

Chaos Theory and Object Relations

a new paradigm
for psychoanalysis



David E. Scharff
Jill Savege Scharff

Dimensions of Psychotherapy, Dimensions of Experience

Chaos theory and object relations: a new paradigm for psychoanalysis

**Dimensions of
Psychotherapy, Dimensions
of Experience**

**David E. Scharff
and Jill Savege
Scharff**

© 2005 David E. Scharff and Jill
Savege Scharff

e-Book 2020 International
Psychotherapy Institute

All Rights Reserved

This e-book contains material protected under International and Federal Copyright Laws and Treaties. This e-book is intended for personal use only. Any unauthorized reprint or use of this material is prohibited. No part of this book may be used in any commercial manner without express permission of the author. Scholarly use of quotations must have proper attribution to the published work. This work may not be deconstructed, reverse engineered or reproduced in any other format.

Created in the United States of
America

About the Authors

David E. Scharff, MD is Co-Director of the International Psychotherapy Institute (formerly the International Institute of Object Relations Therapy). He is Clinical Professor of Psychiatry at the Uniformed Services University of the Health Sciences and also at Georgetown University. Dr Scharff is a Teaching Analyst at the Washington Psychoanalytic Institute. He is a former president of The American Association of Sex Educators, Counselors and Therapists (1988-1989), and former Director of the Washington School of Psychiatry (1987-1994).

Dr Scharff's 15 books include *The Sexual Relationship* (1982), *Refinding the Object and Reclaiming the Self* (1992), *Object Relations Theory and*

Practice (1995), and *Fairbairn: Then and Now* (1998). He has also written 50 articles and chapters and is widely sought as a lecturer on the topics of family and couple theory, object relations theory, and sexual development, disorders and their treatment. He maintains a private practice in psychoanalysis and psychotherapy in Chevy Chase, MD.

Jill Savege Scharff, MD is Co-Director of IPI, Clinical Professor of Psychiatry, Georgetown University, Teaching Analyst at the Washington Psychoanalytic Institute, and Series Co-editor of the Library of Object Relations at Jason Aronson. Her latest book co-edited with S. Tsigounis is *Self Hatred in Psychoanalysis: Detoxifying the Persecutory Object* (2003).

Chaos theory and object relations: a new paradigm for psychoanalysis

*David E. Scharff and Jill
Savege Scharff*

After two years in analysis, Celia King began a session by saying, ‘I can’t believe what’s happening to me. I think of myself as someone who doesn’t mess up, but suddenly I feel like I’m turning into Calamity Jane. I scratched my car on a post in the garage, and I pulled something out of the icebox and spilled grease on myself. I have a headache. I can’t do anything right. Before analysis, I was

unhappy but I knew who I was. I don't know who I am or what I'm supposed to do.'

Many patients find that the more they discover about themselves, the more at a loss they feel. They begin by organizing treatment in patterns similar to the way they organize their lives, only to find that unexpected happenings of treatment throw them into turmoil. They become more confused. The inner turbulence is unwelcome, yet offers new possibilities.

In this chapter, we attempt to show that deterministic chaos theory—grouped with other theories called complexity theory, dynamic systems theory, and the theory of self-organizing systems—offers a new paradigm for thinking about the way the inner turmoil that emerges within the treatment process offers such new possibilities. To this end, we will introduce elements of chaos theory and apply them to concepts in object relations theory and practice: Fairbairn’s theory of the self as a dynamic system of subsidiary ego,

inner object relations developed by splitting and repression; Melanie Klein's (Klein 1946; Segal 1963; J. Scharff 1992) ideas on positions and on projective and introjective identification; Winnicott's (1963) concepts of the environment mother and the object mother, of transitional space; Ogden's (1994) analytic third; the clinical application of transference and countertransference in the light of Bion's (1970) application of projective identification to the container/contained, and his proposal that the analyst should eschew

memory and desire; the role of interpretation; Sutherland's (J. Scharff 1994) conception of the self as a self-organizing system; and Fairbairn's (1958) axiom that the action of psychoanalytic treatment rests fundamentally on the nature of the therapeutic relationship. Chaos theory explains similarities of pattern at different levels of magnitude in personality, therapeutic process and social systems, offering a scientific rationale for the postmodern proposition that interpretations of psychic meaning are never absolute

because they always depend on the vantage point of the interpreter.

Chaos theory derives from the study of non-linear equations that characterize dynamic, self-organizing systems. The findings that began to accumulate in the 1970s were first popularized in the 1980s (Gleick 1987; Briggs 1992). In the 1990s writers in psychology and psychoanalysis began to explore the value of chaos theory for understanding unconscious process, ego development, and therapeutic interaction (Spruiell 1993;

Galatzer-Levy 1995; Ghent 2000; Levenson 1994; Masterpasqua and Pema 1997; Palombo 1999; Piers 2000; Quinodoz 1995; Scharff and Scharff 1998; van Eenwyck 1997).

