

Chaos Theory as a Model for Life Transitions Counseling: Nonlinear Dynamics and Life's Changes

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Chaos theory is presented for counselors working with clients experiencing life transitions. It is proposed as a model that considers disorder, unpredictability, and lack of control as normal parts of transition processes. Nonlinear constructs from physics are adapted for use in counseling. The model provides a method clients can use to reconstruct their own alternative life narratives, a framework in which life stories are understood, and a means to facilitate cocreation of adaptive interventions.

It has been said that “life is what happens to you while you’re busy making other plans” (Lennon, 1980). This familiar statement by John Lennon reminds individuals that, despite their best efforts at planning, their lives unfold in sometimes unexpected and unpredictable ways. Yet the prevailing worldview underlying the Western medical model, on which the mental health field is based, is firmly rooted in rationalism and reductionism and has shaped the theories and practices counselors use in daily interactions with and decisions about their clients. The Western medical establishment embraces the philosophy of rationalism, which has full confidence in the intelligible, orderly nature of the world and in the mind’s ability to discern this order; it asserts that reason, not experience, is the best guide for belief and action. The medical model is also characterized by a reductionistic approach toward science, that is, a belief that there are no inherently unknowable facts and that all of nature can eventually be described scientifically. Western scientists have traditionally used rationalism and linear thought processes to predict outcomes and manage the unknown; through scientific inquiry, they have focused on identifying patterns of order and stability. Since Darwin’s (1859/1976) *The Origin of Species*, Western scientists have tended to view all living organisms as particles of matter that respond to predictable rules; this implied that human behavior could be changed by “applying” certain formulas. Furthermore, dualism, which assumes a split or discontinuity between mind, body, and spirit, has been a dominant influence in science. In this context, human behavior has been explained by logic and principles of cause and effect; spiritual issues were considered to be the bailiwick of religion. On this view—which many find attractive because of its simplicity—all objects and events are seen as nothing more than the sum of their component parts.

For historical and political reasons, mental health professionals have long worked within this linear framework, yet counselors daily encounter evidence that this framework is insufficient for understanding or working with many psychological and emotional problems. Approximately 400 years

since the emergence of reductionism as a scientific model, researchers are acknowledging that many mental health systems, which are organized on strictly rationalistic and reductionistic principles, are in crisis (Wiggins & Schwartz, 1999). Part of the problem with the current approach, according to Wiggins and Schwartz, is a primary focus on pathology rather than on understanding healthy functioning:

Psychiatry lacks a conception of healthy mental life. It has forsaken all serious attempts to understand the patient’s experiences, deeming any such attempt unscientific. As a result, it had reduced mental disorders to a list of observable symptoms. Psychiatry lacks therapies appropriate for mental disorders due to this lack of conceptions. Thus treatment procedures have become simplistic and reductionistic. (p. 6)

Psychiatry, as well as derivative mental health components, is at risk for losing compassion and faith in the innate human capacity for strength and resiliency. It is clear that a model is needed that is capable of accounting for emergent and unpredictable life changes.

In the field of mental health, the system of diagnosing mental illness through the five-axis diagnostic procedure outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000) remains the standard form for the mental health assessment and diagnosis of clients. Although this diagnostic approach may have some flaws, it does have some value. It provides a common language among practitioners, a means for coordinating with managed health care, and a system for facilitating insurance reimbursements. The *DSM-IV-TR* does, however, tend to focus on intrapsychic dynamics to the exclusion of the larger relational environment. There is growing realization that emotional disorder does not reside within the person; rather, psychological and emotional issues often relate to the disordered environments and relationships in which the client lives and engages. Whereas the majority of counselors

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and mental health therapists use the model put forward by the *DSM-IV-TR*, some believe that it is a system that does not adequately address the complex lives and issues of individuals and families (Wiggins & Schwartz, 1999). Within today's multicultural, unpredictable, and rapidly changing world, it may be time for counselors to challenge a philosophical framework based on the somewhat simplistic tenets of strong forms of rationalism and reductionism.

Chaos theory, which posits that events do not always unfold in a predictable way, offers such a model. Using some of the premises and language of chaos theory, we present a realistic framework for counselor facilitation of healthy emotional growth and adaptation, using a brief case analysis to demonstrate how such constructs may be applied.

■ A New Model for Life Transitions Counseling

In response to the need for an alternative and complementary clinical model for mental health practitioners, we propose that the nonlinear dynamics of chaos theory—part of the larger field of systems theory—offer a more congruent and comprehensive view of how people engage in healthy and normative change processes. Adapted to the counseling environment, chaos theory offers a more adequate model for articulating and understanding a positive, strength-based psychological view of people as potentially resilient and adaptive systems, even in the face of extremely challenging experiences. By adopting the understanding that the world does not always work in a predictable manner, an individual can relinquish the internalized shame and self-blame that may arise from the belief that his or her choices were flawed, especially during a significant life transition. At these times, it is common for individuals to experience feelings of stress and disorder as an internal, maladaptive response, rather than as a natural part of the change process. If “disorder is not the dragon” (Mahoney & Moes, 1997, p. 187), counselors can help their clients perceive these feelings of turmoil as an indicator that change is called for and that a more complex level of order is likely to evolve. An integration of chaos and complexity theory with counseling “respects the role of ever-present cascades of disorganization in the living system’s dynamic and lifelong development” (Mahoney & Moes, 1997, p. 188).

