

**ORDER OUT OF CHAOS – AN ALTERNATIVE MEANING  
CONSTRUCTION FOR LOSS**

by

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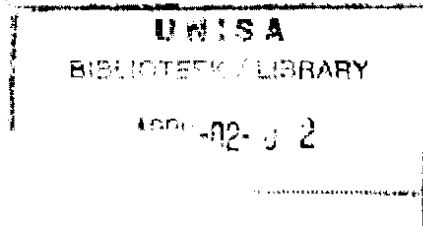
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## SUMMARY

This thesis constitutes a narrative that explores an alternative meaning construction for the experience of loss. During the telling of this story, I consider the appropriateness of adopting the 'new paradigm' approach for this particular thesis, and the constructivist and social constructionist epistemological assumptions underlying such an approach. I delve into the use of 'self' as researcher under this epistemological umbrella. This is followed by an exploration of 'chaos theory' and its application to social systems. And finally, I consider the usefulness of this theory in constructing meanings for loss experiences on various systemic levels within my own family system.

### Key terms:

Constructivism; Social constructionism; New paradigm research; Narrative; Chaos theory; Death; Loss; Grief; Mourning; Systems.



## CHAPTER 1

### INTRODUCTION: IN THE BEGINNING

*"... he who remains passive when overwhelmed with grief loses his best chance of recovering elasticity of mind." (Darwin in Bowlby, 1985, p. 345)*

'Speak to the children of Israel and tell them to make fringes on the corners of their garments throughout their generations, and to put on the fringes of the corner a thread of blue ...'. During the *shiva* for my son Yosef, many people came bearing gifts of the heart. One friend sat near us, wrapped up in our agony, remembering losses of his own. He recalled that his Rabbi had said that the white background on the fringes can be likened to one's ordinary reality – the times in life when things flow in a predictable pattern. The thread of blue is the shock that bursts onto the other, ordinary pattern of life, utterly changing and disrupting it. (Belsky, 1992, p. 7)

The impetus for this thesis began as a need to acknowledge the 'thread of blue' that is the loss of my beloved brother, Steven. As it grew and assumed process and form, the writing created the imaginary doorway that would open points of access in my exploration of both the terrains of the 'thread of blue' and the 'white' background. Each time I venture forth into the reality of his death, a door opens. Through this door I re-enter the background white. The deeper I enter the thread of blue, the acknowledgment and acceptance of death, the more deeply I begin to re-experience the joys of everyday living.

The freedom to travel between the two terrains has changed my view. The angle of my vision has widened to include a more textured tapestry. And now, if the blue is bluer, the white is whiter.

I sit at present surrounded by both the ‘white’ and ‘blue’, these colours interwoven, one colour not being able to exist without the other for me. The story that awaits you, my co-authors, is one that may change the shades of your own palettes, as it has mine with each reading of it.

The central theme of this story concerns my personal search for meaning around the theme of loss. As such, my tale begins with an epistemological eruption which shook the basic assumptions that I had relied upon for much of my life in constructing meaning, leaving me at a loss as I discovered something far more useful – constructivism and social constructionism.

As my story emerges, I write from the humbling positions of constructivism and social constructionism, and therefore hold in tension an awareness of the infinite number of ways in which my tale could have been told. Under this epistemological umbrella, I explore the domain of ‘narrative’ as a valid and useful tool for this particular piece of work. From the position of narrative theory, we imbue experience with meaning via the narrative process, that is, we make sense of lived time by storying it. In accordance with the stipulated epistemological position, the story told here is only one possible version.

All narratives are organised around main themes, the ideas that frame the content of the story. The dominant theme of this story concerns itself with my search for more useful meaning constructions for personal loss experiences. Through the search, I share with you my frustrations and struggles in attempts at using pre-scribed models, and how this lead to the discovery of ‘chaos theory’ as a more useful frame in constructing meanings not only with regard to loss experiences, but with regard to understanding and describing processes of change on many systemic levels.

The patterns that emerge as the narrative unfolds are at once beautiful and strange. At times the story is chaotic, but just as you feel you are drowning in the disorder, order begins to emerge on another level. This tale has afforded me the opportunity to embrace both the order and chaos we so often find ourselves living out, and in. My hope is that as you co-author with me, my story will give you

enough of a glimpse to discern your own patterns of order and chaos.

## CHAPTER 2

### RESEARCH METHODOLOGY: A NARRATIVE BEGINS TO EMERGE

*"I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me." (Newton in Gleick, 1987, p. 159)*

#### In search of 'truth'

The history of humankind is saturated with instances of attempts to understand the world. It seems our curiosity has been directed at the same fundamental questions throughout time - What is the world? How can we come to know it? What is the *truth* about these matters? (Lincoln & Guba, 1985)

The concept of truth is an elusive one. What has evolved via our elusive search is a history of attempts at creating templates by which we can live. Why do we search for these templates for living life? Why do we want to slot our problems into algorithms and come out with solutions? Because it's easier to follow the rules. Because this is all we know. And, because we presume this is the only way to deal with problems. Where do these assumptions emerge from?

According to Lincoln and Guba (1985), inquiry has passed through a number of 'paradigm eras', periods in which certain sets of basic beliefs guided inquiry in very different ways - "If a new paradigm of thought and belief is emerging, it is necessary to construct a parallel new paradigm of inquiry." (Lincoln & Guba, 1985, p. 16).

### **Old paradigm research and the positivists**

Emerging out of a time when little was known about the world and how it worked was what has come to be known as the 'logical positivist' paradigm. This era was dominated by a search for certainty and truth in a world that appeared uncertain, a world that contained many black holes. This paradigm thus assumes that a real social world exists, and that this world is singular, stable and predictable. It further assumes that if we apply the proper methods, we can have increasingly accurate views of what really happens in the world (Atkinson, Heath & Chenail, 1991).

The model of the person in this paradigm regards people as isolable from their natural contexts, as units to be moved into a research design, manipulated and moved out again. Thus, people are used as objects of research and instances of laws and patterns (Reason & Rowan, 1981). With these underlying assumptions about the world, Hesse (in Lincoln & Guba, 1985) presents a statement of what are to be taken as the characteristics of the empirical method: experience is taken to be objective, testable, and independent of theoretical explanation; theories are artificial constructions or models; the language of natural science is exact, formalisable and ideal; and meanings are separate from facts. Thus, logical positivism may be defined as, "a family of philosophies characterised by an extremely positive evaluation of science and scientific method" (Lincoln & Guba, 1985, p. 19).

The major characteristics of a research design under the positivist paradigm are that it is required to be very clear and specific regarding the process and procedures to be followed, what information will be obtained and how the results will be presented. This demand for clarity is rooted in the positivist assumption of certainty and of a single true reality. Hence, the positivist experimental method includes strategies to allow for 'unbiased', value-free observation and analysis of data.

Lincoln and Guba (1985) cite a number of criticisms with regard to the positivist approach to research: it confines science to be used merely for prediction and control; they are of the opinion that positivism is overly dependent on

operationalism which results in the splintering off of the universe; positivism leads to determinism which is 'repugnant' because of its implications for human free will; it is also reductionistic, making all phenomena (including human phenomena) subject to a single set of laws; positivism has produced research with human respondents that truncates the human spirit; and finally, positivism falls short of being able to deal with emergent conceptual formulations. The above mentioned authors are of the opinion that logical positivism rests upon the following assumptions which are increasingly difficult to maintain: an ontological assumption of a single, tangible reality 'out there' that can be broken apart into pieces capable of being studied independently of each other; the possibility of separating the observer from the observed; what is true at one time and place may under appropriate circumstances be assumed to be true at another time and place, that is, contextual and temporal independence of observations; linear causality is assumed - there are no effects without causes and no causes without reciprocal effects; and there is an assumption regarding the possibility of value-free observations - this methodology guarantees that the results of an inquiry are essentially free from the influence of any value systems.

The temptation to approach this inquiry from a logical positivist standpoint was evident for me, as it seemed that a contained, structured, well-focused, definitive inquiry would be far simpler to pursue. It would also provide me with the type of certainty I have been so used to seeking in my everyday world. Prior to my two years master's training course, I would have considered no other approach. I was accustomed to seeking definitive answers to well-formulated questions - this is what I had been schooled in for approximately twenty years. The final stages of my 'schooling', however, seems to have shaken the very foundation of all this certainty, and left me with more answers than questions. The questions, however, have evolved, taken on a new order, which allows for new possible dimensions in the many answers I discover and create. Suddenly, a plethora of worlds were open to me - exposing alternative ways of thinking and conceptualising.

In retrospect, I became aware of how firmly I held on to my old certainty, and what a loss this seemed at the time. Why wouldn't I want to construe my world as safe and certain? Why wouldn't I want to feel that I could, to a large extent,

determine my own future? Back and forth, I struggled between what I knew to be safe, and what was being presented to me through the course of my clinical training - a blindingly, bright new epistemology.

### The world of Gregory Bateson

Part of my journey in discovering this new epistemology was a tour taking me back to the mid-eighteenth century where the biological world was defined by a supreme mind (G-d) at the top of the ladder. This was the basic explanation of everything downwards from that, to man, apes, and so on, down to the infusoria. This hierarchy was rigid and assumed that every species was unchanging. Lamarck turned this ladder of explanation upside down and said that it all starts with the infusoria and that there were changes leading up to the development of man. According to Bateson (1972), turning this taxonomy upside down is one of the most astonishing feats that has ever occurred.

The logical outcome of this turn-around was that the study of evolution could provide an explanation of *mind*. Bateson proposes a new epistemology where the individual mind is immanent but not only in the body. It is immanent in the pathways and messages outside the body; and there is a larger Mind of which the individual mind is only a subsystem. This larger Mind is immanent in the total interconnected social system and planetary ecology (Bateson, 1972). And it is to this ecology that Bateson (1979) turned to discover what he calls "the pattern that connects" (p. 77).