When Sutherland conceived of the self as a complex self-organizing system (J. Scharff 1994), no scientific framework was yet recognized that could be applied to his hypothesis. He had no access to non-random chaos theory, which now makes possible a more sophisticated understanding of individual psychic organization and of

personalities in the dyads, groups and institutions.

PRINCIPLES OF CHAOS THEORY

Just as the theory of relativity and Hegelian philosophy offered new vistas for psychoanalysis in the middle of the twentieth century, chaos theory underpins the philosophy of deconstruction and postmodernism that themselves offer new ways of seeing psychologically and psychoanalytically (Birtles 2002). Chaos theory comes from the study of

formerly unsolvable non-linear mathematical equations and from the new field of non-Euclidean geometry, also called fractal geometry (Gleick 1987; Briggs 1992). In this section, we will describe selected principles of chaos theory (Table 1). In the following section, we will show their relevance to the psychoanalytic situation.

Table 16.1 Selected principles of chaos theory

1. An iterated equation is the mathematical description of a continual process of feedback in a complex system.
2. Because complex non-linear systems demonstrate sensitive dependence on initial conditions, prediction is impossible.

3. Complex dynamic systems are chaotic and unpredictable, but, in non-random chaos, the patterns they create are recognizable.
 4. Chaotic systems tend to self-organize.
 5. Non-linear dynamic systems show self-similarity when examined at different levels of magnitude, a phenomenon called fractal scaling.
 6. Attractors organize the form of a system, although paradoxically, they are also formed by the action of the system they characterize. There are three main types of attractors: *fixed attractors*, *limit-cycle attractors*, and *strange attractors*.
 7. Small perturbations may effect major pattern changes when a system is chaotic, but are likely to be dampened near basins of attraction.
 8. In biology, non-random chaotic rhythms afford a high degree of adaptability. Relatively fixed rhythms are a sign of pathology or lowered capacity for adaptation.
-

1. Dynamic systems are characterized by continuous feedback

An iterated equation is the basis for a continual process of feedback in a system. In an iterated algebraic equation where 'X' is the unknown, the equation is solved, and then the answer is taken as the next starting point. For instance, $X^2 + 0.0001 = Y$ is solved. Then Y becomes the new X as the equation is solved again: $Y^2 + 0.0001 = Z$. Such an iterated system always begins the next cycle at a place determined by the solution of the previous cycle.

All biological life systems work as iterated systems. Individually, as a community, as an entire human species —we begin each moment by starting at the point we have arrived at so far, and then use the same operating equations to take the next step. We begin with a new X that is the sum of everything so far. For instance in each analytic session, the analytic dyad begins with an X that is the sum of experience between patient and analyst in previous sessions.

2. Sensitive dependence on initial conditions

An example of the process of iteration in the psychoanalytic process occurs when the analyst simply repeats a thought of the analysand's, restarting the equation at the point just reached, also inevitably introducing small differences to the next iteration through unnoticed variation in tonal inflection or phrasing. Edward Lorenz discovered that in computer simulation of complex weather systems, small differences in starting conditions produce unpredictable results.

Theoretically, the flap of a butterfly's wings in Brazil could produce a small current that unpredictably amplified could become a hurricane in Texas, hence the name 'butterfly principle' (Gleick 1987). In complex systems, it is not possible to know in advance what difference even unnoticeable differences will make.

Humans have lifelong sensitivity to initial conditions. Small differences in neurobiological events and constitution, parent-infant factors, school, chance conversations, and

trauma have effects beyond expectation. In psychotherapy, small differences in therapists' listening, or the way therapists' vocal inflection necessarily changes over time make distinct differences in the following iterations. Over time, small incremental differences have a large impact.

3. Unpredictability

Periodically, psychoanalysis has been criticized for being unable to predict the outcome of development or treatment. Chaos theory helps explain

how we can know much and yet be helpless to predict. One hundred years ago, the mathematician Poincare found that he could almost determine mathematically the effect of two celestial bodies on each other, but when a third body was introduced, it was no longer possible to predict results (Gleick 1987). Similarly, we cannot predict multivariate systems such as personality development or family interaction in families, but we can often understand them in retrospect because of our capacity to recognize complex patterns.

4. Chaotic systems tend to self-organize

Chaos theory has shown that self-organizing systems seem to organize out of apparently random chaotic patterns (Briggs 1992). When complex equations are iterated millions of times, and the solutions plotted in *phase space*—the mathematical space in which the system’s activity is charted, the solutions may follow a definable curve at first. Then the curve splits at a place called a *saddle point*: two groups of solutions form a double or saddle curve. As iterations continue,

each curve doubles at another saddle point, until a *cascade of period doubling* breaks pattern into apparently random chaos. The successive solutions become unpredictable. But if one keeps iterating and plotting, out of the edge of chaos, a pattern suddenly emerges that resembles the original one. An alternation between chaos and form develops.

In psychotherapy, we see corollaries of period doubling and cascades into and out of chaos. When a patient's

mood determines whether a situation is seen as satisfactory or frustrating, there are two interpretations (or solutions) to the same situation. Which solution or interpretation is dominant depends on the affective tone accompanying the situation. As these alternate, the patient may become confused (breaking into chaos) as to the meaning of such events, only to emerge from the confusion by reverting to the old familiar alternation of positively and negatively toned interpretations.