Chaos theory postulates a critical shift from the classical scientific notions of stability and order toward the study of disequilibrium and diversity in all living systems (Lorenz, 1963; Prigogine & Stengers, 1984). Adapted as a theoretical model for social science use in counseling and therapy, the language and constructs of the nonlinear dynamics of quantum physics provide a useful paradigm for counselors working with clients experiencing life transitions. As an alternative to the prevailing medical model that focuses on pathology within the person, chaos theory as a meaning-making model considers disorder, unpredictability, and lack of control as a normal part of the transition process. Used within the collaborative

counselor–client approaches as described by Avis (1987) and Strong (2000), which respectively emphasize both pragmatic and postmodern interventions, it fits well with concepts of positive psychology and resilience, is congruent with the seemingly random way that life unfolds experientially, and prioritizes the value of examining the client’s engagement in the multiple contexts of life. Although chaos theory has been applied to individual psychology (Butz, 1997) and counseling (Brack & Brack, 1995; Gelatt, 1995; Parker, Schaller, & Hansmann, 2003), it has not been specifically adapted for use in life transitions counseling. Chaos theory provides the following: (a) a framework in which counselors can perceive, organize, and understand their clients’ life stories; (b) a model clients can learn to use to make sense of their experiences and to reconstruct their own narratives during a life transition; and (c) a means to facilitate the cocreation of interventions that lead toward adaptation.

■ A Brief History and Description of Chaos Theory

Chaos theory is a current response to models of reductionism and determinism in the 20th-century scientific community. Through its nonlinear properties, chaos theory creates a synergistic mind-set. Not only is the model composed of multiple component parts, but the whole is viewed as greater than the sum of those basic elements. Baranger (2004) has described 20th-century physics as a by-product of a quantum mechanical model and has predicted that 21st-century physics will represent the chaos revolution. This highlights the ongoing shift away from scientific explanations rooted in classical and reductionistic models to an understanding of systems as fluid and ever changing. Essentially, all organic systems are dynamic; that is, they are capable of change. The term *complex adaptive system* is used to describe all living creatures, including humans, which can both adapt to and change their environment so that it further meets their needs. Complex adaptive systems are also self-regenerating or autopoietic, reflecting life cycle aspects of adaptation such as birth and death, as well as ongoing processes of continual growth. Self-organizing systems are embedded in and interact with their environment in a way that promotes growth. Such systems can create new ways to relate or behave, and because they are connected to a complex network of feedback loops, there is no real way to determine cause and effect (Skar, 2004). This brings into question the role of determinism and certainty in human behaviors.

Turn-of-the-20th-century scientist Henri Poincare is considered the grandfather of chaos theory. Poincare initially demonstrated that simple systems can produce behaviors so complex that they are neither expected nor predictable, thus challenging Newtonian logic and opening the doorway for a new understanding of the universe (Butz, 1997). The chaos model gained popular attention in the 1960s and 1970s with the unintentional discovery of nonlinear phenomena by me-

teorologist Edward Lorenz (1963), as he attempted to create a mathematical representation useful for long-range weather predictions using computer simulations. To save time and space, he rounded a number from six to three decimals while inputting numerical values by hand. The resulting change was so minute (a fraction of a thousandth) that Lorenz was startled to find such a significantly large difference had appeared in the computer simulation output. Like Poincare, Lorenz established that very small changes could greatly alter an end result or an emergent pattern. The *butterfly effect*, or sensitive dependence on initial conditions, is the term coined from these findings. The explanation of this term suggests that the flapping of a butterfly's wings in one part of the world can cause a hurricane somewhere else. More specifically, if two similar systems differ by even the smallest initial variation, they can exponentially diverge from each other across time. Thus, even if one knows the current state of a system and even if one might be able to make reasonable predictions in the short term, one will not be able to predict the path of development continuously over time.

Poincare's original work was later validated by Ilya Prigogine (Prigogine & Stengers, 1984), who won the Nobel Prize in chemistry in 1977 for his theorem that an open system is nonlinear. These findings further shifted attention from classical scientific notions of stability, order, and equilibrium to a paradigm of "disorder, instability, diversity, disequilibrium, non linear relationships (in which small inputs can trigger massive consequences), and temporality" (Blackerby, 1993, p. 58). More specifically, Prigogine highlighted the premise that small systems changes could cause an entire structure to crumble and shift. Plainly put, chaos can emerge out of the simplest of systems. Previously, the prevailing thought in physics had been that only situations with a large number of interacting variables exhibited a chaotic pattern. Poincare, Lorenz, and Prigogine, however, demonstrated that "simple questions usually have complicated answers. You ask a simple question, by giving some simple equations of motion and some simple initial conditions, and the answer, which is the trajectory in phase space, turns out to be . . . chaotic!" (Baranger, 2004, p. 8). Absolute certainty and the possibility of prediction, then, become obsolete, giving rise to unimagined outcomes and possibilities.