The most basic epistemological act is ~~the~~ creation of difference - "it is only by distinguishing one pattern from another that we are able to know our world" (Keeney, 1983, p. 18). For Bateson, what is vital is how we draw these distinctions, and how these acts of distinguishing are connected to the ways in which we come to know and create our worlds.

Bateson (1979) proposes that by drawing distinctions we create boundaries and separateness in our acts of coming to know the world. He also suggests that these 'acts' are highly personal, that "all outside knowledge ... must derive in part

from what is called self-knowledge.” (Bateson, 1979, p. 148). He proposes that all perception operates upon difference - the information we receive via our sense organs is ‘news of difference’ and we use language as a tool for imposing distinctions on this news of difference. With our language we take this news of difference and create what we believe is a **real** reality - something tangible. One of Bateson’s (1979) presuppositions suggests that language stresses only one side of an interaction - by the syntax of subject and predicate, language asserts that ‘things’ somehow ‘have’ qualities. Bateson (1979) proposes that a more precise way of talking would insist that these ‘things’ are produced, are seen as separate from other ‘things’, and that they are made ‘real’ via their internal relations and via their behaviour in relationship with other things, and with the person who is languaging. Thus, “we have *names* of faces, *names* of edges, *names* of apices, and that’s what we’re playing with. Not *faces*, *edges*, and *apices*.” (Bateson, 1991, p. 177) - in a curious way it becomes legitimate to give ‘real’ dimensions to what are really only descriptions of dimensions, only **ideas**, ideas generated by the self.

This process of splitting off parts of the universe is reflected in the supposed dichotomy between mind and nature - and thus Bateson developed his notion of ‘mind’ as an attempt to close the gap between these two supposedly separate entities. According to Keeney (1983), one of Bateson’s most important contributions has been his definition of ‘mind’ as a cybernetic system, where mind represents an aggregate of interactive parts that exhibits a feedback structure. From such a perspective, the complexity of such systems or minds ranges from simple feedback to what Bateson has called an ‘ecology of mind’. Thus, for Bateson, mind is not some-thing that exists inside the skull; rather it extends far beyond the perimeter of the human body and reflects the many parts of the natural world outside of man. Moreover, wherever there is feedback, mental characteristics will be evident. To illustrate this point, consider the ‘mind’ of a blind man crossing a street - his ‘mind’ necessarily would include his walking cane or guide dog. Seen from this perspective, the cane or dog is an active part of the feedback process that guides the man. Mary Catherine Bateson (in Keeney, 1983) proposes substituting the word ‘mind’ for the word ‘system’, enabling one to see that mind becomes a property, not just of single organisms, but of the relations between them, including systems consisting of man and man, or man and horse, or man and plant.



From this point of view, in all perception, there is a transformation or coding between the report and that which is reported, and thus all we have access to is the pattern of relationship between them. For Bateson (1979) there is a wider knowing which is the glue holding together the starfishes and sea anemones and redwood forests and human committees. There is a single knowing which characterises evolution and aggregates of human beings. In transcending the line which is sometimes supposed to enclose the human being, Bateson (1979) puts forward his central thesis - the pattern that connects is ultimately a *metapattern*, a pattern of patterns, that eliminates the dichotomy between mind and nature. For him, mind reflects the large parts and many parts of the natural world outside the thinker.

Bateson (1991) explains that through our processes of transforming and coding we have generated a disconnection between man and nature, losing our sense of meaning - man is slotted into the world of *plemora*, the world of the material, but rightfully fits into the world of *creatura*. "The inner functional typology of the circuits which determine behaviour comes to be a reflection of ... the total matrix, nature, in which the microcosm is embedded and of which it is a part." (Bateson, 1991, p. 104). Thus for Bateson the next logical step was to look to the laws which govern nature for a clue as to the laws that govern man, and for the pattern that connects them. Inherent in these laws are the notions of 'pattern' and 'relationship'.

"Relationship is not internal to the single person. It is nonsense to talk about 'dependency' or 'aggressiveness' or 'pride', and so on. All such words have their roots in what happens between persons, not in something-or-other inside a person" (Bateson, 1979, p. 146). Therefore, he explains, we do not have access to 'things' outside of ourselves, all we can know is the relationship between ourselves and those 'things', the pattern that connects. Looking to nature again for a clue, Bateson (1979) illustrates how we can gain some sort of understanding regarding 'relationship' by looking at our anatomy. When two eyes perceive, each in a two dimensional way, and these descriptions are juxtaposed, a third dimension, namely depth, emerges. He explains further that such multiple comparison is not additive,

(wherein the information obtained would be doubled when two fields are juxtaposed) but rather, it is multiplicative, in that there is an exponential increase in the amount of information obtained by the juxtaposition of two fields. This multiple description gives a 'bonus' of information. In the same way that binocular vision creates the possibility of a new order of information (i.e. depth), so the understanding of behaviour through relationship provides us with a lens of a different logical level (Bateson, 1979).

So, this 'new epistemology' (referred to as new physics, post Einsteinian, or post positivism, among other labels) gave rise to a view of the universe as being an indivisible whole comprising interconnected parts like patterns of an ongoing process (Capra, 1983).

Harre (in Lincoln & Guba, 1985) contrasts positivism with the 'new paradigm':

Where positivism is concerned with surface events or appearances, the new paradigm takes a deeper look. Where positivism is atomistic, the new paradigm is structural. Where positivism establishes meaning operationally, the new paradigm establishes meaning inferentially. Where positivism sees its central purpose to be prediction, the new paradigm is concerned with understanding. Finally, where positivism is deterministic and bent on certainty, the new paradigm is probabilistic and speculative. (Lincoln & Guba, 1985, p. 30)

### **Drawing a distinction with new paradigm research**

It became more and more evident to me that approaching this inquiry from within the old paradigm approach was not only inappropriate, but also unethical. I shall return to the question of ethics later on in this chapter. The more I was exposed to this new way of thinking about the world, the more it seemed that a new paradigm approach is particularly appropriate when human beings are the subject of inquiry.

Still, I continued to question: given the criticisms that logical positivism and other forms of empirical research have come under through the years, as well as formulations of 'softer' methods of inquiry, is there a need for yet another opposing viewpoint? What does the new paradigm approach to research have to offer that modes such as participant observation, Giorgi's phenomenological research, Lewin's action research or Grof's transcendental research have not already provided as a challenge to empiricism's rigid devotion to objectivity?

New paradigm research is seen by Reason and Rowan (1981) as not merely critical of 'orthodox research', but actively opposed to it: "Through our balanced, cool appraisal there comes an undercurrent of hatred and horror about what traditional research does to those it studies, those who do the research, and about the dreadful rubbish that is sometimes put forward as scientific knowledge." (p. xii). Reason and Rowan (1981) put forward that the primary strength of new paradigm research lies in its emphasis on personal encounter with experience, and encounter with persons.

Before proceeding with the new approach to research methodology that accompanies this new epistemology, let us take a deeper look at the basic assumptions underlying this alternative. The constructivist and social constructionist movements developed as a reaction to the realist stance of an objective ontological reality and the correspondence theory of truth. At the heart of these movements is the notion that what is perceived is determined by the perceiver and not by the perceived. Von Glasersfeld (in Van der Watt, 1993) states that "knowledge is not passively received either through the senses or by way of communication, but it is actively built up by the cognising subject." (p. 18). For the constructivists, there is a recursive dialectic throughout the process of perception between our sense organs and the abstract systems we create. For the social constructionists knowledge of the self and the world is constructed via social interchange through language. Truth from this point of view is social consensus - "social constructionism is the claim and viewpoint that the content of our consciousness, and the mode of relating we have to others, is taught by our culture and society: all metaphysical qualities we take for granted are learned from others

around us.” (Owen, 1992, p. 386).

These basic assumptions about ‘reality’ have consequent implications for research on various levels. Lincoln and Guba (1985) expound a number of axioms for new paradigm research. Rather than searching for an ultimate truth based on a single reality, there are the possibility of multiple constructed realities that can be studied holistically, which will lead to a deeper understanding as opposed to the possibility of prediction and control. Under this paradigm the relationship between the knower and the known is inseparable - they interact to influence one another, and this influence is information. The aim of the inquiry is to develop an idiographic body of knowledge that describes an individual case, with the possibility of further generalisation. From this point of view all entities are perceived to be in a state of mutual simultaneous shaping so that it is impossible to distinguish causes from effects. Finally, the role of values in the inquiry is acknowledged, and inquiry is seen as value-bound as it is influenced by inquirer values, by paradigm choice, by choice of substantive theory, and by the values inherent in the context of the inquiry.

Approaching my inquiry from this new paradigm felt liberating. Without the need to find one true answer, to one question, vast opportunity suddenly seemed open to me. However, with greater opportunity comes a wider range of choice on many levels with regard to the research methodology. Bogdan and Taylor (1975) define methodology as “the processes, principles and procedures by which we approach problems and seek answers.” (p. 1).

### **An ‘emerging’ narrative**

Turning to the literature on new paradigm research, I explored what was on offer with regard to research design. Guy et al (1987) define research design as “the plan of procedures for data collection and analysis that are undertaken to evaluate a particular theoretical perspective i.e. process of planning and conducting the research study” (p. 92). Lincoln and Guba (1985) put forward the concept of ‘emergent design’. They are of the opinion that it is inconceivable that enough could be known ahead of time about multiple realities to devise a design

adequately. They feel that what emerges as a function of the interaction between inquirer and phenomenon is largely unpredictable in advance, and that the various value systems involved (including the inquirer's) interact in unpredictable ways to influence the outcome.

