

Chapter Four

Introduction

In Chapter Four I will share my reflections on the review of chaos and broadly relate the ideas about chaos at a high-level to the Chaos Strategies Planning Process. My purpose will be to synthesize ideas and suggest future directions.

To begin I acknowledge that, now in 2018, chaos terminology is beginning to be popularized and is voiced in our everyday vernacular language and our multi-media infused connected world. In John McCarthy's 2006 monograph *Remapping Reality: Chaos and Creativity in Science and Literature* we learn that the science of chaos and complexity, is evident in books, articles, dissertations and Web pages and is proliferating across popular literature as well. McCarthy notes specifically the recurrence of references to Gleick's national bestseller, *Chaos: Making a New Science* (1987). There is much debate about Chaos theory according to McCarthy, for example, a debate between Gleick and Brugge that continued over three issues of *Der Spiegel* in 1993, and yet he concludes that no one really knows what chaos is. I suggest there is more in his observation for us to consider and that we do have a variety of perspectives on chaos, which may be culturally rooted.

In the late 1990s, Peter Weingart and Sabine Massen detailed the spread of the term "chaos" from its original scientific roots across the disciplines in the social sciences

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our
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*Our role
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direct &
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future*

and humanities in a scholarly essay entitled: “The Order of Meaning: The Career of Chaos as a Metaphor.” (McCarthy, 2006, p.17).

Science Citation Index and the Social Sciences Citation Index are information management tools that enable investigation of the use of terminology over time. John McCarthy studied both of these indices for the frequency of the use of the term chaos: in 1974 “chaos” or “chaotic” was found in 23 publications; by 1996, that number had risen to 1,008. As well documents indexed that used the term chaos crossed many social sciences disciplines. The humanities literature is more difficult to analyze and McCarthy did not investigate it. My search of the literature was organic and interactive taking place over many years. With the benefit of time I retrieved a variety of information resources—monographs, journals and ephemera—that address chaos and chaos theory across many disciplines and this was how I observed chaos as a useful corrective to linear and rational thought, which is not easily susceptible to information retrieval systems.

The intriguing and provocative point that McCarthy makes is

the rise of chaos as a catch-all phrase has signaled a growing sense that we have discovered a new tool for remapping our image of reality. It is this latter function of the term “chaos” that continues to be attractive He [McCarthy] draws on Nietzsche’s famous line in aphorism #109 of *The Gay Science*: “the total character of the world is essentially chaos”. (McCarthy, 2006, p.17)

Nietzsche's writing holds the view that chaos is the key to creativity and renewal is permanent in nature. I concur with McCarthy and Nietzsche and find the direct connection between chaos and creativity to be the core of how I consider and think about chaos. As well, the cyclic nature noted with renewal is integral to the Chaos Strategics Planning Process.

After reviewing the literature on chaos theory and chaos more broadly across disciplines in preparation for writing I sense that we have many ideas about what chaos is from a variety of cultural perspectives, even if, noted by McCarthy, it is important to distinguish between the terms chaos theory and chaos more broadly. These terms are not synonymous.

Now in 2018, I too see that the use of the term *chaos* is becoming popularized: meaning that it is used with increasing frequency in various news media and popular journalism. It is on the verge of become part of our vernacular -- everyday speech. However, the increasingly popularized interpretation of chaos is that of chaos is a metaphor for disorder and disarray. Chaos is easily overused and misappropriated. *Chaos theory* is not part of our everyday speech. I suggest we reframe our thinking about Chaos, by learning from chaos theory that chaos is a pathway that we travel to make sense of the world and to create the future we want.

Planning now and into the future

Citing Cage, Glass says is that in

music there is no such thing as an independent existence. The music exists between you—the listener—and the object that you are listening to. The transaction of it coming into being happens through the effort you make in the presence of that work. The cognitive activity is the content of the work.
(Glass, 2015, p.96)

As a musician this makes sense to me. When performing a piece of music the content of the music is my performance of it. My performance is my interpretation which stems from the learning of the musical score. I along with the audience have a role to play – I interpret the music in performance and the audience has the role of listening to my performance. Ideally as I perform, I too listen to the music. This is a very critical element—it is the heart--of live and recorded performance.