Malcolm Gladwell (1996) is a contemporary voice emphasizing the importance of nonlinear dynamics. In his writings about the nonlinearity of epidemics, Gladwell coined the term *tipping point* to underscore the effect of small changes on human behaviors. Reflecting on his childhood struggle to understand issues of cause, effect, and unpredictable circumstance, he recalled an important lesson from his father. When his father observed him attempting to put some ketchup on his food by repeatedly tapping the bottle in linear fashion, his father commented, "Tomato ketchup in a bottle. None will come and then the lot'll" (Gladwell, 1996, p. 36), thus accentuating patterns of irregularity, even within the most mundane and seemingly predictable of tasks.

Implications for Counseling

The value that people place on counseling rests on a strong belief in the possibility and power of dynamic systems to change and adapt. Applied to human systems, the concept of "sensitive dependence on initial conditions" suggests that although counselors may use "prognosis" as an indicator of a typical life developmental path, the patterns that may actually emerge can never be truly predicted. In fact, this concept actually has been considered to be the death of reductionism (Baranger, 2004). The implications for mental health practitioners are clear: Counselors no longer need to restrict themselves to models on the basis of past history. Clients now have a mechanism to free themselves from the restraints of past events, experiences, or behaviors and embrace an ideal of hope and possibilities. They can choose to face life transitions with feelings of wonder and curiosity rather than dread. Gelatt (1995) underscored this freedom, and he commented on the importance of connectedness, stating that "[it] is the key to chaos theory. It is the key to compassion. And it turns out that connectedness is the key to uncertainty, unpredictability, not knowing, ignorance, uncontrollability, and to the practical counseling applications" (p. 112). Both client and counselor can let go of the illusion of control and instead face the precariousness of life experiences with compassion and an attitude of positive uncertainty. Similarly, Butz (1997) compared clients in individual therapy to artists, given that both attempt to work out their difficulties through a creative process. Specifically, "chaos is a precursor not to death, as some clients may fear, but to a more fulfilling life in many cases" (Butz, 1997, p. 127). In fact, researchers have demonstrated that the more predictable events become, especially positive ones, the more they lose their poignancy (Wilson, Centerbar, Kermer, & Gilbert, 2005).

The terms *complexity* and *chaos* are sometimes used interchangeably. For purposes of this article, however, the term *chaos theory* is used to describe the process by which humans, as complex adaptive systems, change and grow. Although we are actually talking about an aspect of complexity science taken from physics and mathematics, chaos theory, as expanded to the social sciences, illustrates the fluctuating cycles between order and chaos that mark a life transition. According to Skar (2004),

if we do not view these chaotic periods in our lives as something bad that needs to be fixed, then these stages can be lived through as necessary parts of our journey through life. This is similar to Jung's concept of "staying with" the experience of the opposites, rather than trying to eradicate the symptom or suffering. (p. 253)

Chaos Theory and General Systems Theory

Chaos theory is one aspect of systems theory. Von Bertalanffy (1968) was the first to truly delineate general systems theory, which focuses on complexity and interdependence. The word *system*—broadly defined as regularly interacting

or interdependent groups of activities or parts that form a whole—implies a dynamic process, and, in systems theory, the focus is on relationships and the dynamic interchange of energies. System dynamics starts with the recognition that the complex and interlocking structure of relationships that compose a system is often just as important in determining behavior as the individual components themselves. Because a primary goal of chaos theory is to explain complex systems that consist of a large number of interwoven and mutually interacting elements/activities, it is an especially appropriate model for exploring human behavior.

There are two major types of systems: those that are closed and those that are self-sustaining and open. A closed system has rigid boundaries that are not easily permeated. An open system is defined not in linear terms but rather by its nonlinear functions, that is, the process whereby a living system regulates the degree of openness between itself and its context (Kossmann & Bullrich, 1997). Thus, a person's beliefs and behavior may be assessed by examining the interactions of all members of his or her various interrelated systems, such as family, work, and community. Kossmann and Bullrich suggested that a system "is always defined by physical, temporal, or dynamic boundaries" (p. 201). Although the boundaries in a closed system are clear, an open system is not as rigid; therefore, it is always adapting to an ever-changing and unpredictable environment. For quite some time many family therapy theorists have embraced the concept of the open system as a major tenet of practice and case conceptualization, reasoning that individuals can never be understood in isolation but must be viewed from a perspective of interconnectedness (Goldenberg & Goldenberg, 2004).

Within a chaos theory framework, the life transitions process may be viewed as an open system with a strong focus on the collaboration among the client, the counselor, and the client's multiple environments, with a primary goal of adaptation rather than simply adjustment. In contrast to adjustment—which may be viewed as "dealing with" or "getting through" a crisis—adaptation is that and much more. The term *adaptation* suggests that the system itself has been forever changed. In the counseling context, it means that the client has the ability to modify both self and the environment when faced with future challenges or changes in that environment. The individual can remain open to the possibility that although decisions may not have predictable outcomes, novel or unique outcomes may turn out to be as desirable—or more desirable—than what had been anticipated.