I found this approach to be quite attractive as setting the boundaries to my inquiry on the basis of the emergent focus permitted multiple realities to define the focus of my research. I knew that I wanted to explore issues of loss, mourning, and associated ritual, however, I was not yet ready to hone in on anything more specific at the time of this realisation. Lincoln and Guba (1985) explain that the naturalist cannot determine the end result of the research and therefore starts with a focus that may change, and as the focus changes so may the procedures. Thus with the naturalist approach, design cannot be specified in advance, rather it has to emerge, develop and unfold as the inquiry proceeds.

### **Emergence**

The birth of this story has its roots in a death.

In search for a researchable topic for this thesis, my supervisor suggested that I ask myself what I have a 'burning desire' to know more about, something that I 'passionately' want to investigate. At the time these questions were posed to me I came up with little more than a blank. This blank remained, until the tragic and untimely loss of my brother, Steven. His death sent me reeling with many questions that I felt 'passionate' about.

In an attempt to gain some understanding of, and generate some meaning for, his death, it seemed an obvious choice for me to explore death, loss, grief, and mourning. Although profoundly affected on a personal level, I was part of and witnessed the impact this loss had on my family. Making the assumption at that time that research needs to be done 'on' other people, I developed the idea of researching a similar loss suffered by other families. I wanted to explore the impact of such a death on the family system, to track the evolution of the family from before the loss, to the point of crisis, to movements that occurred beyond that point.

I was asking questions about: coping mechanisms; the use of rituals in that coping (or lack of coping); the generation of meaning attributed to the loss by the family; the movement through various prescribed stages of mourning; how the individual, personal experience of grief is affected by the family, and vice versa - how family mourning impacts on the personal experience of the loss; how the unexpectedness of the loss has shattering consequences; when the loss is that of a child, how this impacts differently from parental loss; how the death forces role loss and change; and, how the specific social and cultural contexts in which the family is embedded impacts on the mourning experience of the family. My list of 'burning' questions suddenly became endless.

My intention was to journey with one or two families, exploring various familial patterns that were well embedded through the generations at times of loss, and tracking movements towards greater systemic order or chaos. Having read extensively through much literature on loss and mourning, I found little there that gave me insight into my own recent experience of loss. Over and above this, I found the presented stage theories of mourning to be rigid and straightjacketing, not allowing for much movement or individual experience in the process of recovery and subsequent growth.

In explorations for a framework that would assist in making sense out of the type of experience that throws one into complete turbulence, my supervisor guided me toward looking into the work of Prigogine and Stengers (1984). Thus, a guiding substantive theory emerged from the inquiry - as Lincoln and Guba (1985) explain, "no a priori theory could possibly encompass the multiple realities that are likely to be encountered" (p. 55), also a priori theory is likely to be based on a priori generalisations which provide a poor idiographic fit to the situation encountered.

Thus the purpose of the inquiry evolved into an investigation that would explore whether Prigogine and Stengers' (1984) theory of 'order out of chaos' could be used as a basic model in conceptualising the grief and mourning processes experienced by Jewish bereaved families who had suffered an unexpected loss, as opposed to attempting to fit such experiences into prearranged stages of mourning, and how the rituals specific to this religion played a role in assisting the grieving

family to reach a place of relative order or chaos.

The intention was to make use of the case study methodology. Definitions in the literature regarding what a case study is range from simplistic statements such as, 'a slice of life' or an 'in depth examination of an instance' to more formal statements as Denny's "intensive or complete examination of a facet, an issue, or perhaps the events of a geographic setting over time" (Lincoln & Guba, 1978, p. 360). Lincoln and Guba (1985) suggest that the definition of a case study will depend on its purposes. The original idea was that I would make use of the case study methodology as a means of description of specific experiences and test the above mentioned theory and hypothesis.

In an attempt to embark on this research project in the 'correct' manner, I began by selecting gatekeepers to various organisations very carefully. Much energy went into speaking to the 'right' people, utilising the 'right' channels, following the 'right' paradigm research. The intention was that letters be sent out to grieving families, expressing compassion and empathy for their untimely loss, and providing an invitation for them to join me in my research as a means to making some sense, and giving some meaning, to their tragedy.

At this point in the history of my dissertation I began to experience something completely uncharacteristic - a new pattern began to evolve. I became stuck. Instead of steamrolling ahead with putting my plan into action (my normal pattern), all action seemed to cease (later came the realisation of action in non-action). For some reason, which I was unable to fathom at the time, I could not move forward in my usual characteristic manner when I have a 'project' to complete.

Spending much time grappling with my inability to move forward, and engaging in many conversations with myself in this regard, it finally dawned on me. This strange 'stuckness' was about my discomfort with the idea of invading the raw pain of another family at a time of intense and private crisis. Having visited this place of sorrow, knowing this place as I do now, I felt disrespectful asking to be invited in to another's. Part of this was the realisation that we each create our own

place of mourning, and that such a private place cannot be 'known' by another.

My next move was to take my new realisations to my supervisor, to take my internal dialogues and share them with him, thereby opening up another level of conversation. Together we began to create a new reality, a new slant for my dissertation. There began the realisation of the usefulness of narrative, dialogue, and storytelling. I wondered aloud about the validity of telling the stories of other people, of 'truly knowing' these stories. These types of questions led to the evolution of the idea that the only story I felt I had a right to tell was my own - the one story that I could share that has validity for me.

Part of this dawning came with the realisation that this dissertation needed to be useful for me in order for it to be of any value to the reader. That part of its validity lies in the fact that this dissertation (from conception, through process, to end) has been a therapeutic and cathartic experience for me. Writing this document has added new dimensions to the meanings I have constructed around the loss of my brother, extending to recreating new meanings for many other losses. Thus, shaping and reshaping the way I conceptualise and experience my world in the present. For me, this is essentially testament to the validity of this paper. My hope is that such an experience (and that is what this dissertation has been) would add new dimensions, new levels, to the stories that other people tell themselves - thereby perturbing and shaping new realities in the painful process of loss.

So, my questions began to change. When did I first learn about loss? What were the first meanings I ascribed to early losses? How have these meanings evolved? How have my various experiences of loss impacted on each other? What is the meaning of loss in my family? How has this systemic meaning attribution impacted on my own meaning creation? And, how have I impacted on my family's meaning of loss? What role have societal, cultural, and religious systems played in shaping my own and my family's experiences of loss? Looking back through the generations, are there repeating patterns around the experience of loss? My questions became endless and dynamic - each one forcing the awakening of a new question, a new narrative, a new meaning.



In search of a starting point, I grappled with my own losses - only to find that they are embedded in a complicated and intricate web that began many years ago. The web I refer to is a family rich in heritage, stories, and rituals that revolve around loss, leaving, disengaging, connecting, and growing, and loss again. This type of pattern seems intricately entangled with my family system and reverberates throughout the patterns of my own life.

Shedding the skin of the old paradigm approach to my inquiry was inevitable, it had taken on a flow of its own - "emergent design is where succeeding methodological steps are based upon the results of steps already taken, and implies the presence of a continuously interacting and interpreting investigator." (Lincoln & Guba, 1985, p. 62). I experienced the loss of structure and certainty that accompanies taking the positivistic approach as that, a loss. Yet, out of the loss was borne a new world of possibility and integrity.

The more involved I became in the inquiry, the more I realised that it was beyond the scope of old paradigm research. Plug (1990) explains that the research design must suit the research problem. It became evident that I needed to adopt an approach that is amenable to exploring multiple realities, and an approach that is sensitive to and adaptable to the many mutually shaping influences and value patterns that I may encounter. The new paradigm approach was clearly the one of choice. Lincoln and Guba (1985) are of the opinion that setting boundaries to the inquiry on the basis of the emergent focus permits the multiple realities to define the focus. They go on to explain that boundaries to the inquiry cannot be set without intimate knowledge of the context in which the inquiry is situated, as foci have no meaning in abstraction from the local investigator value system.

My next step was thus to explore the context in which I was to work - my family system, with all its unspoken rules and rituals. I shared with them what had emerged as the process of my inquiry had unfolded, and how I had come to the point where I realised that what I was researching were my own experiences of loss, and that these are intimately embedded within my family. I explained that embarking on this inquiry would mean exploring with them their own experience of loss, as individuals, and as a family system. I explained to them that my plan was

to have a series of conversations with each of them alone, and together as a unit. My hope was that out of these narratives would emerge new meaning, not only for myself, but also for a family in anguish.

Rather than continuing my attempt to squash traditional ideas regarding the use of the case study method into my inquiry, it became clear that a case study of myself, and my own family system would lend itself well to the full description I was searching for; a description that would encompass as many facets of my focus as possible, thus making 'understanding' possible for the reader. Lincoln and Guba (1985) suggest that the case study mode of inquiry is better adapted to a description of multiple realities for the following reasons: it is adaptable to demonstrating the investigator's interaction and biases; it provides the basis for both individual 'naturalistic generalisations' and transferability to other sites (via thick description); and, it is suited to demonstrating the variety of mutually shaping influences that may be present. Thus, my mode of inquiry remained the 'case study', however, now it seemed far more open and flexible, and able to generate meaning that could be useful for myself, my family, and you the reader.

It emerged that the primary instrument I was to use throughout my inquiry would be my -'self', together with the rest of my family. Steier (1991a) is of the opinion that research is a story about ourselves involving questions such as: How am I punctuating this system? What aspects come to the foreground for me? What are my lenses, biases, theoretical slants that are facilitating this particular perspective?

It became apparent that what had already come about was that I had been languaging, dialoguing, throughout the initial stages of this inquiry, and that a 'story' had begun to unfold prior to my realisation that I was in fact telling a story about myself.