Mrs King had come to analysis with an idealized view of life. She was highly competent and served others unselfishly. Her life was enviable. That picture served to cover an inner emptiness and frustration of which she was hardly aware: that everyone else came before her. Her compliance to others' needs masked a resentment without words. In terms of chaos theory, she had two solutions to her life's equations: the sunny, idealized compliant one on the surface, which alternated with the empty, wordless, deeply buried frustration and resentment. In analysis, as the iterations of her story joined with the analyst's feedback, she slowly saw the repressed 'solution' to her daily equations. The perturbation caused by this disturbing new awareness caused, at first, an oscillation between these two ways of understanding her daily experience, and then periodic cascade into confusion and emotional chaos.

She no longer knew who she was. Periodically, she would solve the problem of feeling lost in chaos by returning to the familiar patterns. She preferred reinstating the idealized view of her life, but when someone frustrated her, resentment and anger also appeared, now more on the surface.

5. Non-linear dynamic systems show self-similarity at different levels of magnitude, a phenomenon called 'fractal scaling'

When iterated non-linear equations are plotted by computer, they show *self similarity at different scales of magnification*, a feature Bernard

Mandelbrot has called ‘fractal scaling’ (Gleick 1987). A fractal is similar pattern at varying levels of scale—the ‘footprint’ of a dynamic system. The mathematics of chaos is easier to visualize in natural geometric images of fractals than in formulas. Fractals are found everywhere in nature and art (Briggs 1992). A leaf pattern of branching veins at varying levels of magnification is similar to its overall shape, again to patterns of leaves on twigs, twigs on larger branches, and trees in the forest. Branching neural dendrites and the pattern of veins and

arteries into smaller units demonstrate fractal scaling. In art, self-similar fractal patterns at differing orders of scale—as for instance in the detail of exterior decorations of the Paris Opera matching its overall architectural structure—produce the most aesthetically satisfying images. In analysis, Galatzer-Levy (1995) has shown fractal similarity between patients' speech patterns, the structure of a session, and personality structure, and also similarity between the process in any session and the overall shape of treatment.

6. 'Attractors' represent the form of a system as plotted in phase space

A 'fixed attractor' is a *point*, the kind of pattern to which a pendulum powered by gravity tends. As the pendulum runs down, its arc acts as though drawn by the point at which it will eventually stop.

A 'limit-cycle attractor' is a *fixed pattern* that holds all the points in phase space through which movement occurs. The arc of a pendulum powered by electricity is a simple limit-cycle attractor. Clinically, frozen,

encapsulated time-stopping phenomena of trauma act as limit-cycle attractors.

A ‘strange attractor’ is a pattern of random, non-repeating points, seen, for instance, in the movement of celestial bodies or biological rhythms. Although there is a pattern to the equations or movement of objects, the exact location of movement in phase space does not repeat. Paradoxically, strange attractors have a predictable overall form, but that form is made up of unpredictable details (Briggs 1992).

The pattern of a whirlpool offers a good visual image of a strange attractor, with the small eddies found nearby and within the larger pattern as fractals of the overall pattern.

A strange attractor appears to organize its system, but the attractor is actually produced by the system of which it is a part. Both these qualities of strange attractors are useful in understanding human development. For instance, the brain of an infant is organized by repeated interaction with parents (Schore 1997). The attractors

that organize the infant-mother interaction are formed by it, and also act on it. Although exact sequences do not repeat, the patterns are recognized by both mother and infant, and can be measured by researchers. The concept of strange attractors is also useful in the conceptualization of psychotherapeutic process, as we will demonstrate in the clinical example below.

7. Perturbations more easily effect major pattern change when the system is chaotic,

*but are likely to be dampened
near 'basins of attraction'*

Strange attractor patterns resemble those in systems of turbulent flow, such as a waterfall or the patterned chaos of leaping flames, where certain patterns repeat, then give way to randomness, then suddenly emerge out of the chaos to form an ordered pattern, and then revert to chaos again. For instance, turbulent water near a whirlpool seems to be sucked into the pattern of the whirl. Near the attractor, the system seems to be swept into the current in an area called a 'basin of

attraction'. It seems that matter in the 'basin of attraction' of an attractor is pulled into it, although it paradoxically also produces the continuing pattern by its behavior in being near the attractor. Near the basin of a strange attractor, the system is less susceptible to influence by small perturbations or intrusions that disturb the system. In disorganized areas of chaotic regions, perturbations may have relatively large effects. By analogy, the force it takes to get a ball rolling is relatively slight at the top of a hill (like a chaotic region) while it takes a much larger

force to get the same effect in a valley (like a basin of attraction) (Piers 2000).