Chaos Theory as a Life Transitions Counseling Framework

Life transitions counselors face a unique set of challenges. By definition, these mental health professionals primarily focus on supporting individuals who need assistance navigating the adjustments required by recent, sometimes normative, life changes. Many clients, however, continue to adhere to the notion that the "problem" resides within them. In fact, they may believe that if someone simply directed them to engage

in certain behaviors, they would be able to gain predictable, desired outcomes. Unfortunately, these beliefs often lead to frustration and an inability to move on, because adaptation to life transitions often does not respond to the rules of closed, deterministic systems. Alternatively, in an open system, the counselor operates not as an expert but as a collaborative part of the system from the onset of the change through the transitional process, assisting and supporting the individual or family through the new adjustments and adaptations. Above all, there is a strong initial focus on helping the client to take a more open and positive attitude toward dawning recognition that a transition is immanent; then, the counselor can assist the client in adapting to the changes involved in the process.

A reductionistic view of life transitions is characterized by linear thinking that focuses on cause and effect; this minimizes the client's ability to internalize change. This approach supports the view that problems are primarily internally based, and contextual issues are often not taken sufficiently into consideration. Theorists including Bridges (2001) and Schlossberg (1984) have made important contributions to the understanding of life transitions as more than a series of antecedents, behaviors, and consequences. Chaos theory, however, takes the understanding of the client in a life transitional process to another level of conceptualization. Chaos, as a theory of nonlinear dynamics and inherent unpredictability as well as possibility, is highly congruent with how people actually navigate through the world. In fact, Levinson (1986) has actually proposed that alternating states of stability and transition constitute life span development.

When it is applied to life transitions, chaos theory supports the normalization of feelings that many individuals have been taught to ignore or to view as negative. It supports the unexpected, creates an alternative mechanism for experiencing emotional discomfort as a positive signal that change is needed for growth to occur, and proposes that adaptation is possible. Specifically, this framework is very much in line with a postmodern, constructivist school of thought, incorporating the ideal that how people experience transitions can be altered to fit within a story of growth rather than disorder:

With our patients at critical life transitions, what we may first notice is an old, worn-out pattern of relating. This old pattern may emerge in the transference, in an expectation for—or repetition of—the old situation, and the old roles . . . if we provide the right catalyst in our interaction with the patient, a new form of order—or self-organization—may emerge. We, of course, are not *making* it happen, but instead providing the right environment for the system to organize in the direction of its own individuation. (Skar, 2004, p. 259)

Chaos Theory, Postmodernism, and Life Transitions Counseling

Because human beings are meaning-making creatures, the search for significance within the human experience has always been an

aspect of mental health. Given the specific stressors inherent in the 21st century, it is even more crucial that strategies used by counselors and their clients be as closely aligned as possible with the ways in which life actually unfolds. As a result of human beings' fundamental need for meaning, chaos theory is potentially very valuable as a framework for understanding how people in transition self-organize during the process of change. Although linear dynamics and cause-effect reasoning may work well to explain individual, short-term experiences, their explanatory powers fall short when relied on for a comprehensive assessment of human experiences across the life span. Reliance on reductionistic theories alone sets people up to experience confusion and fear and to doubt their potential, especially when their "best laid plans" result in entirely unexpected and sometimes unwanted outcomes.

A chaos theory framework offers concepts that can help a client to structure and understand his or her own experiences, while also providing the flexibility for possibilities previously not considered. Furthermore, taking a concept from postmodernism, counselors can teach clients to use this model as a guide in "re-storying" their experiences in ways that will aid them in reaching higher levels of life satisfaction and inner peace, even in the face of extremely challenging life events. The power of chaos theory lies in its potential to create space for the unanticipated, unexpected, and random to occur. By definition, a random or unexpected outcome is possible regardless of the systematic attempts made to cause a certain effect. Telling one's story to others and knowing that one has been heard is a potent therapeutic intervention; this narrative by-product will be especially powerful when used with the language of chaos theory. Chaos theory constructs may be used as a tool to help normalize what may otherwise seem abnormal or disordered; it may reduce a client's sense of having "failed" to cope and open up the doors of possibility.

Within a linear model view, it is common to assume that someone who has been faced with incredible adversity may have learned negative attitudes, beliefs, or poor coping skills as a result of their difficulties. Those displaying incredible resilience and success despite environmental conditions are likely to be considered unusual. In chaos theory, unusual resilience is as much of a possibility as other outcomes. Counselors can help clients release beliefs about what they may see as "inevitable" and show them how to look for what is possible. This model opens doors for behavioral risk taking and expands the potential for creativity. As Gelatt (1995) noted, "Conventional planning is like following a blueprint. Creative planning, on the other hand, is like using an artist's palette" (p. 110). That is, a nonlinear framework creates a language that allows individuals to see the dynamic nature of life experiences and offers a way to frame experience in a way that opens up a world of possibilities.