### **'Storytelling' as inquiry method**

The master gave his teaching in parables and stories that his disciples listened to with pleasure - and occasional frustration, for they longed for something deeper. The master was unmoved. To all their objections he would say, 'You have yet to understand, my dears, that the shortest distance between a human being and truth is a story' (de Mello in Hayward, 1990, p. 46)

Storytelling is a way of exploring meaning - a practical co-operative hermeneutic (Reason & Rowan, 1981). Stories are a way of reflecting on one's experience and capturing those parts of experience that cannot be contained within propositions. It is also a way of making sense of these experiences. Labov (1982) defines narrative as "a recapitulation of experience that maintains the strict temporal ordering of events as they occurred in the 'real world'" (in Mishler, 1986, p. 263).

Storytelling is not a new method of inquiry; Freud had already adopted the Greek myth of Oedipus in order to illuminate the meaning of his neurotic patients' stories. James Hillman (in Reason & Rowan, 1981) argues that "my soul is not the result of objective facts that require explanation; rather it reflects subjective experience that requires understanding." (p. 338). The expression of experience, and therefore inquiry into meaning, is an important aspect of research that has been for the most part ignored by orthodox science. Perhaps via 'storytelling' as an inquiry and research method this shortcoming may be corrected.

Within the literature, two theories or approaches to narrative can be distinguished: the structuralist approach and the hermeneutic approach. Structuralism is concerned with the structural features of the story - plot, character, and theme are used for description and classification. Hermeneutics is concerned with subjective interpretation and animation of a text to find its individual meaning. Stories are regarded as open systems and their meaning depend as much on the teller as on the listener (Landau, 1984).

Eckhartsberg (in Reason & Rowan, 1981) sees human meaning-making as resting in stories - "To be human is to be entangled in stories." (p. 82). To make meaning manifest through expression requires the use of a creative medium through which the meaning can take form. Story and storytelling seems to be the most universal of all expressive media and thus appears to be the logical choice as a mode of inquiry and a way of knowing. Stories are a prominent feature of human beings in interaction. Via storytelling people open themselves up to new experiences and discern what is happening for them. They reflect on their experience and attempt to make sense of it (Mishler, 1986).

Gergen and Gergen (1984) maintain that people do not possess a 'life story' but rather select a narrative and then choose those events from their past that justify the selected narrative. Throughout this inquiry it has been revealed to me over and over again that the narrative that I often 'select' out for my own story revolves around the theme of 'loss'.

Bruner's (1986) approach to narrative is a constructivist one - a view that takes as its central premise that 'world making' is the principle function of mind. According to this view, 'stories' do not 'happen' in the 'real' world, but are constructed in people's heads through continuing interpretation and reinterpretation of experience. According to Bruner (1986) the ways of telling and conceptualising become so habitual that they eventually serve as recipes for structuring experience itself. They not only guide the narrative up to the present but also direct it into the future. He agrees that "a life as led is inseparable from a life as told" (p.31). The value of storytelling as a method of inquiry lies in the fact that one can explore the pattern of how a 'story' influences and is being influenced by 'life', and vice versa.

A story often moves from belonging to an individual to becoming part of the collective. Social constructivists view one's life story as a social property or by-product of social interchange (Gergen & Gergen, 1984). Such interchange may be viewed as a negotiation process in which participants propose, adjust, and interweave narratives. Within the negotiation process the stories that emerge structure events in such a way that they demonstrate connectedness or coherence and movement or direction through time - that is, narratives are capable of

generating directionality among a series of otherwise isolated events. Narrative accounting is capable of structuring events in much the same way as an individual structures his life events. Connectedness or coherence as well as a sense of movement or direction through time can be demonstrated via a story - "The only way in which we can describe lived time is in the form of a narrative." (Bruner, 1986, p. 12). Social constructivists emphasise that any existing narrative stands in a reciprocal relationship with other narratives as they move through context and time.

Responses to a story are both personal, and at the same time evokes archetypal aspects. A story has an idiosyncratic meaning for the individual as well as a shared meaning by the reader or listener. In this way a deeper level of expression is evoked (Reason & Rowan, 1981). Thus, the story is a device that leads to a depth of communication that should be valued. A narrative metaphor was employed for this inquiry in order to make sense of my own story as well as to make room for other potential stories to emerge via mutual dialogue. Alternative perspectives, as well as new meanings, began to evolve as the stories of each family member perturbed the story of the next.

According to Reason and Rowan (1981), expression is the goal of new paradigm research and is the mode of allowing the meaning of experience to become manifest. Meaning is so often interwoven with experience that it needs to be discovered or made manifest. It is when we tell stories that we work with the meaning of experience. In its pursuit of scientific knowledge the logical positivist paradigm has explained the 'soul' (psyche) away - Avens (1980) reflects on the irony of the fact that the field of psychology, which is dedicated to the study of the 'soul', has in fact 'exorcised' it: "My soul is not the result of objective facts that require explanation; rather it reflects subjective experiences that require understanding." (Hillman in Reason & Rowan, 1981, p. 137). It is clear that storytelling is especially suited for new paradigm research, and this inquiry in particular, as it focuses on understanding experience, rather than explaining behaviour.

A holistic, subjective view of experience that incorporates multiple meanings can be gained through the use of storytelling as method of inquiry

(Lincoln & Guba, 1988). This inquiry proposes the possibility of multiple realities that are constructions of the human actors involved. These realities exist in the minds of their constructors; thus they cannot be broken apart but must be examined holistically. As both inquirer and member of the family being 'researched', I at once have the advantage of easier access to the 'whole' of the narrative that is always in the process of emerging. This position afforded me the opportunity to gain insight into the complex patterning that is evident there, gaining understanding of these interactional patterns rather than trying to establish cause-effect relationships. Mishler (1986) puts forward that the status/power differential between participant and researcher narrows when using storytelling as inquiry method, the resultant reduced struggle for control creates an open interaction system that essentially leads to 'co-operative' inquiry.

Once there was the realisation that what I was in fact researching was my own story, then came the realisation that this story has a special interconnectedness with the stories of each of my family members. I could not continue with pursuing this line of the inquiry any further without their consent to be part of it (directly or indirectly). I approached each member individually, not wanting any one person's decision to participate in my inquiry to influence the next. Each member had their own set of questions regarding different aspects of the inquiry. These questions were in themselves revealing and perturbing, becoming part of the narrative that was unfolding. In general, there was initial caution about consenting to participate on the part of all members. This was understandable - a family that had experienced so many losses on various levels was not eager to 'give away' or 'lose' yet another part of what held them together, their story.

I explained that the story was really my own, however, that they are inevitably a part of that, and that participation would probably evolve informally via our usual family discussions. On explanation, all members seemed more comfortable with what I was proposing and agreed to partake. On reflection, much information was gleaned via discussions that were not framed specifically for my inquiry - discussions that were a natural part of the everyday evolution of my family system. I systematically recorded my ideas when these discussions came into being in what might be called a 'diary', or a 'log book' - a space that was

created for the purpose of this research as a way of ensuring that important interactions were not forgotten.

On examining storytelling as inquiry method, Mishler (1986) cautions that certain problems may occur when 'teller' and 'listener' do not share cultural values. As this narrative is embedded in a rich cultural heritage it is important to acknowledge that it will hold different meanings for those steeped in the same culture as those who are not. However, there are different levels on which this narrative is explored, and cultural heritage is only one of them. There are other levels, for example the level of family, that are more universal, and meaning may be gleaned in different ways from this point of view. It is worth noting here that this story will perturb each 'listener' or 'reader' in a unique fashion depending on their own cultural heritage, their own sense of family, and their own experience of loss.

#### **The 'self' as researcher and researched**

"The facts do not speak for themselves, but the historian speaks on their behalf, and fashions the fragments of the past into a whole whose integrity is in its representation - a purely discursive one." (White in Gergen & Gergen, 1986, p. 38). This is the essence of storytelling as a research method: the person who lived the series of events constructs the meaning of the life story. The way in which the fragments or events are connected to form a mosaic of the meanings of that life, is personal.

The primary research instrument used throughout this inquiry is thus the 'human instrument' - my-'self', as well as members of my family, and even friends and acquaintances, who became part of the telling and the writing of this story. There have been no questionnaires, no structured interviews, and no statistical analyses. Heron (in Reason and Rowan, 1981) is of the opinion that it is through experiential knowledge that the researcher can come to understand the person or phenomena as a whole and ensure that the research honours the individual's humanity. And, according to Reinharz (1988) it is only when we abandon our attempts at 'subject' manipulation and reductionistic analyses, that the 'I-It'

distinction of 'orthodox' research can be transformed into the 'I-Thou' of new paradigm research.

The new paradigm approach maintains that an acting system that does not engage in experiential self-study can neither produce nor collect valid data due to the unexamined incongruities within its experience - "In other words, the poetry of science is grounded on our desires and concerns, and the course followed by science, in the worlds that we live, is guided by our emotions, not by our reason, as our desires and concerns constitute the questions that we ask as we do science." (Maturana, 1991, p. 135). Because the human researcher is primary in the research process, various aspects of the self of the researcher need to be taken into account. As the primary instrument to be utilised throughout this inquiry it was essential that I developed a heightened sense of my own values, norms, ethics, and biases.

I achieved this via engaging in continual processes of self-reference and reflexivity. Such processes took place recursively throughout the emerging process of this inquiry on various levels simultaneously. Regardless of how much emphasis is placed on 'objectivity', the human element will always be part of scientific endeavour (Lincoln & Guba, 1985). The fact that scientists are explicitly made aware of effects such as researcher bias and self-fulfilling prophecies, and to be on guard against them, indicates how difficult, if not impossible, it is to be a researcher without values that impinge on the research.

