

**The Sky is Falling  
...and The Universe is Expanding**

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*"Well, here's another fine mess you've gotten me into."  
~Abbott to Costello*

...But this time there is absolutely no one to blame. Not even ourselves. The modern world is in a major pickle – a very serious pickle. Some believe wholeheartedly that we are at the end: The end of cheap energy (oil), the end of industrialism, the end of capitalism, the end of western culture, the end of rational consciousness that began with the Greeks peaked in the Renaissance and declined in the Enlightenment, the end of the Cenozoic – a 60 million year cycle that gave birth to the incredible diversity of life that is dwindling before our very eyes, the end of the world. From the looks of it, they may be right. It is highly possible that as we jumped on the highway of infinite economic growth that we were actually on a road to nowhere. As David Byrne so aptly put it:

Well we know where we're goin'  
But we don't know where we've been  
And we know what we're knowin'  
But we can't say what we've seen  
And we're not little children  
And we know what we want  
And the future is certain  
Give us time to work it out  
We're on a road to nowhere  
Come on inside  
Takin' that ride to nowhere  
We'll take that ride<sup>1</sup>

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<sup>1</sup> David Byrne and the Talking Heads, "Road to Nowhere", Little Creatures, 1985

It is quite an undertaking to understand our present moment. It is a whole other ball of wax coming to an understanding about what drove us here (both literally and figuratively). And then there is the matter of convincing otherwise those who still believe that the future is certain, but we just need some time to work it out. “Oh, the economy will get back to normal. We just need to figure out how to deal with this housing thing...” “If this ‘global warming’ thing were real, then why did we have one of our coldest winters on record last year?” “Come on, there is enough oil down there to last lifetimes!” And the like... These are the same citizens who are still convinced that the American Dream is still alive; that we are still living in the Golden Age. But, like every age of humanity, the Golden Age had its shadow. “One by-product of this extraordinary explosion was as yet barely noticed, though in retrospect it already looked menacing: pollution and ecological deterioration. During the Golden Age it attracted little attention, except from wild life enthusiasts and other protectors of human and natural rarities, because the dominant ideology of progress took it for granted that the growing domination of nature by man was the very measure of humanity’s advance.” (Hobsbawm, pg. 261) The domination of nature by man – whence did this notion begin?

Going back just a short span of time we might understand this mindset (or paradigm, worldview) as a product of the Industrial Revolution. But as we ascend, in our memory, to this peak of human achievement, we see in the distance a further peak – that of the Cartesian Revolution and Newtonianism – the great work that spawned our mechanistic view of the universe and the splitting of mind from spirit.

But then, from the corner of our eye we see yet a further peak – the rise of Christianity during the Dark Ages – and with it the desire to escape this mortal coil into the Kingdom of Heaven; the Earth was to be left behind, transcended. But no, now visible are the very roots of science and monotheism in the pioneering work of Aristotle – a perfect world built upon the very foundations of logic. ... Of course, admittedly, this is just the history of the West; but one must confess- this history has formed the dominant paradigm of the entire planet. All this is to illustrate that the notion of “how we got here” would require a complex analysis of, not only sociological and scientific factors of human existence, but also the very shifts in human consciousness that gave rise to the philosophies informing our notions of who we are in relationship to both the cosmos and the planet and, of course, to each other.

One thing is certain, however, the discovery of cheap energy in the form of fossil fuel absolutely and irrevocably altered the course of history – not only for humans, but for every single species (from the lowliest microorganism to the most complex mammal) on the planet. Plus (though Lewis Mumford has traced this trend back to the Egyptian civilizations with his concept of the Mega-Machine<sup>2</sup>), Industrialization cleared the way for a mentality that viewed all life – the planet and humanity - as a ‘resource’ from which to feed the great machine that keeps the economy running - an economy that is now believed by many to be running itself; an economy that is based upon a process of extraction, production, and waste –