The concept of ‘basin of attraction’ and its implications for change in a system have been applied to psychoanalysis by Palombo (1999), who labeled as ‘infantile attractors’ those unconscious models that influence current behavior to follow infantile patterns. Analytic material close to the infantile attractor’s basin is held more fixedly in the old pattern, while material further from the basin is

more easily susceptible to influence from the analytic process. The ‘tuning variable’—the strength of perturbation that it takes to destabilize orderly flow in a system or change chaotic, turbulent flow into a pattern—depends on many conditions, an important one of which is the proximity to a more organized pattern or basin of attraction. Quinodoz (1995) has suggested that the strength or weakness of object relationships form a tuning variable for anxiety and psychic integration, both during

infantile development and in the transference to the therapist.

8. In biology, chaotic rhythms afford a high degree of adaptability. Relatively fixed rhythms are a sign of pathology and lowered adaptability

Self-similar patterns—those characterized by strange attractors—are the norm in dynamic systems. *Self-same* patterns, more like those characterized by a limit-cycle attractor, are often signs of pathology. A marcher's pace, so-called regular heart

rate, normal EEG rhythms are all healthy biological rhythms that show chaotic irregularity. The frequencies are ever-changing and when plotted mathematically reveal patterns of strange attractors. Only in disease do these biological rhythms become essentially regular. Chaotic irregularity confers a much higher degree of adaptability than lock-step regularity. Current neurobiological research has begun to demonstrate that the brain is also organized by the principles of non-random chaos theory as seen for instance in the way the mother-infant

exchanges that are similar over time but never exactly the same, form strange attractor affect patterns that determine the growth of the infant's right orbitofrontal lobe in the first 18 months (Schoore 1997). It is not that complete randomness is healthy. It is the slight chaotic irregularity within an overall pattern of stability that produces healthy capacity for adaptation to unpredictable needs.

APPLYING PRINCIPLES OF CHAOS THEORY TO THE CLINICAL SITUATION

We view psychological experience as a matrix of fractals that shows self-similarity across scale. Aspects of healthy experience are organized by movement between varying strange attractor patterns. In such a matrix, linear elements of progression and regression—such as psychosexual stages, repetition compulsion, or the concept that developmental fixation and regression are the foundation of psychopathology—can be seen as limit-cycle attractors. These linear models do not sufficiently address the facts of life within a complex matrix of

experience made up of conflicting meanings and relationships, and multiple truths. Bion (1970) and Winnicott (1971) described the task of living in the fundamentally paradoxical situation in which conflicting and irresolvable elements have to be experienced without choosing one over the other. In this synchronic mode, conflicting meanings coexisting. Psychological experience is organized by varying patterns that have a complex relationship to each other. This complexity more accurately describes

psychological experience, but Freud's limit-cycle attractors have a continuing validity as clinically helpful approximations that frequently describe pathological breakdown patterns because limit-cycle attractors often simplify overall pattern at the expense of the adaptability of chaotic flexibility. This provides a scientific way of understanding why psychoanalysis has always been better at explaining psychopathology in retrospect than at predicting or even describing health, since health consists

of more complex combinations of patterns of behavior.

CLINICAL CHAOS

Celia King, a 35-year-old, highly functioning divorced mother and successful entrepreneur, came to analysis with me (DES) with an inner sense of emptiness that led, over the first two years of work, to a sense that she did not really know who she was. Married at 19, she immediately had a son, then a daughter, and divorced at 23. Her children, now young adolescents, did well academically, socially and in sports, but they complained and whined at her a good deal. She had chest pain found to be neither cardiac nor esophageal in origin that had disappeared on treatment with a small dose of SSRI antidepressant. In analysis Mrs King regularly presented her family and

colleagues as offering her mainly persecuting and rejecting experiences: her live-in boyfriend was unreliable, her children refused to help, and her employees lacked initiative. She handled irritation by becoming obsequious, doing favors, failing to set limits, and other 'too good' excited object behavior, thereby keeping her painful internal objects split off from central, satisfying experience.

Superficially, Mrs King's pattern appeared to be a flexible adaptive strange attractor. Underneath, it resembled a limit-cycle attractor designed to allow no conscious connection with painful affects, a stricture producing inner meaninglessness. Mrs King's limit-cycle attractor pattern of self-organization was less adaptive than a more chaotic strange attractor pattern. It offered predictability and control at

the expense of spontaneity and access to feelings. It led to somatization of her 'heartache' into chest pain. In analysis, she regained contact with experience split-off by repressed anti-libidinal, limit-cycle attractors.

Analysis introduced destabilizing perturbations. Taking her complaints seriously, I began to challenge her affective disconnection by linking adult patterns and somatic pain to current and childhood disappointment. I came to realize that Mrs King's idealizing transference and compliance produced a complementary countertransference of me as a good analyst who, however, was superfluous and empty of real function. In chaos terms, iterations of our interaction produced an excited countertransference pattern that also contained her emptiness. With minor exceptions, she agreed with what I said. Her trust was too-

good-to-be-true, an excited-object projective identification designed to keep me from becoming a persecuting object. Using my countertransference sense that her unquestioning trust made me less useful, I began to show her the transference pattern in which she used projective identification to keep me feeling good but untested to avoid friction between us. This friction introduced a tuning variable between us, a destabilizing force that could throw things into or out of chaos and confusion.