Lincoln and Guba (1985) argue that all instruments are value-based; however, the researcher as a 'human instrument' is at least capable of being aware of his/her values and how they enter the research process. A value can be seen as a criterion that comes into play when making choices or stating preferences (Lincoln & Guba, 1985). My values have certainly influenced my choice of research, the methods I have chosen, and the outcomes I have discerned.

Reason and Rowan (1981) explain that the underlying values and norms of researchers tend to reveal themselves in the questionnaires and instruments designed by the researcher as well as the 'truths' the researcher generates. From the positions chosen on various issues throughout the journey taken for this inquiry, it



is quite evident that I place high value on the human being as a source of tremendous and endless amount of information. That for me, words uttered, interactions participated in, patterns discerned, and, non-action noticed, are of far greater value than presenting an equation, or an algorithm, that purports to contain answers to human-life issues.

From both a constructivist and social constructionist point of view, the ideas underlying cybernetic thought are central to the understanding of the concept of reflexivity in which the observer is viewed as part of the observed. According to Babcock (1980) reflexivity has been a topic of philosophers for centuries. He discusses the writings of Heraclitus, Augustine and Rousseau, all of whom it can be inferred shared the idea of the 'naked', experiential self and the reflexive self who was aware of himself as his own instrument of observation. Reflexivity refers to a 'bending back' or 'turning back' of the self. This is a circular process where the 'knowing' process is embedded in a reflexive loop (Steier, 1991a). Gergen and Gergen (1991) propose that reflexivity entails discourse, or conversation, regarding 'who we are'.

I regard many conversations that I have been part of over the last two years as reflexive - some of these interchanges have been directly about my thesis, others have had indirect bearing on this inquiry. Many conversations have involved other people, some have occurred via self-talk. Infinite hours have been spent pouring over literature that has shaped and perturbed the foundations of my logical positivist epistemology. This epistemological struggle has brought me to a point where I can feel liberated by the ideas of constructivism and social constructionism to such an extent that I have been able to embark on this personal journey, and present it as a valid piece of research. I have done this with the belief that whatever I would have researched as an official topic would have been inevitably self-revealing. Steier (1991b) argues that it is important to regard one's own assumptions and methodologies as researchable - in this way the observer becomes an 'object' unto himself.

Engagement in consistent reflexive processes has brought an awareness that the choice of methodology adopted for this inquiry is self-revealing too. That with

a shift in epistemology came a shift in the way I inquire about the world around me. In moving away from searching for an ultimate answer to a specific question, it seemed natural to adopt a methodology that emerged as my data did, a methodology that was flexible enough to allow the inquiry to take on a life of its own.

Henwood and Pidgeon (1995) state that some researchers have argued that reflexive methodologies need to include a criterion of respondent validation in which the researcher's interpretations are agreed to by participants. The authors go on to argue that because we cannot hold up a mirror to reality, validity claims cannot be based upon correspondence between the views and interpretations of the researcher and research participants. I shall return to the issue of validity at a later stage; however, suffice it to say here that I would agree with Henwood and Pidgeon: this narrative is a reality that I have constructed to be true for myself; each of my family members would put forward a different narrative even though it may be based on events that are common to all.

This brings me to the issue of ethics. The implications of reflexivity and cybernetic epistemology for research are that the researcher needs to 'own' the research, as being self-referent and a product of his/her own construction. Keeney and Morris (1985) state that cybernetics proposes ethics as an alternative to the objective/subjective dichotomy. They argue that from an ethical perspective researchers should recognise the connections between the observer and the observed and accept responsibility for their constructions of what they have observed.

### **Legitimation**

Part of taking responsibility for the entire inquiry process is a consideration of the issue of legitimation.

The basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking

account of? What arguments can be mounted, what criteria invoked, what questions asked, that would be persuasive on this issue? (Lincoln & Guba, 1985, p. 290)

According to Shapiro (1986), logical positivists have an idea of validity whose end is certain knowledge, whose structure is correspondence or the perfect template, and whose researcher is impartial and detached. As discussed earlier, this view of reality arose as a response to metaphysical speculation and held that the foundations of science should be based on empirical observations, the rules of logic and statements that are true by definition or meaning. Within this traditional approach, a great deal of emphasis is placed on minimising threats to different types of validity and, in fact, researchers use scientific methods (random sampling, statistics, probabilities, strict control of extraneous variables) in order to do so.

The traditional use of validity has been criticised on many different grounds, including its logical and philosophical shortcomings. Moreover, it has been found to be lacking by people working in the field - "somehow one is left with the feeling that something is missing; that the study failed to do justice to the totality of the phenomenon" (Neimeyer & Resnikoff, 1982, p. 76). For Bernstein (in Atkinson & Heath, 1987), not only are positivistic methods losing credibility for contemporary philosophers of science, but in the area of the social sciences as well. This forces one to question whether psychology should in fact emulate the natural sciences or develop its own peculiarly human science. The question is further highlighted by Goldman (1982) who points out that these methods were adapted, rather than arising out of the social sciences. It seems that the first stage in establishing an appropriate method of inquiry for the social sciences is to avoid making assumptions based on the traditional logical positivist paradigm.

Bateson (in Reason & Rowan, 1981) explains that a totally subjective understanding of the world makes one a solipsist,

... but at the other extreme, the opposite of solipsism, you

would cease to exist, becoming nothing but a metaphoric feather blown by the winds of external 'reality' ... somewhere between these two is a region where you are partly blown by the winds of reality and partly an artist creating a composite out of inner and outer events. (p. 241)

Thus Reason and Rowan (1981) explain that we need to develop a notion of reality in terms of perspective, relationship, and process. The notions of perspective and relationship allow for the individual's subjective perception of an objective reality. In this dialogue between objective and subjective, reality is always emerging and needs to be considered in terms of process. This means that any notion of validity must concern itself both with the knower and with what is to be known. For this inquiry, the knower and the known are part and whole of a continuously emerging narrative - the two are at times inseparable, at times distanced.

Lincoln and Guba (1985) assert that "There is no question that the naturalist is at least as concerned with trustworthiness as is the conventional inquirer." (p. 294). They posit four assumptions with related criteria of legitimacy that are important to consider for this inquiry:

1. 'Truth value' - when there is no longer an assumption of one objective reality, there can be no ultimate benchmark against which to measure justification. Rather, the multiple realities being explored are construed by different individuals. These constructions are mainly accessible to the people who make them. Thus, research into these constructions needs to be credible to the constructors of those realities. So, absolute truth value is replaced with credibility. Thus, much of this inquiry is my own construction and credibility lies with endeavouring to present a piece of work that holds true for me.

2. 'Applicability' - if the assumption of generalisability falls away, it can be replaced with the notion of transferability. The assumption of generalisability means that findings are deemed applicable to other situations due to methods of sampling. In new paradigm research, findings are deemed

applicable only for specific contexts and can be transferred only when the characteristics of the sending and receiving contexts are both known. The contextual boundaries of this inquiry are both highly idiographic and relatively general. The narrative revolves around a specific family, with specific customs and rituals. However, boundaries are also drawn around universal issues such as death, loss, and family.

3. 'Consistency' - the assumption in the old paradigm is that replicability is an indication of validity as this indicates that only the independent variable is responsible for change. However, in the new paradigm, there is an awareness that changes that occur may be the result of actual changes in the participants or changes in the emergent design, and these need to be acknowledged rather than controlled. I have aimed to achieve dependability via methods that take these factors into account. These will be considered shortly.

4. 'Neutrality' - when the assumption of an objective reality falls away, neutrality loses its purpose, as the researcher can no longer be 'objective' by being neutral. For this inquiry an emphasis on objectivity has shifted from the hands of the researcher to the data, and is replaced by the notion of confirmability.

Various procedures have evolved throughout this inquiry that have assisted me in achieving greater legitimacy with regard to the above mentioned criteria. Lincoln and Guba (1985) propose that it is necessary for the researcher to make a significant investment of time in order to achieve greater legitimacy. Here I am afforded a lifetime of investment. This has allowed me to cultivate an intuitive understanding of this family culture as I have been immersed in it for so long. Such a lifetime investment also means that I have established a strong relationship of trust within the research context. However, I made a concerted effort to maintain this trust via the use of 'no hidden agendas' and a demonstration that the interests of all members are a priority. Family members were never pushed into languaging about issues that were too painful, and, as a result of this prolonged engagement in the context, I was able

to sense when this was occurring and was then able to switch to another level of discussion.

Along with prolonged engagement in the field, I also made sure that I persistently observed, even when not doing official research work - "If prolonged engagement provides scope, persistent observation provides depth." (Lincoln & Guba, 1985, p. 304). Via the use of 'tentative labelling' I discerned important issues that would recursively come up at various times. Having these labels in my head assisted me in identifying when and how patterns were being lived out.

As discussed earlier, high quality self-awareness is of utmost importance when embarking on the type of inquiry that I have. 'Peer debriefing' has assisted me on many levels with regard to maintaining recursive self-awareness. Peer debriefing involves "exposing oneself to a disinterested peer ... for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind." (Lincoln & Guba, 1985, p. 308). Lincoln and Guba (1985) suggest that the debriefer be a peer and not somebody in an authority relationship, that they be informed about the subject of inquiry and methodological issues, that they should take the role seriously and be able to play devil's advocate. Torbert (in Reason & Rowan, 1981) advocates that a conversation with a lifetime friend is potentially the most embracing system for "illuminating one's conscious lopsidedness." (p. 247). I have been fortunate to have had such a person travel much of this inquiry and narrative with me. He has assisted in keeping me honest by creating a space in which I was able to explore my reasons and motives for being involved in this particular inquiry, in which I could play with alternative hypotheses, where it was made safe for me to stay with the emerging design when I was tempted to structure my design too much, where in confusion he sat with me and constructed mind-maps as a means of making sense and giving new meaning to large amounts of information, and where I was allowed to de-stress and find renewed enthusiasm with an inquiry that has extended over a long period of time.