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<sup>2</sup> See Mumford, *Art and Technics*, 1952

extraction from the periphery (peripheral third world countries), production for first world economies, and waste (in the form of toxic pollution) back into the periphery. This model worked just fine (some might believe) until the periphery spread from “just outside of town” to the whole Southern Hemisphere. So what had begun as a surefire way to create an economy based upon a philosophy of infinite growth, became the very means of that economy’s own demise. “The world economy facing the problems of the 1970’s and 1980’s was no longer that of the Golden Age, although it was, as we have seen, the predictable product of that era. Its system of production had been transformed by technological revolution and it had been globalized or ‘transnationalized’ to an extraordinary extent, and with dramatic consequences. [...] The general tendency of industrialization has been to replace human skill with the skill of machines, human labor with mechanical forces, thus throwing people out of work.” (Hobsbawm, 413)

In other words, the great discovery of the Industrialized nation with the help of cheap, efficient (though limited and destructive) fuel had some pretty dire consequences that have only now been creeping into popular consciousness. All of this, however, has been foretold. Fritz Lang’s *Metropolis* (1927) clearly and bleakly showed its viewers one possible future of this level of dehumanization. Even as far back as 1895, H. G. Wells understood that we could very well be heading towards a dystopian binary world of the haves and the have-nots – those who live in the above ground paradise and those who power that world from below.

“The Time Traveler tests his device with a journey that takes him to the year 802,701 A.D., where he meets the Eloi, a society of small, elegant, androgynous, and childlike people. They live in small communities within large and futuristic yet slowly deteriorating buildings, doing no work and having a frugivorous diet. His efforts to communicate with them are hampered by their lack of curiosity or discipline, and he speculates that they are a peaceful communist society, the result of humanity conquering nature with technology, and subsequently evolving to adapt to an environment in which strength and intellect are no longer advantageous to survival. Returning to the site where he arrived, the Time Traveler finds his time machine missing, and eventually works out that it has been dragged by some unknown party into a nearby structure with heavy doors, locked from the inside. Later in the dark, he is approached menacingly by the Morlocks, pale, apelike people who live in darkness underground, where he discovers the machinery and industry that makes the above-ground paradise possible. He alters his theory, speculating that the human race has evolved into two species: the leisured classes have become the ineffectual Eloi, and the downtrodden working classes have become the brutish light-fearing Morlocks.”<sup>3</sup>

Though literature and film has tended to portray possible outcomes of industrial society with a dubious eye – some combination, in varying degrees, of utopian and dystopian characteristics, Science (capitalization intended) has generally looked toward the future with promise. In many respects, the gifts of the industrialized world to science have been prodigious. Great leaps in medicine and technology would surely be perceived as miracles to people of merely 100 years ago. Science, though at first alienating us from the cosmos, has now proven our lineage traces back to the stars in the night sky. What greater gift to humanity than the knowledge of our interconnectedness to the very universe in which we live? There are also those who worship in the Church of Science (though perhaps of a slightly different denomination) who wholeheartedly believe that however deep and complex the current pickle may be, science will find a way to save the day.

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<sup>3</sup> [http://en.wikipedia.org/wiki/The\\_Time\\_Machine](http://en.wikipedia.org/wiki/The_Time_Machine)

Personally, I find the Church of Interconnectedness the more promising of the two (a concept I'll return to in another 2000 words or so).

The question "Where are we now" can be more easily answered than "How did we get here". Though disputed in scientific and non-scientific camps alike with ever-weakening arguments, the "pickle" referred to earlier can be broken down into very distinct yet complexly interconnected issues:

- Climate Change
- Peak Oil/Resource Depletion
- Overpopulation

In a nutshell, humanity is reaching the unruly global population of over 7 billion people. Practically speaking, the sole source of energy allowing the majority of this horde to survive is petroleum. Petroleum is a fossil fuel that is quickly dwindling. The burning of fossil fuels for energy produces a waste product that is steadily raising the overall temperature of the planet past its balancing point; not to mention the removal of the planet's natural mechanisms for balancing its temperature, i.e. forests, coral reefs, icecaps, etc. Once the tipping point is reached humanity is in for a wake-up call of epic proportions. According to the Millennium Assessment Report,

"Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth. 20% of the world's coral reefs were lost and 20% degraded in the last several decades. 35% of mangrove area has been lost in

the last several decades. Humans have increased the species extinction rate by as much as 1,000 times over background rates typical over the planet's history (*medium certainty*). 10–30% of mammal, bird, and amphibian species are currently threatened with extinction (*medium to high certainty*)."<sup>4</sup>

And this is just the tip of the (melting) iceberg. There is a strong possibility that we will run out of oil before global catastrophes due to climate change (massive flooding, crop failure, drought, ocean death...) begin their hard fall. Depletion of the last oil reserve, without adequate preparation, could cause widespread economic and social collapse, leading to far smaller and more centralized economies with little to no technological footprint. Or, on the flip side, our communities could be thrown into complete chaos. In some ways, the choice is ours to make. It all seems to ride on: a) whether we choose to accept the current state of affairs or continue to deny human impact and the inevitability of peak oil and, b) what future we want to create for future generations.