As I interpreted the limit-cycle nature of her pattern, Mrs King began to voice small annoyances towards me. These gentle criticisms represented the first excursions away from the basin of attraction of her character defenses. Introducing small perturbations into the initial conditions of the iterations of our interactions had produced

unpredictable changes in subsequent interaction because of sensitive dependence on these initial conditions. Slowly we moved away from the basin of attraction in which both of us felt empty, and the analytic relationship and discourse began to oscillate across a wider and less comfortably predictable range.

Mrs King now experienced a slowly increasing inner chaos she had foreclosed because of threat of disintegration in her family growing up. She complained about her parents and her current family, voiced resentment, but soon denied it. I pointed out her retreat from awareness of resentment to avoid the threat of being pulled back into the chaos of the family. She was avoiding the infantile basin of attraction where family dysfunction was pooled. Successive iterations of descriptions of her childhood, her current family

experience and my interpretations slowly produced new patterns. Where pain had been avoided by cutting off affect, there was now room. Just my saying to her that she was disappointed in people or that she resented them, created a perturbation in her fixed reactions, a new turbulence that moved her toward tolerating the chaos of ambivalence and futility, the pull of split-off and repressed gravitational bodies—inner painful objects she had kept out of her conscious universe. Having lived with rigid predictability, she was disconcerted to be less predictable to herself.

As the pull of the compliant, excited object relations basin of attraction loosened, the resentment, rejection, and longing appeared. With more awareness of her resentment came her realization that she feared being like her parents, irresponsible, abandoning

and damaging to children and partners. She had taken care of her sisters, and then of her children, boyfriend and employees to avoid being like her parents. Her denied unconscious identification with bad internal objects based on deprivation and impingement, led to her relentless need to repair old objects. Each of these isolated patterns had become limit-cycle attractors constrained from becoming adaptively chaotic. As I commented on the contrast between the way she presented herself and the way her unthinkable anxieties reached me through iterations of projective and introjective identification, the whole range of my input into our shared interaction produced small repeated perturbations in her psyche. Mrs King faced more affect than she had previously allowed, providing the inner tuning variable that moved her from one attractor to another.

Dynamically, the situation worked like this: each incident that might trigger resentment could either evoke a rejecting object constellation, or could quickly lead to an idealizing compliance. In terms of chaos theory, these were saddle points at which the equation split into two opposing solutions determined by contrasting affects. Before analysis, the resentful anti-libidinal attractor had been largely unconscious, subject to intense repression by the idealized excited object attractor. As analysis proceeded, Mrs King was transported across one

saddle point after another—branch points in her identifications. The tuning variables that propelled her into chaotic, anxiety-ridden experience came from previously repressed affects. The rapid unconscious crossing of the saddle points (choice points of how to be organized) she now experienced in anxious situations became a destabilizing cascade of ‘period doubling’ or of emotional solutions for her internal operating formulas, until chaos ensued in the form of confusion about her sense of herself. Now Mrs King could no

longer maintain an identity as ‘the good-natured fixer’. She no longer knew who she was.

Influenced by the overarching new attractor pattern formed within the analytic matrix, analyst and analysand form a new shared pattern of unconscious strange attractors identified by Ogden (1994) as the analytic third, by which both participants were influenced. Mrs King interacted consciously and unconsciously with me as an external object with both environmental and

object-related elements that were gradually internalized (Winnicott 1963). We interacted through continuous cycles of projective and introjective identification, forming the container/contained (Bion 1967, 1970). In this process, the analyst's mind becomes a new region of phase space through which the analysand's anxieties travel repeatedly in each iteration, and this is also represented in the potential or phase space between them, in the atmosphere of the analysis that itself forms new strange attractors

that pull the patient away from old ones and old basins of attraction.

Analysis is an iterated experience. Through the repetition compulsion—which constitutes reliance on limit-cycle attractors, patients repeatedly use formulas. Each repetition is a fractal of the patient's personality and of her relationship to others. The repetitive transference patterns are self-same rather than self-*similar*. Mrs King used an outer shell of exaggerated depressive position functioning to maintain the repression of frightening

aspects of paranoid/schizoid object relations (Klein 1935, 1946). The result was blocked movement between the positions, rather than the chaotic fluctuation between psychic positions characteristic of psychic health (Bion 1962, 1963; Ogden 1989). She was in a static position or psychic retreat (Steiner 1993), a limit-cycle attractor that protected her from a collapsing sense of self. Change was like pushing a ball uphill out of a deep basin of attraction. But each therapeutic repetition becomes subtly different because of sensitive dependence on

initial conditions—because extremely small differences can potentially make disproportionate differences in fixed patterns. Slowly Mrs King became able to move out of these basins to experience the chaos of the unknown, and move slowly through the analysis of transference toward a more integrated experience. As she did so, the foreclosed analytic space began to open into a more functional transitional phase space. This space was characterized by some states of more adaptive chaotic irregularity in

which new attractor patterns could develop.