According to Atkinson and Heath (1987), in new paradigm research the burden of responsibility for determining the legitimacy of any particular way of constructing reality is shifted from the researcher to the reader. Following their constructivist position, the presentation of findings in the old paradigm is limited because the data is presented only after having been organised and categorised. Thus, the reader is given no opportunity to question the researcher's construction and has to concur with the researcher's validity and reliability appraisals. The alternative they offer is for the researcher to provide as much raw data as possible, so that the reader can determine issues of legitimacy for himself.

This approach has specific ramifications for the issues of applicability and transferability. For this reason I have endeavoured to provide as much data as possible (even where I have deemed some of it unnecessary to include), so that you, my co-author, may determine whether or not the findings and descriptions evident in this narrative inquiry can be transferred and applied to your own unique situation. Thus, in the latter part of the narrative I often make use of rich descriptions, with reference to setting, history, and emotional climates.

### **The story's chaos**

The inquiry itself has not been without its own emotional climate and difficulties. The choice of topic was initially, and has continued to be, a difficult one for me as 'researcher'. Being highly personal, this narrative has certainly held my interest for some time, however, it has also led me to places of immobilisation - periods where I have had to put it aside for a while as at times the narrative was unfolding before my very eyes as I was writing. I often had a sense of being caught in a whirlwind - living the story on one level, languaging and writing it on another, meta-level. At times the inquiry assisted me in making sense of my world, yet there were times I would have preferred not to do this. In a sense then, the inquiry has become part of my living narrative - it has operated as both a project that needs completion, but also as a place for me to make sense of a life story that has often felt too overwhelming

to even glimpse at in any 'real' way.

Choosing to approach the inquiry from a new paradigm perspective also presented some fundamental problems for me. Without the old, familiar, logical positivist approach to such a task I was often left floundering with little structure or direction. In retrospect, it is evident to me that I initially attempted to squeeze my ideas and practices into a positivist structure. Allowing the design to emerge was difficult for me at first. It was after a period of immobilisation, when I had left the work, had engaged in numerous peer debriefing sessions, that I came back to it with renewed ideas and an openness and flexibility that was not present before. It was then that I truly felt part of the unfolding process of the inquiry.

Reason and Rowan (1981) refer to the indeterminacy of emergent design where the researcher begins with a difficulty in deciding on the focus of the research, and during that process has to decide which are the most salient points that need to be studied in depth. They suggest a balance between unfolding the design to meet newly acquired information, and responding to the 'latest, loudest, noises' in the process. Striking this balance is something I learned more and more about as the narrative unfolded.

The approximation of the 'reality' or 'truth' extracted from this inquiry honours the human condition and in its emergence has often led to ambiguity, confusion, uncertainty, and paradox; however, as Heron (1988) states, "... where the human condition is concerned it is better to be vaguely right than precisely wrong, better to own a fruitful confusion than to mask it with irrelevant precision." (p. 165).

It has emerged then, that this inquiry is characterised by a holistic perspective. It is qualitative and idiographic, and has been carried out in a naturalistic setting. It is embedded in knowledge that has emerged from linguistic interchanges and experiential dynamics. I, as researcher, am part of this emerging knowledge, and thus both subject and object. Throughout the inquiry I have aimed to create a multiple, 'both-and' perspective, encapsulating



heuristic truth within a specific social context. I view the participants in the inquiry, all my family members, as active agents with goals and intentions of their own, knowing that throughout the process of the inquiry each member is constructing a narrative of their own - each narrative perturbing the next. It is clear that this inquiry then is aimed at achieving a subjective understanding in terms of pattern as opposed to attempting to measure behaviour. The research findings that follow can be viewed as the descriptions or interpretations of the world of the researcher, by the researcher. This does not negate the fact that there may be many other equally legitimate ways of seeing or interpreting this same world when viewed from another vantage point.

## CHAPTER 3

### CHAOS THEORY: FILLING IN THE MISSING PIECES

*“According to our times and to our experience we represent the natural and the human world by a great set of images. To this set of images we apply, as a template, a system of hypotheses which seems to us coherent. The difficulty in scientific advance arises when some new experience necessitates a reassembling of the pattern of our images.” (Pantin in Bowlby, 1985, p. 38)*

#### A quiet order

Two candles flicker as they welcome in a time of rest - the Sabbath. It is Friday night; a family sits round a dinner table surrounded by an aura created by these burning candles. The table is laden with food and, as I recall this scene, I am at once filled with the familiar aroma of my mother's exquisite cooking.

On this particular night the family is small. My mother and father sit in their usual positions; my husband and I sit next to them. All three of my brothers are not with us on this weekly family occasion. I feel their absence.

I recall with longing the Friday night Sabbath meals when I was a child. As my mother still does today, she would spend a large part of the week planning and preparing an elaborate meal for our family and the friends who would often join us. By the time the Sabbath arrived, our home was filled with a warm energy that the four children in the family would thrive on.

As I sit at the Sabbath table remembering these wonderful evenings, I am brought back to the present by a ringing phone. A phone call at such a time was unusual as most of the people we knew were also celebrating the Sabbath. As my husband and I await (my father already asleep), my mother answers the call. She brings back to the table wonderful news. My oldest brother Steven has just announced his engagement to a delightful girl. As I see the tears of joy in my

mother's eyes, I am at once overwhelmed with emotion. My heart filled with delight, I rush to wake my father and share with him the announcement. We hug and kiss each other, sharing the happy news. It's been a while since we did this.

My brother had taken his girlfriend away to a beautiful resort nearby to propose to her. Caught up in the excitement, he decided he wanted to come home and share his joy with us. I remember thinking to myself how I had never seen my brother so happy; that the expression on his face when he walked in to our home was one I had never witnessed.

We all basked in the joy, chatting furiously about wedding plans and arrangements, as the candles took on a new glow that seemed to change the colour of the light in the room. I have a vivid memory of my thinking that I could not recall feeling this happy and joyful for another person in a long time. I almost had a sense that my heart would jump out of my chest, and there was a familiar ache there that I had so often associated with pain and suffering, yet on this night it was pure joy.

The happy couple did not stay with us long as they wanted to return to their resort. I hugged my brother close to me, and whispered to him that I was so happy for him. For an instant, our eyes met and I was overwhelmed with emotion yet again. As he walked away I thought to myself that I had not felt that close to him in a long time.

### **Random chaos**

My husband and I left this happy place soon after. Driving home, talking about the wonderful news, we passed an accident on the highway. Two cars left smouldering on either side of the road, indistinguishable in the dark. I recall commenting on how serious it seemed, and wondering aloud as to whether we should turn our car around to offer some assistance. My husband suggested that we stop at a SOS phone along the side of the road and report the accident. We did this. Another motorist had pulled up to the phone to do the same. He said he had in fact stopped at the scene of the accident and that it looked pretty bad, that professional

help would be needed urgently.

As we drove away from the SOS phone, I was overwhelmed with a sinking feeling. Could my brother have been involved in the accident? As I silently asked myself this question, I uttered these words to my husband. His first reaction was reassurance that it could not have possibly been Steven, then we both tried to recall the types of cars that were spread on either side of the road. Neither of us had a clear picture.

The drive home was endless. I spent the rest of the journey home wondering whether it was my brother's car, and if it was, how I could not have turned back to offer help. The images that raced through my mind were horrific.

Arriving home, I immediately called the resort, knowing that they would not have arrived there yet, but leaving a message for my brother to call me when he did get in. I recall that all I could manage to do was my routine of cleaning my face, brushing my teeth, and climbing into bed. Lying there, waiting for the phone to ring, the minutes ticked by, and I felt colder and colder as time passed. My mind was blank, I could not think, I would not think.

Two hours had passed, it was 04h00, and not a word had been uttered between my husband and I. I had called the resort a number of times - to no avail. As much as I did not want to admit it to myself, I knew, something had gone horribly wrong. I knew, I had to call my parents. Picking up the receiver, my hand trembled, my body felt numb. As the call clicked through I heard Mark's (my brother's) familiar voice say 'hello'.

On recognising my voice, he told me that Steven was dead. My immediate reaction was, no reaction. I became like an automaton, I knew I had to get back to my parents as quickly as possible. My breathing was shallow as I got dressed again, back into the car, and back on that same road home. Again, not a word was shared between my husband and I.

Arriving back at the same home that had been filled with such joy hours previously; I found it now, as a house of mourning. Within such a period of time, my parents had aged, and as I looked at them for the first time since hearing the tragic news, I knew they would never look the same to me again. They had lost their oldest son.

### **In search of order**

Within two days funeral arrangements had been made, and before I knew it, there we were, a family shaken by this senseless tragedy, standing at his grave. The funeral did not prove to be a meaningful punctuation for me with regard to dealing with this sudden loss. I was more shattered at seeing my parents stand over their son's grave and was unable to connect with any sense of my own loss at this time. The only ritual that stands out for me about this day is that where the mourners' of the deceased tear their clothing (*keriah*).

According to Lamm (1992) the most striking Jewish expression of grief is the rending of garments by the mourner prior to the funeral service. The Bible records many instances of rending the clothes after the news of death. When Jacob saw Joseph's coat of many colours drenched with what he thought to be his son's blood, he rent his garments. Likewise, David tore his clothes when he heard of the death of King Saul, and Job, who knew grief so well, stood up and rent his mantle.