Like the postmodern view of the self, chaos theory welcomes a view of numerous potential outcomes.

The postmodern self is never solidified once and for all; it is always in a state of becoming and thus potentially sensitive to perturbations in context. This is a perspective on the human psyche in search of new physical metaphors, metaphors that

include dynamically evolving systems continuously engaged with their contexts. We can no longer rely on models based on insulated, linear, and closed systems to explain a self in context and in continuous construction. (Perna & Masterpasqua, 1997, pp. 6-7)

Chaos theory provides an important model for those working with clients in life transition processes. It offers language and metaphors that assist the client in making meaning of his or her transitional experience as a person living in context; self can be viewed as being in an ongoing process of "continuous construction and reconstruction" (Perna & Masterpasqua, 1997, p. 6).

Chaos theory offers clients a way to construct new stories about and attribute more positive meaning to their lives. Each individual has particular beliefs about reality and stories about the difficulties he or she has faced in life. George Kelly (1955) developed a theory of *constructive alternativism*, which is based on the idea that each person has constructs and mechanisms for explaining his or her life path. He organized his theory into a fundamental postulate with 11 corollaries. Specifically, "a person's processes are psychologically channelized by the ways in which he anticipates events" (Kelly, 1955, p. 46). Thus, individuals are tied to their past only to the extent that it has helped to shape their expectancies for the future. With this in mind, it seems clear that the fear and anxiety arising from a life transition experience reflects the understanding that a change in personal construct is imminent; this anticipation is often daunting. As Neimeyer (2000) has pointed out, human beings strive to construct meaning out of their experiences by creating stories that reflect life themes.

The use of chaos theory is thus an alternative to earlier learned explanations and encompasses Kelly's (1955) proposition that humans in transition can cocreate a plethora of potential resolutions, rather than becoming stuck in a cycle of unrealistic expectations of perfect outcomes and subsequent disappointment. Blatner (1997) contended that there are several practical implications of postmodern thought, which include the following: make creativity and spontaneity a core counseling value; help clients re-story their lives or create a "personal mythology"; help clients gain a certain amount of interconnectedness with the world; help clients gain a sense of multiple life roles or ways of being within the world; offer treatment that fits each individual; help clients learn metacognitive skills; and promote skill building. In essence, counselors should help their clients challenge objectivity while offering a framework for multiple realities.

Life Transitions and Loss

People come to counseling with a need to respond to a life event. Typically, a person asks for assistance with a life-change process when a certain amount of upheaval, or chaos, occurs. That is, he or she is experiencing a lack of order and a perception that life will never be as it used to be. All transitional experiences carry with them a sense of loss and grief, even when the transition is positive and planned. In leaving the familiar past, something is usually left behind; there may be "fear of

the unknown and the loss of the familiar structures of the past” (Skar, 2004, p. 257). Jane Hughes Gignoux (2002) concluded that a life-transforming experience is one in which

people are brought back to “life,” reconnected to spirit. This often occurs after some part of them has “died,” been cut off, separated—not in the physical sense, but in a deeper spiritual sense. This can happen to dying people as well as those who are very much alive. (p. 29)

These times can be fraught with periods of disequilibrium and the experience of negative emotions such as anxiety and fear.

There are many forms of loss, and many ways in which individuals respond to them and subsequently adapt. The belief that loss can result in growth is one that tends to build on the strengths in people, even during the most difficult life events. People seek counseling as a means to “adjust” and feel better. From the perspective of nonlinear systems thinking, adjustment is a necessary but insufficient goal of life transitions counseling. It is important to go one step further, toward a transformation of the loss (Wong, 2002); a reauthoring of life needs to occur. Harvey (2001) proposed that a prominent aspect of the field of positive psychology will be how people deal with losses over their life spans. In a study using narratives and questionnaires, Harvey, Walker, Mason, and Pauwels (2001) asked 300 people to describe their most significant loss and to state whether they perceived the loss to be related to life difficulties as well as positive gains. Overall, the participants reported significant connections between the loss and challenges they were currently experiencing. Yet they also highlighted interpersonal gains from struggling with the loss, demonstrating that even during the adversity of loss or transition, resiliency and strength are often prominent. On an individual level, people do not wish to live their lives in a chronic state of disarray. Nevertheless, there needs to be a middle ground toward an understanding, acceptance, and integration of the importance of entropy for future adaptation.

As previously noted, a chaos theory framework of change allows one to view the onset of disequilibrium as a signal that change is happening, that growth may occur, and that a higher level of adaptation is possible. Although loss in and of itself is not fundamentally positive, Miller and Harvey (2001) proposed that the “experience of loss can become a profound means for showcasing human strengths and potential” (p. 313) and that this deeply emotional experience can affect the reevaluation of life meaning and personal strength. When people understand that loss, although painful, can lead to growth, they may become better able to work through a challenging experience without avoiding the pain, thus creating the opportunity for adaptation. Then, when the next new challenge occurs, they are better equipped to deal with the cognitive and emotional issues involved. The client needs to reconcile the paradox of holding on to both the comfortable and uncomfortable to fully self-organize. When clients are helped to view feelings of loss within periods of chaos

as “normal,” rather than something that needs to be “fixed,” they are more likely to be able to integrate those feelings as an important component of growth.