Two dreams

Two dreams from Mrs King demonstrate Fairbairn's (1944, 1954) proposition that dreams represent 'shorts' of a patient's endopsychic situation. We now see them as fractals of personality, and as iterations of dynamic endopsychic structure combining cognitive and affective organization. Dreams also represent an analysand's relationships including the transference relationship (D. Scharff 1994), and illustrate new psychic strange attractors evolving in the transference-countertransference encounter.

Mrs King said, 'I had two dreams last night. In the first I was a teenager hiding from a strange boyfriend who

was going to beat and rape me. I went into the library where you were reading. You didn't look up, so I went into the ladies' toilet. I felt trapped because the dangerous boyfriend was still outside. A woman said, "We'll help." Some women gave me a military uniform and snuck me out a window. I joined a military parade and marched away to some barracks and felt safe.

'The second dream upset me more. I was living in a one-level ranch house with a low roof. My real boyfriend was there and said, "The cats are out tonight." There were tigers and panthers. He said he was going to look for our dog. I didn't want him to. He's in the jeep with the roof off. He drives into the carport without putting on the brakes and crashes. Then he comes into the house carrying my son's head. It's obvious it was the cats that got him. I dial 911. The person

answers, “Once the cats target you, there’s no hope!” I go on the roof and shoot 11 of the cats, but I know there are always 12. I decide the 12th cat is in the house, and I don’t know if it’s going to go after my son, my boyfriend, or me.’

Mrs King’s boyfriend had a jeep, but she said the dream car also represented my cars usually parked in the carport in front of my office, a low-roofed one-story building. This led her to an image of the car crashing into my office, driven now by me. In the first dream I sat reading, although she was in danger, and she had to hide in a toilet associated with the one off my waiting room. This reminds her of the time she and her mother hid in the bathroom when her father threatened to shoot them. The military women could defend her against armed men related to her father with the gun. The lions and tigers of the second dream

reminded her of the color of bees buzzing in my garden she can see from the couch. In the last few days she has felt afraid of them. As Mrs King gave these associations, I felt sadness at the threat she was feeling in our relationship, a loss of transference idealization. At the same time, because I knew the idealization had limited our work, I felt an inner quickening in response to her bringing the previously excluded danger into the room.

These dreams show the cracking of the projective identification of an excessively too-good-to-be-true holding pattern (a limit-cycle attractor pattern) that had protected us from knowing the ways in which Mrs King

feels unsafe, a dawning awareness of an unconscious lack of safety, of the invasive, rapacious and even murderous persecuting objects previously excluded from our relationship. They are fractals of Mrs King's unconscious internal object relations, her developmental history, and the transference-countertransference interaction. The sense of danger that characterized her childhood has returned. She does not feel I will look up from my books to protect her. I appear as myself ignoring her and as the dangerous boyfriend.

She uses the toilet to hide from danger emerging in the transference. The military woman refers to her mother in that situation and also to my wife, whose office is across the waiting room, who she has often fantasized could help her. Only her militant women friends will defend against the marauding men.

The second dream iterates the same problem with her boyfriend in a more helpful role. She has previously been unable to speak of unconscious fears, unsupported because of my lack of

awareness of her inner fright. Through projective and introjective identification, I have been participating in a pattern in which we both exploited an attitude of exaggerated trust to keep the cats at bay; therefore her fear that they would never rest until they got her could not be acknowledged. I am the 12th cat that is still out to get her.

The dream fractals of Mrs King's internal situation and of the transference-countertransference exchange locate the cats as the ever-present sense of threat. I fail to defend

her, and then pounce on her with interpretations. The dream communications to herself and to me are fractals of her overall psychic organization, self-similar to larger patterns in which she is on guard because no one understands. They are also fractals of her relationship to her primary objects, and of the aspect of the analytic relationship in which she feels I do not understand, and that only a longed-for but unknown woman could arm her against the night.

The analysis with Mrs King has seemed on the surface to be conducted in the depressive position, but these dreams indicate that it has been a limit-cycle, relatively fixed version of the depressive position. As the dreams surface her paranoid/schizoid themes, I can loosen the protective, rigid pseudo-depressive pattern—a basin of attraction that has gripped much of our interaction. As I feel her fear, I see the splitting and repression of her encapsulated psychic retreat (Steiner 1993). Sitting in my chair behind her, looking past her to the magnolia tree in

my garden, I silently think about how she watched protectively lest its buds be frozen before they could bloom as happened in the previous year. I imagine a cat on a branch, stalking a bird in the tree. I feel the danger lurking everywhere for Mrs King. There has been a perturbation in this session, in this iteration, a move away from the basin of attraction that has held therapeutic action at bay. Now she is able to convey fear in such a way that I have been able to take it in. And it connects, too, to the blossoms we can both see outside. The terror and

the beauty are closer together. They do not have to be as limited as before, not so rigidly held apart.