The rending is an opportunity for psychological relief, explains Lamm (1992). It allows the mourner to give vent to his pent-up anguish by means of a controlled, religiously sanctioned act of destruction. Maimonides, according to the interpretation of B. H. Epstein (in Lamm, 1992), notes that this tear satisfies the emotional need of the moment, otherwise it would not be permitted as it is a clear violation of the biblical command not to cause waste.

Gorer (in Lamm, 1992) notes that although Jewish culture gives no symbolic expression to anger, a considerable number of others have done so. This is seen in such rituals as the destruction of the dead person's property or possessions, or, by the various mutilations which mourners have to inflict upon

themselves as a sign of the pain which the dead have caused them. *Keriah* may serve as a substitute for the ancient pagan custom of tearing the flesh and the hair which symbolises the loss of one's own flesh and blood in sympathy for the deceased and which is not permitted in Jewish law (Lamm, 1992).

The *halachic* (legal) requirement to 'expose the heart' (that is, that the tear for the deceased must be over the heart) indicates that the tear in the apparel represents a torn heart. The prophet Joel chastises the Jew to rend the heart itself, not only the garment over the heart, indicating that the external tear is a symbol of the broken heart within (Lamm, 1992).

The grief I expressed at this moment seemed to tap into the deepest wells of my pain and for the first time since Steven's death I felt human. The anguish was exquisite and sacred, the anger ugly. But it felt so good to feel it, and express it. To my disappointment, a woman who was assisting my family through this ritual stopped me in mid-tear. To this day, I am not sure if she stopped me for fear that I may tear the shirt in two (*halachically* incorrect), or because she was afraid of the intensity of my expression. I felt cheated of my expression, my time to be angry.

The week that followed was filled with ritual, family, friends, and religious leaders. Some parts of that week are excruciatingly clear, others are a blur. Judaism has devised graduated periods during which the mourner may express his/her grief, and release with calculated regularity the built-up tensions that are part of bereavement.

The first three days following burial are days devoted to weeping and lamentation. During this time the mourner does not respond to greetings, and remains in his home. It is a time when even visiting the mourner is usually somewhat discouraged, for it is too early to comfort the mourners when the wound is fresh. The period of *shiva*, the seven days following burial, includes the first three. During this time the mourner emerges from the stage of intense grief to a new state of mind in which he is prepared to talk about his/her loss and to accept comfort from relatives and friends. The world is supposed to now enlarge for the mourner. While he remains within the house, expressing his grief through the

observances of *avelut* - the wearing of the torn garment, the sitting on the low stool, the wearing of slippers, the refraining from shaving and grooming, the daily recital of the *Kaddish* (the mourner's prayer) - his acquaintances come to his home to express sympathy in his distress. The inner freezing that came with the death of his relative is now supposed to begin thawing. The isolation from the world of people and the retreat inward is now meant to relax somewhat, and normalcy is expected to return (Lamm, 1992).

Liebman (in Lamm, 1992) maintains that the discoveries of psychology - of how essential it is to express, rather than to repress grief, to move step by step from inactivity to activity - reminds one that the ancient teachers of Judaism often had intuitive wisdom about human nature and its needs. He is of the opinion that traditional Judaism had the wisdom to devise almost all of the procedures for health-minded grief that the contemporary psychologist counsels. "In this magnificently conceived, graduated process of mourning an ancient faith raises up the mourner from the abyss of despair to the undulating hills and valleys of normal daily life." (Lamm, 1992, p. 79).

As a student pursuing my master's degree in clinical psychology at the time of my brother's death, I was well informed with regard to various theories of grief and mourning. In that first week, and thereafter, I often felt caught between the academic ideas I had formulated over the years of my studies in psychology and what was being sanctioned as the 'right' things to do with regard to Judaic practices around the mourning process. Occasionally I found comfort in certain rituals (as mentioned above); however, my in-depth knowledge of the 'stages of grief and mourning' often left me confused and concerned that I was not 'working through' my grief in the appropriate manner. As much as I attempted to make sense and give meaning to the tragedy, I found little help when referring to my academic knowledge.

### Official ordering

Barbato and Irwin (1992) propose that theoretical approaches to grief appear to fall into two broad groups. 'Descriptive theories' depict the phenomenology of the grief process in a basic descriptive way and thereby seek to make the course of grief more discernible. 'Process theories' of grief seek to model the psychological mechanisms underlying grief and to posit the purposes served by these mechanisms.

Most descriptive theories of grief have sought to nominate stages of the grief process. Gorer (in Lamm, 1992), for example postulates three stages: shock, intense grief work, and the re-establishment of physical and mental balance. Tautelbaum (1981) puts forward three major stages: shock and numbness, suffering and disorganisation, and reorganisation.

Stroebe (1993) divides process theories of grief into 'depression models' and 'stress models'. Depression models focus on the emotional response to loss. By positing grief within a framework of emotions, these models have little to say about physical and cognitive responses to loss. Stress models construe bereavement to be a stressful life event that taxes the individual's coping skills.

Implicit in many theories of grief, including the above mentioned, is what Stroebe (1993) refers to as the 'grief work hypothesis'. Use of this term dates back to Freud's paper, 'Mourning and Melancholia' which, in its German original, described the centrality of *trauerarbeit* (grief work). The view that grief work is essential for the resolution of grief is shared by Lindemann (in Stroebe, 1993) who, like Freud, argued that repeated dwelling on the deceased and the lost relationship serves the function of gaining detachment. Within his framework of bereavement as a 'psychosocial transition', Parkes (1986) stresses the importance of grief work, going further than previous formulations by describing various components that make up the process.



Stroebe (1993) reports that there is very little scientific evidence on the grief work hypothesis; moreover, he finds that studies that bear on this issue yield contradictory results. His review of both correlational and experimental studies does not provide unequivocal support for the grief work hypothesis. Stroebe (1993) finds that there is a general dissatisfaction with stage theories in that they seem to imply an orderly, linear progression of grief through clearly defined, mutually exclusive steps.

With little real experience of loss through the death of a loved one, especially a loss so unexpected, all I seemed to have at my disposal in making sense of this experience, were the reams and reams of literature I had read over the years. In the midst of the tragedy, what I had was cold comfort. Nothing seemed to fit into what I had studied, and none of what I had studied assisted me in any way in 'working through' my loss.

Over and above this, I found myself embedded in the loss experienced by the rest of my family. My loss was not an isolated one, and the pain I witnessed within my family largely influenced my experience of the trauma. The 'stage theories' of grief and mourning gave me no insight into this 'collective' experience of mourning. Rather, they propose a mourning process that is isolated, where the stages we move through have no impact on those around us, and those around us have no impact on our own grieving - they do not seem to account for the continual feedback loops that we are all embedded in. According to Kissane and Bloch (1994) the family always constitutes the most significant social group in which grief is experienced. Yet, stage theories make no allowance for this.

With all my knowledge, with all my religious rituals, I was still left with a feeling of emptiness. Something was missing. Even though death is such a natural part of life and the living, somehow all this literature, all these theories, made it somewhat obscure, detached from any kind of real pain or emotionality.

### **Discovering raindrops and clouds**

In my search to understand, to make sense of, to give meaning to, I began to look at other natural processes around me, and how they have been explained. Simple processes such as, the way in which the branches of trees grow in particular directions, and how branches off those branches split and grow in different directions, how the leaves on these branches take on a path of their own, when and how these leaves die. I watched water dripping off the trees and wondered about where it drips from, how often it drips. I looked up into the sky and observed cloud formations, and wondered about the patterns I saw forming there. I watched the shadows that they cast on the leaves I had been observing and sat in awe of how different the leaves looked when masked by the shadows created by the clouds.

### **Missing the sunlight in the shadows of globalisation**

Prigogine and Stengers (1984) are of the opinion that one of the main sources of fascination in modern science has been the feeling that it has discovered eternal laws at the core of nature's transformations. Galileo, and those who came after him, conceived of science as being capable of discovering global truths about nature, and following this conviction the world is seen as homogenous. These authors are of the opinion that classical science still aims at discovering the unique truth about the world and that this science believes that it has the one language that will decipher the whole of nature. Toffler (in Prigogine & Stengers, 1984) explains that one of the most highly developed skills in contemporary Western civilisation is dissection - the splitting-up of the universe into its smallest possible components in order to explain and understand it.

Yet, as Gleick (1987) explains, "Ravenous fish and tasty plankton. Rain forests dripping with nameless reptiles, birds gliding under canopies of leaves, insects buzzing like electrons in an accelerator ... the world makes a messy laboratory for ecologists, a cauldron of five million interacting species." (p. 59). In their attempts to understand such an ecology, mathematically inclined biologists' of the twentieth century built a discipline that stripped away the noise and colour of real life and treated populations as dynamical systems, using elementary tools of

physics to describe life's ebbs and flows. Gleick (1987) proposes that biologists mathematical models tended to be caricatures of 'reality', as did the models of economists, demographers, psychologists, and urban planners, when the soft sciences tried to bring rigor to their study of systems changing over time. Here too, there seemed to be something missing, that emptiness in explanation and models.

By the very success of science, nature was shown to be an automaton, a robot. The urge to reduce the diversity of nature to a 'web of illusions' has been present in Western thought since the time of the Greek atomists. Prigogine and Stengers (1984) explain that the driving force behind the work of the Greek atomists was not to debase nature but to free men from fear, the fear of any supernatural being - "Again and again Lucretius repeats that we have nothing to fear, that the essence of the world is the ever-changing associations of atoms in the void." (p. 3). The reduction of nature to atoms gave rise to what Lenoble (in Prigogine & Stengers, 1984) has called "the anxiety of modern men" (p. 3), and this anxiety has led to a rupture between man and nature.