The Language of Chaos Theory as Applied to Life Transitions Counseling

A number of constructs of chaos theory are particularly appropriate for application to life transitions counseling. These constructs assist both counselor and client in developing positive and alternative views of the future, with each following the premise that human beings are complex adaptive entities oriented toward growth. The definitions of these constructs originate in the physical sciences—from which chaos theory emerged—and have been adapted for use in the social sciences. The result is a language counselors can use to assist a client in framing a personal narrative of transition that supports adaptive change. Because language is important in meaning making, these ideas and terms are useful tools for moving toward an adaptive outcome even in the midst of uncomfortable, confusing, or seemingly random experiences. Following are terms that describe how elements of chaos theory can be understood and used in the context of counseling.

1. *Adaptation*: The goal of collaborative counseling. Outcome after a successful transition. A dynamic process resulting in alterations within a person that emerge as a result of the transition experience. A person is recast in a form more congruent with current environment. Adjustment plus integration of new learning.
2. *Adjustment*: Component of adaptation. An attempt to cope with and manage transitions. May not involve the integration of components of a changed self. May ignore important but difficult feelings to cope.
3. *Phase transition*: The process of being in a transition. The old and familiar has been left, but the new has not yet emerged. This is typically the most uncomfortable part of the transition time and is filled with the most challenging feelings.
4. *Self-organization*: Emergent growth process through which adaptation and change occurs. After a period of chaos and transition, humans are capable of emerging at a higher order state of adaptive equilibrium. “The capacity for self-organization enables complex systems to develop or change their internal structure spontaneously in order to cope with their environment” (Skar, 2004, p. 248).
5. *Butterfly effect*: Small changes can have large impacts at a distance (Lorenz, 1963). Any small, random event may have major effects. A small event or experience can result in a major life change.
6. *Bifurcation*: As a transition unfolds, the new possibilities emerge that were not previously perceived or expected. Although these bifurcations are not always observed within the moment, they quite often become clear at a later point.

7. *Emergence*: The act of coming through transition. The person emerges into the reconstructed self as he or she progresses through the transition experience.
8. *Chaos*: Cyclic fluctuation of energy patterns both from the environment and from within oneself. Period that signals change is imminent and that the client can no longer remain in the status quo. This time is usually fraught with feelings of unwanted turbulence. Viewed theoretically as a positive signal that adaptation is a possibility and that a person can emerge from this stage having reconstructed a more adaptive self.
9. *Complex adaptive systems*: "Self-organizing structures that adapt for continuing being; with connections along networks that allow for open exchange of matter and energy; and with the ability to utilize the border between order and chaos to create new forms, for emergence to occur" (Bloch, 2005, p. 196). System that inherently strives for adaptation, change, life, and growth.
10. *Attractors*
 - a. *Point attractors*: Point attractors pull a person to repeat previous patterns of behavior. Habitual patterns from the past that draw a person back to the familiar. Point attractors are implicated in individuals remaining stuck in repetitive, maladaptive patterns in which they can see only one path.
 - b. *Strange attractors*: Strange attractors pull a person to engage in behaviors that are novel, random, and unfamiliar. Strange attractors are implicated in movement toward growth and adaptation.
11. *Fractals*: Self-similar life themes.
12. *Networks*: The connections between an individual and all the interrelated components of his or her systems, such as friends, family, colleagues, and acquaintances.

The Application of Chaos Theory to a Case Analysis

The following section presents an analysis of the case of Rita (a fictional composite of several clients) using the constructs of chaos theory. The application of this model to a life transitions counseling case illustrates how counselors can use these constructs to assist clients in the process of adaptation and growth.

Case Background

Rita is a 35-year-old mother of two who was referred for individual counseling at the suggestion of her own mother because she was feeling increasingly despondent after her husband, Jack, filed for divorce. Within the first few minutes of the initial session, Rita told her counselor, "I feel as though my life is out of control, as if all my plans are shot to hell and I have nothing else to look forward to. I feel like such a failure." Rita and Jack married right after high school because she was pregnant. She wanted to have an abortion immediately because she was accepted for an interior design program at a local community

college and thought that she was not ready to be a parent. Jack, however, told her that he would never see her again if she did not marry him and keep the child. Afraid of losing Jack, Rita acquiesced, giving up her career and becoming a full-time homemaker. Her circle of friends dwindled because she was the only one who had children, and she became more and more dependent on her mother for support. Jack continued his education, finishing both his undergraduate and law degrees, frequently leaving Rita home alone to "raise his children." Jack's parents financially supported them while he was in school, and Rita had to ask them for money whenever she wanted to buy something for herself or her family. Jack left managing the household to her because he was "too busy"; he expected her to take care of everything. She did not complain at the time because she felt that he was working really hard to get through school; yet, she was secretly hoping that once he was finished they would be able to spend more time together.