THE ANALYST'S SURRENDER TO CHAOS

Balint urged therapists to allow a 'harmonious interpenetrating mix-up' (1968: 136) in order to promote a therapeutic regression cathected by the therapist's primary love in order to offer a 'new beginning' for an analysand's emerging self. Bion (1970) proposed that analysts eschew memory and desire, giving themselves

over in each moment to learning in the immediate experience of the session. In a related vein, Winnicott (1971) urged parents and analysts to allow babies and analysts to live with irresolvable paradox. *Each urges us to tolerate chaos!* When we truly surrender to the moment, we give up what we already know in favor of what is not yet known, to the chaos inherent in complex self-organizing systems that frees us from old limited attractors, and opens to the excursions of new strange attractors. One can almost feel the pattern oscillate

between analyst and patient, feel unnameable influence, let it seep in and change the inner patterns with which it resonates, and then feel the force of a strange attractor as the atmosphere of the session changes, as the analysand takes in our words, tone or facial expression in a slightly altered way. New shapes gradually form out of the ‘analytic third’, the new strange attractor cocreated by analyst and analysand.

Beyond the surrender to chaos, what difference can chaos theory make

clinically? In most ways, it is too soon to know. Practice changes more slowly than theory. We are still learning from the discoveries of Klein, Fairbairn, Winnicott, Balint and Bion. Clinical practice is changing in multiple directions. The new openness to mutuality in the therapeutic relationship removes much of the imposed certainty of Freud's linear theories. Many of Freud's propositions are limiting attractors. Newtonian physics is still extremely useful as a working approximation to mechanical problems. Like Newtonian physics,

Freud's propositions are based on a limited point of view that offers valuable approximations to operational truths. But it is time to open ourselves to the uncertainties that allow new understanding to form from experience. In complex systems, limited attractors can form part of the pattern, just as Euclidean geometry forms a guide to building a house. More complete understanding of dynamic systems calls for strange attractors.

We find it helpful to think of strange attractors and basins of attraction as we experience the iterations of the therapeutic experience, as we surrender to the unpredictable swings of clinical hours. The metaphors of fixed, limit-cycle and strange attractors, the movement from self-same patterns of psychic retreats and encapsulations to the self-similar fractal patterns of health allow us to see variance in repetitive behavior. Self-similar patterns demonstrated in a patient's speech, behavior, dreams and transference

(Galatzer-Levy 1995) offer the analyst opportunities to intervene at any level, knowing that a perturbation on a small scale may eventually produce profound effects at larger scale.

The many uncertainties of working in an intersubjective field, and anxiety about the durability of knowledge in the postmodern era, raise questions that are easier to parse with help from chaos theory. Analysis has struggled for a long time with the charge that our interpretations stem from pathological certainty, bias, and medical

omnipotence without scientific foundation. But in the postmodern philosophical context, all knowledge and all interpretation of experience are seen as relative, all constructed from the vantage point of the culture, the current intellectual framework, and the experience of the interpreter. There is no absolute truth. Using chaos theory and the ramifications of the Heisenberg principle—that all observation changes the phenomena observed—we can see that pattern recognition in complex systems is always open to multiple interpretation,

and that analysis is not unique in having to live with ambiguity.

Fairbairn's model of personality (1944) introduced the concept of dynamic flux of complex factors into psychoanalytic theory. The clinical concepts of the fluctuation between Klein's psychic positions mediated by mutual processes of projective and introjective identification as the organizer both of the mind-in-development and of the therapeutic process, the concepts of the holding relationship and of

container/contained, dreams as fractals of personality and of the transference/countertransference exchange, the role of interpretation in inducing change, concepts of psychic and interpersonal splitting as pattern doubling at saddle points, and Bion's dictum that analysts should work without memory or desire, are theoretically explained by chaos theory. More than a metaphor, chaos theory offers to ground psychoanalysis in a modern paradigm that fits current trends in psychoanalytic thinking. A theory of complex self-organizing

systems that tend towards higher levels of organization, it provides a fitting new model for the psychoanalytic process. We are, after all, biological organisms governed by the principles of the physical universe in which we live. The universe and all who inhabit it are governed not just by the known principles of gravity and relativity, but by the complex theories of non-random chaos, which, with the aid of slowly advancing knowledge, we begin to perceive dimly. Within the limits of what we know so far, it is not possible to predict how far the strange

attractor of chaos theory will take us from its use as metaphor coloring our thought, to paradigm shift galvanizing new understanding.

REFERENCES

- Balint, M. (1968) *The Basic Fault: Therapeutic Aspects of Regression*, London: Tavistock.
- Bion, W. R. (1962) *Learning from Experience*, New York: Basic Books.
- Bion, W. R. (1963) *Elements of Psycho-Analysis*, London: Heinemann.
- Bion, W. R. (1967) *Second Thoughts*, London: Heinemann.
- Bion, W. R. (1970) *Attention and Interpretation*, London: Tavistock.
- Birtles, E. F. (2002) 'Why is Fairbairn Relevant Today: A

Modernist/Postmodernist View’, in F. Pereira and D. E. Scharff (eds.), *Fairbairn and Relational Theory Today*, London: Karnac, pp. 36-52.