Philip Glass rounds this idea out even further:

The ideal way of performing, to my way of thinking, would be when the performer allows the activity of playing to be shaped by the activity of listening, and perhaps even by the activity of imaging listening.
(Glass, 2006, p.97)

Now consider thinking within the context that Cage and Glass suggest the interpreter of the music—that is, the performer who plays the music--has a role and contributes to the process of performing the music. This is I believe a modern perspective. In fact this is how I see readers using my Chaos Strategics Planning Process.

Interpretation and performance of the process make it meaningful and relevant for readers, thinkers, planners for today and tomorrow.

Chaos theory: as a metaphor

Let's explore the work of Priscilla Murphy published in 1996. Murphy states that the literature related to chaos theory in the 1990s was fragmented and chaos was a “complex” brew being written about within several disciplines. “In fact, chaos theory appears relevant to such a broad array of disciplines that some view it as a scientific version of postmodernism; a scientific metaphor for late-20th-century cultural values of relativism, plurality, and chance.”

(Murphy, 1996, p.96).

Her point is that in 1996 chaos theory is relatively new and relevant to a broad array of disciplines, some of which include: the natural sciences (in the 1970s), the social sciences (in the 1980s) and recent applications include epidemiology, ecology, geography, economics and social organization (in the 1990s). Some view it as a scientific version of post-modernism. Drawing on the work of Richard Lucking, “Chaos—The origins and relevance of a New Discipline,”

Project Appraisal 6 (1991), pp. 23-32. Murphy (1996, p.111) She [Murphy] characterizes this shared interest in chaos theory across so many fields as a manifestation of postmodern times. I find her reference to postmodernism intriguing, almost surreal, and the idea of framing chaos theory as a scientific metaphor for the 21st century gives me pause as postmodernism is conceptually complicated, hugely complex and beyond the scope of this writing, although from my perspective, I have introduced ideas related to postmodernism, post modernity and chaos theory through music and visual arts. It seems that potentially chaos theory may even be broader than a scientific version of postmodernism; a scientific metaphor as Murphy suggests. For me, when thinking about the ideas expressed by Cage in Glass's writing about music and Cage's reference to the visual arts as leading change and innovation, I see a potential pathway to connecting postmodernism, post modernity and chaos theory.

I think that we can consider chaos theory as a broad scientific metaphor in our early 21st century world. Yes, we are experiencing tremendous change, like all generations before us, and all generations to come in the future. While I understand we are living in a time of tumultuous change I believe this is part of our humanity and is true for all generations, those before us and those to come. As leaders it is incumbent on us to think kaleidoscopically, to me this means take a broad perspective, consider many points of view beyond the familiar –

consider linearity and non-linearity, cause and effect and influence, strange attractors, scale, feedback, phase changes, self-organization and renewal, all of which are elements of chaos theory.

(Murphy, 1996, p.95)

and these are key ideas framing, the connection between Chaos and creativity.

Murphy explores some key concepts of chaos theory and notes that the very term chaos theory is somewhat misleading.

She clarifies that although chaos theory incorporates elements of chance, chaos in her view is not random disorder. She suggests that chaos theory attempts to understand the behavior of systems that do not unfold in a linearly predictable conventional cause-and-effect manner over time.

(Murphy, 1996, p.96)

She suggests viewing the system as a whole as this is how patterns and structures can be revealed or observed. She cautions that it would not have been possible to predict future direction solely based on past history, which is where chaos theory fits in.

Murphy states that chaos theory has its own features and terminology and she outlines these in her article laying the foundation based on these central assumptions.

With this perspective in mind I suggest we step back and look at the whole picture.

This big picture perspective is a fundamental concept that Kenneth and I discussed and built into the Chaos Strategics Planning Process. We used the phrase “*project a probable future*” and based on the application of the Planning Process this was what we saw to be the probable outcome.

How do we create a proactive probable future model?

Social media is now accepted and embedded as part of our daily environment across the globe 24/7. We can be anywhere, dialogue with anyone in real time thanks to social media. Our attention spans have been steadily fracturing in this age of social media and putting us into a reactionary mode. The Chaos Strategics Planning Process is a more proactive approach and I suggest potentially counters reactionary behavior.

How do we establish the scope of strategic planning – where does it begin and end?