When Jack graduated from law school, Rita fully anticipated significant lifestyle changes; she wanted to spend more time with Jack without the children, have Jack take more responsibility with the children, and possibly attend night-school classes herself. Rita's plans, however, never came to fruition. Jack immediately took a job with a law firm and told Rita that he would take more family responsibility once he was making some money on his own so they did not need to rely on his parents. Once again, Rita complied and spent the better part of the next few years alone with the children while Jack "slept at the office." Rita felt so lonely, unfulfilled, and bored that she bought a book and learned to sew, stating, "I ended up slip covering everything in the house." One night, Jack came home and told her he wanted a divorce because he felt that they no longer had anything in common.

When Rita first came to counseling, she was living with her 68-year-old mother because she just could not see how she could possibly take care of herself and her children alone. After a few months, Rita wanted to move out, but her mother asked that Rita stay longer because she had just retired from a school administrator position and wanted company. Rita felt "stuck," alone, and angry with herself.

Case Analysis

Rita's life expectations and subsequent choices were made through a linear, reductionistic lens and were based solely on the desires of significant others. Her choices were made to please someone else. She seemed to wait around for something external to occur, believing that specific outcomes would surely emerge in the future as a result of these attempts to please (i.e., Jack would spend more time with her, she could have a career). Unfortunately, all Rita's hopes and dreams were terminated when her husband left her; the only option she saw was that of moving in with her mother. Rita believed that there was something inherently wrong with her because even though she did all the "right" things, her life was turning out to be a failure. She felt incapacitated because she could not see any positive options.

If one views the situation from the perspective of chaos theory, Rita was thrust into a significant, unexpected, and disarming phase transition when her husband asked for a divorce. Her seemingly orderly life was now filled with turmoil and decidedly painful chaos. Rita was in the grips of a long-standing point attractor, repeatedly making similar decisions that resulted in others'—but not her own—needs being met. For example, she chose to marry and have a child even though she wanted to go to college; she chose to stay home and emotionally support her husband, even though he was unresponsive to her for many years; and she chose to continue living with her mother, even though she felt that she was finally ready to move out on her own. This particular point attractor could also be seen as a fractal within her life story. Rita was very artistic and dreamed of doing something creative; however, she became the cocreator of her husband's happiness and not her own. Her network was additionally self-limited because she gave up many of her close friendships and connections. Although she would have liked to cultivate independent relationships, she felt responsible for two young children.

Rita also experienced intense feelings of loss and became focused on grieving “what was” rather than seeing “what could be.” She “lost” not only her husband but also her life “story.” This experience of loss is a normal part of the transition experience. She tried to adjust, yet, because she held on so steadfastly to her previous narrative, she was unable to see further possibilities (or bifurcations), and her potential for adaptation or self-organization was not being realized. Rita has experienced the changes in her life as dramatic and negative; she has not yet integrated how some of the small changes, or her own personal butterfly effects, may open doors for her if she is willing to go through them. For instance, Rita has learned to sew as a response to her boredom and loneliness. Additionally, moving in with her mother might give her the chance to actually go back to school and change her life.

■ The Application of Chaos Theory to Life Transitions Counseling

The language of chaos theory provides a framework for the counselor to organize, interpret, and help the client make meaning from a life transitions narrative. Initially, a client may feel stuck because he or she is interpreting behavior through a linear lens and clinging to old illusions of order. Nevertheless, too much order—or too much chaos—may actually result in a lack of growth, stagnation, or feelings of being stuck (Warren, Franklin, & Streeter, 1998). Individuals in open systems can process constant change in interactions with their environments. Rita, for example, behaved like a closed system, limiting her interactions with the world and trying to stay in a place of equilibrium and homeostasis; this precluded the potential for personal evolution. During the initial sessions, a counselor might help Rita to tell her story; ultimately, they might together cocreate a nonlinear account of the experiences on the basis of chaos theory constructs. By virtue of the cocreation process, Rita would be better

able to shift to a more open and inviting stance. This new story, although fully grounded within her reality, could give rise to new meanings, new thoughts, new feelings, and potentially new behaviors. By taking the conditions that existed in the original story and reframing them within a chaos theory structure, she could begin to reinterpret her life. Rita's initial story was one of hopelessness, futility, and lost dreams. She felt as though she were falling apart and viewed herself as ineffective. She made choices that did not turn out the way she planned and believed that she was disordered. If Rita were to retell her story using a chaos theory framework, she would begin to see that as a complex adaptive system, she is in the midst of growth and change and that feelings of chaos and disorder accompany many life events, especially significant nonplanned life transitions. From this turmoil, however, she would have opportunities for more desirable and complex functioning.

As the client's story is transferred into a new framework, additional cognitive behavior approaches can be integrated to help facilitate new meaning making. One of the basic tenets of cognitive behavior change is that a change in one's thoughts will affect feelings and behaviors. Specifically, through the telling and retelling of a story in a different, nonlinear way, clients' thoughts about themselves, their environment, and their behaviors may change. It is important to consider that for Rita to be able to integrate this new story, “the new direction forward has to be lived for it to be real. It is only when we dare to act in new ways that a change can actually be said to occur” (Skar, 2004, p. 255). Cognitive behavior therapy can be clinically helpful, given that quite often during intense destabilization, clients may need highly structured experiences such as modeling, relaxation, deep breathing, assistance with routines, or just generalized “grounding” (Mahoney & Moes, 1997, p. 193) to help them deal with phenomenological chaos.