There is, I believe, a third factor, a more subtle factor that hinges on a broader perspective of our role in both our own and cosmic evolution. This factor has more to do with worldview or paradigm and the strong probability that, whether we will it or not, human consciousness is evolving. The question then might be, do we wish to participate in that evolution or attempt to thwart it? Before painting this broader picture though, I think it is important to consider just how human beings think about possible futures and, equally important - how we interact creatively with the present.

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<sup>4</sup> Millennium Assessment Report, <http://www.maweb.org/en/index.aspx>



The arts have always played a powerfully synthetic role in culture – weaving disparate themes of social change, technology, romanticism, religion/spirituality, politics, and of course aesthetics. One aspect of the arts that tends to have been undervalued or perhaps overlooked (likely due to their mysterious intimacy with one another; especially in the case of music) is their relationship to the evolution of consciousness. I alluded earlier (see page 5) to two quite distinct streams of thought in human reflection upon the future: basically, the hell in a hand-basket scenario and science will save us all (“Thank Ford!”<sup>5</sup>). Both of these future scenarios stem from one tradition – the Enlightenment. This period of human history - beginning with, I would contend, Descartes (1637) and ending after the period of great revolutions, most notably the French Revolution or the Napoleonic Wars (roughly 1800) – is marked by an increased reliance and belief in scientific empiricism, scientific and philosophical reductionism, and a notable division between scientific knowledge, metaphysics, and spirituality. One may wonder why I believe this somewhat arbitrary distinction is relevant to thinking about the future. My answer is that, not only do consider it relevant, I consider it vital to an integral approach both to understanding our present situation and to thinking intelligently about participating in our future as an evolving species on an evolving planet in an evolving cosmos. Explicating an alternative theory of future studies, Thomas Lombardo refers to future studies scholar Richard Slaughter:

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<sup>5</sup> Reference to *Brave New World*, Aldous Huxley, 1932

“It is Slaughter’s contention that the Western scientific view of the future generates only two visions of the future: Techno-optimism and the pessimistic ‘Terminator 2’ scenario. Technology will save us or technology will destroy us. The Western view sees the main drivers of change as science, technology, materialism, commercialism and greed; and these factors could either lead to more and ore of the same thing or backfire and produce disaster. He even argues that much of modern science fiction buys into this either-or thinking. By not including other perspectives on reality or views of the future, our speculative imagination is severely restricted. As one example, he proposes that the pursuit of wisdom – of a wise society or culture, which brings into consideration the evolution of consciousness, inner meaning, and values – should be seriously considered as an alternative vision of the future to the Western obsession with technological power.” (Lombardo, 136)

So how does this concept play into a larger perspective of creative human potential, especially within the arts? To begin with, there needs to be a tacit assumption that theories of the evolution of consciousness have validity.<sup>6</sup> From this base we can safely assume that our actions and material creation reflect changes/shifts/mutations of consciousness. Though there are obvious differences in the details and scope of various thinkers on this topic, there is one basic correlation – that of some sort of teleology. For Teilhard it is the Omega Point – a kind of Christ consciousness that he believes is the manifestation of a global nexus of consciousness (what he refers to as the ‘noosphere’). Consciousness, for Teilhard, has been present all the way back to the Big Bang and all the way down to the subatomic particle. It is an inherent aspect of the Universe. From this line of reasoning, we can cohesively explain how matter went from unconscious to sentient to conscious to self-reflective. For Jean Gebser humanity is in the midst of a

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<sup>6</sup> For further reading on this subject I recommend Teilhard de Chardin, Jean Gebser, William Irwin Thompson, and Jeremy Rifkin as excellent starting points.