This is an interesting question and following the design principles of the Chaos Strategics Planning Process strategic planning is ongoing and dynamic, cyclical in nature by design as presented in the Chaos Strategics Planning Process. Recall Shipengrover states that our state of change is: “A state that has been described as ‘permanent white water’.” (Shipengrover, 1996, p.2).

In fact if we follow the Chaos Strategics Planning Process as illustrated (Figure 1,2), the process is continuous!

Plans inherently evolve and change over time. Shipengrover suggests that

the new rules suggest that order emerges from the “messiness” of disorder through experimentation and trial and error.

Unlike models of planned change, chaos teaches that there are no prefixed, definitely describable destinations and that we do not know what is going to matter until we are into the journey.

(Shipengrover, 1996, p.2)

I concur with Shipengrover and note the planning process is as important as the plan.

We are on a continuous journey, making our pathway through chaos, learning as we go, and this inspires creativity.

In the course of the review of chaos and chaos theory we looked across disciplines and from my perspective there are many interesting and intriguing connections for exploration. Demastes (1998) in the Preface to his monograph Theatre of Chaos refers to scientists of chaos as

chaoticians—challenging the static newtonianism that has existed and has demonized chaos. These new scientists echo a premodern vision—nonlinearity- arguing this best describes our world.

(Demastes, 1998, p. XII –XIII)

In his view these scientists are catching up to the arts. Demastes' key point here is that the results could very well lead to an

interdisciplinary reintegration of the arts and sciences through a large feedback loop wherein one discipline helps to crystallize the musings of the other and vice versa.

(Demastes, 1998, p. XIII)

Demastes calls for an interdisciplinary cyclical approach integrating the arts with the sciences. This is a dramatic idea suggested in 1998 and today in 2018 I believe interdisciplinary approaches are integral to how we solve problems, create and innovate collaboratively to construct the world we want.

The Chaos Strategies Planning Process was presented and discussed in Chapter 2.

The Chaos Strategies construct presented in the illustration (Figure 1) has been revised for 2018. In appendix A the original Chaos Strategies diagram is included as created by Kenneth G Wilkins. The diagram incorporates elements of mathematics including equations and syntax and are germane to the text and to the thinking – they present a high level mapping and perspective on a cyclical process.

My reflections on the survey of chaos

Reflecting on the review of chaos over time what did we learn? How do we pull this altogether to make sense of it within the context of the Chaos Strategies Planning Process?

As I reflect on my review of chaos over time my thinking and perspective is grounded by McCarthy:

The guiding principle in these reflections on the nature of chaos and creativity is the importance of perspective, of gaining the right perspective. If we wish to experience something new, we must learn to see things in a new way. Attitude is the key to changing how we see things. (McCarthy, 2006, p.259)

McCarthy has elegantly synthesized the value in finding what he calls the *right* perspective, meaning to experience a new perspective in order to explore and experience newness and uses chaos as the pathway. Chaos is a pathway to foster creativity and manage change which is fundamental to our human experience and endeavours as we go forward and renew into the future.

You may be wondering why I chose to review chaos over time from ancient times to now, following the time periods suggested by Butz. As I followed his survey it struck me that we, humanity, have always been interested in and intrigued by creation and we continue to pursue the big questions around how our universe came to be and why and how do we fit in this universe. Through my review of the literature human interest in creation and the universe more broadly was corroborated and continues to

pique our curiosity. Creation is a myth with a positive outcome. Butz looks at chaos from a broad philosophical perspective covering some of the history of chaos across cultures, over time and opens our thinking to ideas expressed in other cultures. Perhaps by opening our thinking to other cultures and their perspectives we can learn about chaos and at the same time gain insight into other cultures. In the survey I see the creation myths through several cultural perspectives and several of these position the concept of chaos as holistic, which I understand and this encourages me to position and think about chaos in a positive frame, as a part of the creative process. I hope we can begin to consider the term chaos in a positive perspective contributing to creativity and growth through learning. Think about the following questions-- Does this mean chaos is part of the change process and is it necessary to arrive at or create a new form or order? Is chaos part of how we grow, learn, generate new ideas and build wisdom? These are my questions and how I make the case for Chaos as Creativity.

*Chaos
as
Creativity*