Rita's story can also be re-created in a way that breeds positivism and hopefulness. Humans tend to strive for order and consider chaos as undesirable, given that a sense of order is often related to a desire for safety and security. Chaos theory, however, demonstrates that there is an inherent lack of predictability in the cosmos and that too much order and stability is actually quite hazardous to adaptation. Just as anxiety can be a signal that something is awry, Rita's current negative feelings are actually signs of an organism in flux and signal a time for creating change. As counselors collaborating with our clients, we move from a relationship of teacher–student to a shared “not knowing” and sense of possibility. That is, in addition to instructing clients regarding the application of chaos theory language and cognitive behavior change tools, counselors also help clients discover and create with their own meanings. In place of the less functional original narrative, concepts such as attractors, bifurcations, networks, butterfly effects, and fractals are explored. Rita has always believed her life was governed by linear rules; however, it is through the unexpected (e.g., divorce) that Rita's life has the potential for adaptation. The major life transitions that have led her to these attractors could be explored, and she could begin to understand

the futility of avoiding change. Additionally, from a strength-based perspective, Rita may begin to see how resilient she really is. For example, it is ironic that she perceives herself as dependent and helpless, when in actuality it is others who have depended on her. Clients experiencing a period of transition often feel a fear of the new, a desire to cling to the old, and feelings of grief when they realize that their lives will never be quite the same. If the counselor can help the client mourn his or her loss, yet, at the same time, “hold” these uncomfortable feelings without the need to avoid or repair, the client will have a good chance at successfully adapting during a life transition. In other words, counselors can help their clients to frame difficult and challenging experiences as having potential for positive growth, while at the same time integrating the painful and ambiguous feelings.

Conclusion and Proposed Research

We have presented chaos theory as an alternative framework for counselors working with clients in a life transition. Based on nonlinear dynamics, chaos theory differs from the reductionistic medical model—which emphasizes biological, determined pathology—the mental health standard for many years. As described, a chaos theory model is more congruent with how change actually occurs for human beings. Development across the life span is marked by cycles of unpredictability, chaos, and stability. Although linear models of predictability can be comforting, especially during times of distress, they are more likely to be reliable for explaining changes that occur in the short term; linear sequential patterns of growth are not the norm across the life span.

We propose that counselors adopt a chaos theory model as an initial framework for perceiving and interpreting clients’ transition narratives and subsequently guide clients in restorying their narratives using the concepts of chaos theory. This will assist clients in changing the meanings they give to their lives and the transitions that occur, with the new attributions leading to a higher level of growth and adaptation and the possibility of greater satisfaction—even in the face of challenging events.

Using a case analysis, we have conceptualized the concepts of chaos theory and the potential for emotional and behavioral adaptation in counseling. We have concluded that although some clients are well treated with linear medical model practices, those clients trying to manage environmental change and navigate life transitions and loss will be additionally aided by the use of a chaos theory framework. We propose that reframing the transition narrative to conform to chaos theory will assist clients in moving from a negative stance and potential feelings of discouragement, disillusionment, and hopelessness to one of strength and greater connection characterized by positive coping attributes, such as optimism, encouragement, and hopefulness. Each transition cycle can contribute to expanded skills for positive coping; over time, clients can come to view environmental change as the doorway to growth and to new, not-yet-imagined possibilities and connections.

Numerous research possibilities stem from this article, each lending itself as a building block for the next. Overall, post-modern narrative perspectives offer a mechanism for eliciting personal meaning and interventions subsequent to a major life transition or distressing life event (Borden, 1992). A content analysis of life transitions narratives, based on chaos theory, could be conducted to demonstrate relationships between various themes and adaptive outcomes, as measured by ratings of psychological well-being. Subsequently, an experimental design model could be developed (either using individual or group sessions) to demonstrate whether a clinical use of the chaos theory framework will actually affect self-organization, adaptation, or emotional difficulties.

Bereavement is another potential area to research the usefulness of chaos theory. If we are correct in supposing that individuals in counseling undertaken from the perspective of chaos theory are better able to integrate the inevitable sense of loss that occurs during any life transition, a study of those individuals might determine whether they fair better during bereavement events than do people who have participated in more traditional life transition counseling. Furthermore, exploring the unexamined “loss” side of even desired transitions could lead to a more complete model of adaptation. Finally, specific interventions using the language of chaos theory could be developed to assist clients in their perceptual and meaning-making processes while they are in transition.

Chaos theory offers counselors a useful and interesting new theoretical perspective for helping guide clients through the transitions in their lives. Aligned more closely with how the change process actually unfolds, it provides both counselors and clients with a mechanism for hope and optimism, even in the face of challenging life events.

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