massive shift in consciousness from the Mental mutation (that began with the Greeks, peaked in the Renaissance, and declined into what he now refers to as the Rational or Deficient Mental<sup>7</sup>) into the Integral. For Gebser, that shift is upon us and the overriding characteristic will be diaphaneity of all previous forms of consciousness – each transparent to itself and integrated into a holistic conception of our essential unity with both the physical and the trans-physical worlds. One of the most critical aspects of Gebser’s vision to comprehend is that, with each shift in consciousness comes an inherent irruption of *dimension*. The Mental mutation’s dimensional characteristic was Space – three dimensional space – which manifested in visual art with the “discovery” of perspective; in music with theories of tonality, cadence, and counterpoint. The dimension currently worming its way into consciousness is Time – not clock time, which is the fractionalized, spatial understanding of time that is so characteristic of the deficient Mental – or what Gebser calls *temporicity*.

It seems expeditious to refrain from a full exposition of this concept (tempting as it is!) and restrict myself to the present. Within the present I’d like to restrict myself to music and visual art, and within music to current trends in the genre of experimental electronic – or what is being referred to now as *sound sculpture*. Already it is clear that we are dealing with something fairly new (though it was certainly explored by avant-garde composers like Varese, Cage, Subotnik, and Grisey, among others) in that sound – which is an essentially time-based medium –

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<sup>7</sup> Each mutation according to Gebser – the Archaic, the Magical, the Mythical, and the Mental – began in an efficient mode (holistic), peaked, and began a descent in deficiency (fragmented). At the peak, or when the mode fully irrupted into consciousness, there began the onset of the next mutation – a new dimension of consciousness.

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is being perceived as something with which to manipulate or alter our conceptions of space and begins to see through the mental constructs of the past couple hundred years, especially that of the human relationship to technology. I would like to bring to the fore one beautiful example of a genre that I believe is integrating the Romantic principle of aesthetics and beauty with the cold realities of the technological world – Glitch Art.

**Glitch art** is the aestheticization of digital or analog errors, such as artifacts and other “bugs”, by either corrupting digital code/data or by physically manipulating electronic devices.<sup>8</sup>

Glitch makes transparent the very ground, the very technology, of the art to which it gave rise. It reveals what was hitherto suppressed and disguised, and brings with it a new kind of beauty – a beauty based upon error: an all too human quality. In

*Undercurrents: The Hidden Wiring of Modern Music*, Rob Young writes, “When you let sound be itself, strip it of the imperative to represent human sentiments literally, you are not necessarily making something inhuman. At their best, these nicks and cracks are wounds – reminders of the frailty, mortality, and imperfection of human endeavors.” (Rob Young, ed.Young, 49)

Listen: Fennesz, *Black Sea*, 2008



In a visual form, this idea was uniquely expressed in the film *Manufactured Landscapes*.<sup>9</sup> By stripping away the desire to hide that which is the very

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<sup>8</sup> [http://en.wikipedia.org/wiki/Glitch\\_Art](http://en.wikipedia.org/wiki/Glitch_Art)

underpinning of our whole economy - factories and the extraction of “resources” from the Earth – and creating from it something of subtle beauty, Edward Burtynsky transcends the typical either/or judgment call on human environmental impact. In that transcendence, he is saying yes, human impact is profoundly altering the biosphere. He is also saying, yes, humans have the ability to create beauty from destruction. In these two examples, in Gebserian terms, we see the Mental consciousness (technology and industry being two facets) becoming transparent or diaphanous to itself and, in a sense, creating a new story or myth about who we are in relation to our present manifestation.

Another sound artist who, I believe, explores the intersection of spirit and technology is Stephan Mathieu. In the following piece, Mathieu is manipulating real-time short wave radio broadcasts. By tapping into the electro-magnetic spectrum, Mathieu is tapping into a reality that continues to reveal our mysterious existence in a more mysterious universe. “[The] electromagnetic universe set the stage for the final deconstruction of atomic materialism: the dissolution of the ether, the emergence of Einsteinian space-time, and ultimately the arrival of quantum mechanics and its colossal oddities. The corporeal cosmos melted into an immense sea of vibrations and insubstantial forces.” (Erik Davis, ed. Young, 20)

Listen: Stephan Mathieu, *Eine Promenade*, 2005



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<sup>9</sup> Produced by: Nick de Pencier, Daniel Iron, Jennifer Baichwal; Mercury Films Inc. and Foundry Films Inc. in co-production with the National Film Board of Canada and in association with TV Ontario, 2006.

