *mutualization* – an intentional commitment to progressive transformation of our relationships, with each other, with the Earth, with other species, and within the cosmos. Such a proposition seeks to establish a new planetary way of thinking and feeling, a true *world view*.



Image 6: Two residents of the community of Santa Maria on the Uruará River, a tributary of Amazon, in the state of Pará, Brazil. They are heading to a community meeting to discuss actions to be taken against illegal deforestation and logging companies stealing timber from their land. Photograph by Ali Rocha: <ali.rocha@alfixit.com>.

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- Endnotes**
- 1 This article is expanded from one I contributed to a Japanese publication seven years ago, and it is in the trajectory of others, as noted in the citations below. Rodrigue 2017. I express my appreciation to Nobuo Tsujimura, Hirofumi Katayama and Penelope Markle in their advice and friendship in its development.
  - 2 Qi 2017.
  - 3 Koshimura and Shuto 2015. Chen and Benton 2012. Alvarez 1997.
  - 4 Photographer Tommaso Protti may be contacted via the following. Portal: <[www.tommasoprotti.com](http://www.tommasoprotti.com)>; Telephone: +55 11998863336; Email: <[tommasoprotti@yahoo.it](mailto:tommasoprotti@yahoo.it)>; Postal: Rua Epitacio Pessoa 94, Apartment. 31, 01220-030, Sao Paulo, Brazil. For more information, see Fondation Carmignac <<https://www.fondationcarmignac.com/en/tommaso-protti/>>.
  - 5 Yong and Xing 2020. Eastman 2009. *Cracking the Maya Code* 2008.
  - 6 Feynman 1964. Dartnell 2014. Pincha 2008. Grassie 2016.
  - 7 This paper continues the thinking of some of my earlier papers. Rodrigue 2012, 2015, 2016. Its trajectory is in the spirit of that laid out by other big-historians, viz. Hughes 2015.
  - 8 Karve 2023: 12.
  - 9 Calgacus 98 CE.
  - 10 These generational calculations are estimates, as there have been and are many variables in child-birthing.
  - 11 The awareness of traditions as recent social constructs has been demonstrated in many works, such as those of Mitford 1963, and Hobsbawm and Ranger 1983.
  - 12 LeGoff cited in Nazaretyan 2015: 126. LeGoff 1977.
  - 13 I have argued elsewhere that there is a need to pay attention to ancient traditions that might hold utility from centuries of human evolution. Rodrigue 2014.
  - 14 Among those considering such questions of dualism was philosopher Bertrand Russell 1948.
  - 15 Akop Nazaretyan debuted his concept of techno-humanitarian balance in the Russian journal, *Social Sciences Today*, in 1993. Since then, it has appeared in numerous other publications. Nazaretyan 1993; idem 2010. Psychologist Steven Pinker later documented a similar trend. Pinker 2011.
  - 16 Rodrigue 2022.
  - 17 Kanwar 1984. Agnihotri 2023.
  - 18 Sengupta 2023. Economic Times 2023.
  - 19 Minocha 2022. Economic Times 2023.
  - 20 Tiwari 2016. Rajesh and Goswami 2023. Sharma and Lekhi 2023. Ngashangva and Arasu 2023. Economic Times 2023.
  - 21 Borrell 2015. Zhang 2017. Chalcraft 2012, Sun and Heung 2023.
  - 22 Owen 2015.
  - 23 Lin and others 2017.
  - 24 Panov 2017. Nazaretyan 2004; idem 2017.
  - 25 Smith 1776: Book 4, Chapter 2, paragraph 9. Rodrigue 2019: 119.
  - 26 United States Geological Survey 2017. I use ‘race’ in its wider sense, not just biological. Race in this context also refers to any ‘root’ structure, such as religion, class, language, and gender.
  - 27 Rodrigue 2017. Barry Rodrigue had proposed this project in a Japanese anthology about Big History and Universal Studies, so he and volume coauthors and big-history professors Nobuo Tsujimura and Hirofumi Katayama joined together in this inter-university project, which was administered via the Edmodo educational system by Rachael Guarnaccia in autumn 2017. One of the resulting essays was published by Symbiosis student Anaga Krishna in the IBHA bulletin. Krishna 2018.
  - 28 Akop Nazaretyan addressed many of these deep changes made by Big History in his essay, ‘A Quest for Immortality,’ in which he ponders deep time and how our individual contributions to society take on a life of their own. Sun 2015; idem 2016. Nazaretyan 2016; idem 2017. In some ways, this call for establishing a global guideline by accessing big-history insights is similar to how the discipline of sociology opened up new ways of not only understanding how society functioned but led to the establishment of the profession of social work so as to implement the insights provided by the field of study.
  - 29 While globalization is often used to refer to worldwide business networks, mondialization indicates global networks of a more humanistic, social and ecological kind. Eric Waddell, Le Vigan, Languedoc-Roussillon (France), personal communication (conversation) with Barry Rodrigue, 2002. Among the intellectual sources of this movement were the philosophers, Gilles Deleuze and Félix Guattari, who used the horticultural metaphor of a rhizome to describe horizontal and multifaceted links within and between societies. Deleuze and Guattari 2004. Eric Waddell, Québec, Québec (Canada), personal communication (e-mail) to Barry Rodrigue, 16 August 2009.