Briggs, J. (1992) *Fractals: The Patterns of Chaos*, New York: Touchstone.

Fairbairn, W. R. D. (1944) ‘Endopsychic Structure Considered in Terms of Object-Relationships’, in *Psycho-Analytic Studies of the Personality* (1952), London: Tavistock with Routledge, Kegan Paul, pp. 82-136.

Fairbairn, W. R. D. (1954) ‘The Nature of Hysterical States’, in D. E. Scharff and E. F. Birtles (eds.) (1994), *From Instinct to Self: Selected Papers of W. R. D. Fairbairn*, vol. 1, Northvale, NJ: Jason Aronson, pp. 13-40.

Fairbairn, W. R. D. (1958) ‘On the Nature and Aims of Psychoanalytic Treatment’, in D. E. Scharff and E. F. Birtles (eds.) (1994), *From Instinct to Self: Selected Papers of*

W. R. D. Fairbairn, vol. 1, Northvale, NJ:
Jason Aronson, pp. 74-92.

Galatzer-Levy, R. (1995) 'Psychoanalysis and
Chaos Theory', *Journal of the American
Psychoanalytic Association*, 43: 1095-
1113.

Ghent, E. (2000) 'Motivation in the Light of
Dynamic Systems Theory', paper
presented at the American Academy of
Psychoanalysis, New York, January 2000.

Gleick, J. (1987) *Chaos*, New York: Viking
Penguin.

Klein, M. (1935) 'A Contribution to the
Genesis of Manic-depressive States', in
*Love, Guilt and Reparation and Other
Works: 1921-1945* (1975), London:
Hogarth Press, pp. 370-419.

Klein, M. (1946) 'Notes on Some Schizoid
Mechanisms', in *Envy and Gratitude and
Other Works: 1946-1963* (1975), London:
Hogarth Press, pp. 1-24.

- Levenson, E. A. (1994) The Uses of Disorder: Chaos Theory and Psychoanalysis', *Contemporary Psychoanalysis*, 30(1): 5-24.
- Masterpasqua, F. and Pema, P. A. (eds.) (1997) *The Psychological Meaning of Chaos*, Washington, DC: American Psychological Association.
- Ogden, T. (1989) *The Primitive Edge of Experience*, Northvale, NJ: Jason Aronson.
- Ogden, T. (1994) *Subjects of Analysis*, Northvale, NJ: Jason Aronson.
- Palombo, S. R. (1999) *The Emergent Ego: Complexity and Coevolution in the Psychoanalytic Process*, Madison, CT: International Universities Press.
- Piers, C. (2000) 'Character as Self-organizing Complexity', paper presented at the winter meeting of the American Academy of Psychoanalysis, New York, January 2000.

Quinodoz, J.-M. (1995) 'Transitions in Psychic Structures in the Light of Deterministic Chaos Theory', *International Journal of Psycho-Analysis*, 78: 699-718.

Scharff, D. (1994) *Refinding the Object and Reclaiming the Self*, Northvale, NJ: Jason Aronson.

Scharff, J. S. (1992) *Projective and Introjective Identification and the Use of the Therapist's Self*, Northvale, NJ: Jason Aronson.

Scharff, J. S. (1994) *The Autonomous Self: The Work of John D. Sutherland*, Northvale, NJ: Jason Aronson.

Scharff, J. S. and Scharff, D. E. (1998) *Object Relations Individual Therapy*, Northvale, NJ: Jason Aronson.

Schore, A. N. (1997) 'Early Organization of the Nonlinear Right Brain and Development of a Predisposition to

Psychiatric Disorders', *Development and Psychopathology*, 9: 595-631.

Segal, H. (1963) *Introduction to the Work of Melanie Klein*, London: Hogarth Press and the Institute of Psycho-Analysis.

Spruiell, V. (1993) 'Deterministic Chaos and the Sciences of Complexity: Psychoanalysis in the Midst of a General Scientific Revolution', *Journal of the American Psychoanalytic Association*, 41: 3-44.

Steiner, J. (1993) *Psychic Retreats: Pathological Organizations in Psychotic, Neurotic and Borderline Patients*, London: Routledge.

van Eenwyck, J. R. (1997) *Archetypes and Strange Attractors: The Chaotic World of Symbols*, Toronto: Inner City Books.

Winnicott, D. W. (1963) 'The Development of the Capacity for Concern', in *The Maturational Processes and the*

Facilitating Environment (1965), London:
Hogarth Press, pp. 73-82.

Winnicott, D. W. (1971) *Playing and Reality*,
London: Tavistock.

Table of Contents

[About the Authors](#)

[Chaos theory and object relations: a
new paradigm for psychoanalysis](#)

[PRINCIPLES OF CHAOS](#)

[THEORY](#)

[APPLYING PRINCIPLES OF](#)

[CHAOS THEORY TO THE](#)

[CLINICAL SITUATION](#)

[CLINICAL CHAOS](#)

[THE ANALYST'S](#)

[SURRENDER TO CHAOS](#)

[REFERENCES](#)