By allowing oneself to suspend the dominant figure/ground, perspectival relationship of music that emanates from a point like source (a band, and orchestra, etc.) toward a listener/receiver, and feeling into the fact that this music emanates from everywhere simultaneously, one can then begin to sense the emerging *temporicity* and spacelessness to which Gebser refers.

From the perspective of visual art, the concept of time is beautifully synthesized in the work of both Andy Goldsworthy<sup>10</sup> and Jason de Caires Taylor<sup>11</sup>. Each of these artists challenges our concept of the eternal. Their art is subject to slow change, decay, and transformation, as are all other forms of matter in our Universe. There is no attempt to create an illusion of durability or even of artifact, as we see in museums. Time is recognized as an integral aspect of *Being*. The passage of time becomes synonymous with the concept of *Change*. This has been, obviously, explored earlier in the century, especially in the work of John Cage, however it is only now reaching the ears (and consciousness) of popular culture.

In all of this I feel an important common theme that perhaps boils down to a new sense of *humanity* and the power of human creativity and love. Though vastly different in approach, both *Metropolis* and *Manufactured Landscapes* portrayed a vivid picture of both the dystopian reality of progress in blind disregard to life and the human dedication to love and beauty. Why else create art? Why else think about our future? Why else attempt to understand our place in the grander scheme

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<sup>10</sup> [http://www.rwc.uc.edu/artcomm/web/w2005\\_2006/maria\\_Goldsworthy/TEST/index.html](http://www.rwc.uc.edu/artcomm/web/w2005_2006/maria_Goldsworthy/TEST/index.html)

<sup>11</sup> <http://www.underwatersculpture.com/index.asp>

of things? I stated earlier that my allegiance is with the Church of Interconnectedness. I choose to stand there because, no matter how serious the current pickle becomes, there is always a bigger picture from which to survey the land. If I choose to see my existence as beginning with a star giving its life to the Universe and, through time, creating the very stuff of life and consciousness - consciousness which is now able to look back upon itself with awe and wonder - then I can't help but feel as though I am definitely on a road to somewhere. And where that somewhere is, involves me, and my ability to create, to envision, and to love. It is critical to understand that our world is not only shaped and understood through science and technology, but also through the arts. Art not only reflects current trends in culture and society but, I believe, throws up signposts as to where we are headed; the qualities of future consciousness foaming forth from below the limen of the waking world. By paying attention to current trends and, most importantly by listening *through* the music, seeing *through* the art, at a more metaphysical level, we might start to get glimpses of the world we want to create; not just the outside, manifest world, but the inner world from which manifestation takes place. So yes, the sky may be falling, but we live in an ever-expanding Universe of which we are an integral piece; a Universe of incredible beauty and creativity.

I leave you with a lyric, a vision of a human reaching for the stars:

Up on a hill, as the day dissolves  
With my pencil turning moments into line  
High above in the violet sky  
A silent silver plane - it draws a golden chain

One by one, all the stars appear  
As the great winds of the planet spiral in  
Spinning away, like the night sky at Arles  
In the million insect storm, the constellations form

On a hill, under a raven sky  
I have no idea exactly what I've drawn  
Some kind of change, some kind of spinning away  
With every single line moving further out in time

And now as the pale moon rides (in the stars)  
Her form in my pale blue lines (in the stars)  
And there, as the world rolls round (in the stars)  
I draw, but the lines move round (in the stars)  
There, as the great wheels blaze (in the stars)  
I draw, but my drawing fades (in the stars)  
And now, as the old sun dies (in the stars)  
I draw, and the four winds sigh (in the stars)  
~Brian Eno, *Spinning Away*



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Listening:

Fennesz, *Black Sea*, from the album *Black Sea*, Touch Records, 2008

Stephan Mathieu, *Eine Promenade*, from the album *Radioland*, Die Schachtel Records, 2005

Lyrics:

David Byrne, *Road to Nowhere (excerpt)*, from the album *Little Creatures*, Sire Records, 1985

Brian Eno, *Spinning Away*, from the album *Wrong Way Up*, Opal Records, 1990