In our attempts to understand, explain, we have missed out on the bigger picture. Our tools for understanding have led to the isolation of one part of the universe from another. Just as Prigogine and Stengers (1984), Gleick (1987), and Woodcock and Davis (1980) have found scientific explanation lacking somewhat, so too, I found scientific models describing and explaining grief and the mourning process insufficient whilst experiencing my own loss.

### Shifting my vision of nature

In my search for meaning I stumbled upon what will be referred to hereafter as 'chaos theory', also known as 'catastrophe theory', or 'complexity theory'. It seems that for as long as the world has had physicists inquiring into the laws of nature, it has suffered a special ignorance about disorder in the atmosphere, in the turbulent sea, in the fluctuations of wildlife populations, in the oscillations of the heart and the brain, in the varied patterns of grieving for both animals and humans. The irregular side of nature, the discontinuous and erratic sides - these have been puzzles to science, or worse, monstrosities (Gleick, 1987). However, as Toffler (in

Prigogine & Stengers, 1984) explains, most of 'reality' is seething and bubbling with change, disorder, and process, rather than being orderly, stable, and equilibrated. In our search for certainty we have chosen to ignore the disorder around us, and instead studied, examined, experimented on, that which is stable and unchanging. How much then do we really understand about the worlds that we live in? Does this mean that that which we believe we know is only part of a much bigger picture? A picture framed in the 'mess' that science has chosen to ignore over the years.

According to Prigogine and Stengers (1984), our vision of nature is undergoing a radical shift toward the multiple, the temporal, and the complex. Curiously, the complexity that has been uncovered in nature has not led to a slowdown in the progress of science, but rather to the emergence of new conceptual structures that may be essential to understanding of the world - the world that includes us.

Now that science is looking, chaos and disorder seem to be everywhere. Chaos appears in the behaviour of the weather, the behaviour of cars clustering on a highway, the behaviour of oil flowing in underground pipes. According to Gleick (1987), irrespective of that which is being studied, the behaviour obeys the same newly discovered laws.

The word 'chaos' has been an intriguing word for centuries. For most it has been something to avoid. Western theological and philosophical thought has been built around the notion of avoiding chaos. For others, 'chaos' has been a cry of rebellion against this philosophy, with the promotion of ideas of anarchy and personal freedom. Chaos theory represents neither of these attitudes, which seem to be linked to linear models of the universe (Gleick, 1987).

The term 'chaos theory' is most widely used to describe an emerging scientific discipline that is based on the study of non-linear systems. Many chaos theorists feel that they are redirecting a trend in science towards reductionism, where systems are analysed in terms of their constituent parts. These 'new age' theorists are seeking 'whole' explanations. In seeking holistic understanding these

theorists propose a controversial way of thinking about the processes of change in non-linear systems - change in the course of events, change in an object's shape, change in ideas themselves. The theory is controversial as it proposes that the mathematics underlying three hundred years of science have encouraged a one-sided view of change. The mathematical principles are ideally suited to analyse, and they were created to analyse *smooth*, continuous, quantitative change: the smoothly curving paths of planets around the sun, the quantitative increase of a hormone level in the bloodstream. However, there is another type of change - change that is less well suited to mathematical analysis: the abrupt bursting of a bubble, the discontinuous transition from ice at its melting point to water at its freezing point, the qualitative shift in our minds when we 'get' a pun - chaos theory is a mathematical language created to describe and classify this second type of change, and it is challenging scientists to alter the way they think about processes and events in many fields (Woodcock & Davis, 1980).

Chaos theorists have created special techniques using computers to generate spectacular graphic images, pictures that capture the delicate structures underlying complexity. "This science has spawned its language, an elegant shop talk of *fractals and bifurcations, intermittencies and periodicities, folded-towel diffeomorphisms and smooth noodle maps*" (Gleick, 1987, p. 5). Some of which I will consider below. Suffice it to say here that these are what Gleick (1987) calls the "new elements of motion" (p. 5). For this reason, to some, chaos is a science of process rather than state, of becoming rather than being. This is one of the reasons chaos theory seemed more useful when considering the process of mourning than stage theories. Where stage theories imply a linear progression from one static state to another, chaos theory gives space for the explanation of discontinuous and unexpected change processes.

Gleick (1987) proposes that chaos theory breaks across the lines that separate scientific disciplines because it is a science of the global nature of systems, bringing together thinkers from fields that have been widely separate. Chaos theory and its associated tools have developed from three major strains of science. Within mathematics strange attractors, fractals, cellular automata, and other non-linear, graphical models have been used to study data that was previously thought of as

random. Biological schools of thought have used chaos theory to enhance the understanding of genetic algorithms, artificial life simulations, and learning processes of the brain. Within physics, and particularly thermodynamics, the study of turbulence has led to a greater understanding of self-organising systems and system states (equilibrium, near equilibrium, the edge of chaos, and chaos). With the emergence and growing acceptance of chaos theory, the distinctions between these disciplines, and others, is disappearing. The use of chaos theory in this inquiry is testament to the universal applicability of chaos theory across what has previously been called the 'soft' and 'hard' sciences - "Science is not an 'independent variable ... it is an open system ..." (Toffler in Prigogine & Stengers, 1984, p. xii).

With the emergence of chaos theory and the opening up of disciplines, mathematicians, physicists, biologists, chemists, engineers, were all seeking connections between different types of irregularity. Physiologists found a surprising order in the chaos that develops in the human heart, ecologists explored the rise and fall of gypsy moth populations, and economists dug up old stock data and attempted a new type of analysis. The information that emerged led directly into the natural world - "the shapes of clouds, the paths of lightning, the microscopic intertwining of blood vessels, the galactic clustering of stars" (Gleick, 1987, p. 3). A theme of chaos theory is its adaptation to long-standing questions about the forms that recur time and again in nature.

For this reason, the revolution in chaos theory applies to the universe we can see and touch, to objects and patterns of a human scale. Gleick (1987) is of the opinion that there has been a long standing feeling that theoretical physics has strayed far from human intuition about the world. In the past, strong distinctions have been made between man's world and the supposedly alien natural world. A passage by Vico (in Prigogine & Stengers, 1984) describes this most vividly:

... the night of thick darkness enveloping the earliest antiquity, so remote from ourselves, there shines the eternal and never failing light of a truth beyond all questions: that the world of civil society has certainly been made by men, and that its principles are

therefore to be found within the modifications of our own human mind. Whoever reflects on this cannot but marvel that the philosophers should have bent all their energies to the study of the world of nature, which, since G-d made it, He alone knows; and that they should have neglected the study of the world of nations, or civil world, which, since men had made it, men could come to know. (p. 4)

In ancient times, nature was a source of wisdom, where medieval nature spoke of G-d. In modern times, it seems that nature has been silenced. And, in this silencing, we do not seem to hear nature's whispers of wisdom. Chaos theory encourages us to turn back to nature, to listen more carefully, to see with a different vision. If we look closely there, we will notice that everything tends toward disorder and perfect, stable efficiency is impossible - "In our world, complexity flourishes, and those looking to science for a general understanding of nature's habits will be better served by the laws of chaos." (Gleick, 1987, p. 308).

In turning to nature and all her turbulence, Gleick (1987) encourages us to look at ourselves as part and whole of nature's marvel, and in so doing introduces the concept of 'self-similarity'. Are we not systems that attain order via chaotic processes? Researchers are increasingly recognising the body as a place of motion, oscillation, and perpetual change. They have discovered rhythms that were invisible on frozen microscope slides or daily blood samples. They have studied chaos in respiratory disorders. They explored feedback mechanisms in the control of red and white blood cells. Oncologists have now speculated about periodicity and irregularity in the cycle of malignant cell growth. Physiologists have begun to see chaos as health. It has long been understood that nonlinearity in feedback processes serves to regulate and control. Simply put, a linear process, given a slight nudge, tends to remain slightly off-track. A non-linear process, given that same nudge, tends to return to its initial starting point - "Pattern born amid formlessness: that is biology's basic beauty and its basic mystery. Life sucks order from a sea of disorder." (Gleick, 1987, p. 299).

### **Being and becoming part of nature's chaos**

Looking around us at everyday processes it becomes evident that nature is not always comfortable and consonant with herself (Prigogine & Stengers, 1984). Yet, through all the turbulence and chaos, she not only lives but also grows. I was encouraged to take my chaotic experience of grief and mourning and look to mother earth, and chaos theory, for clues that may assist me in filling in the emptiness I had discovered in my attempts at creating meaning out of traditional stage theories of grief and mourning.

#### **Non-linear systems**

Chaos theorists hold that while some parts of the universe may operate like machines, these are closed, linear systems, and closed systems, at best, form only a small part of the universe. What is left over are often referred to as *open, non-linear* systems, where there is an exchanging of energy, matter, or information, within the system itself, and between the system and its environment. Prigogine and Stengers (1984) explain that biological and social systems are open and thus any attempt to understand them in mechanistic terms is doomed to failure. The above mentioned stage theories didn't seem to take account of such processes of exchange and the impact they would have on the mourning process.

Gleick (1987) says that unlike linear systems, easily calculated and easily classified, non-linear systems often seem essentially beyond classification - each system different from every other, each system a world unto itself. The idea of non-classification seemed quite attractive to me, and felt very liberating. No longer did I have to struggle to fit my own mourning process into a pre-arranged model of the process, and, over and above this, this mourning was placed within the larger context in which it was being lived out - my family, our community, both non-linear systems.

Followers of chaos theory are of the opinion that non-linear systems that exhibit chaos have rarely been studied. When people in various fields stumbled upon visions of chaos in their work, all their training argued for dismissing them as



aberrations. In the process of dismissal, infinite amounts of information have been lost over the years. With the advent of chaos theory more and more people in the know are coming to understand how non-linear nature is (Gleick, 1984).

In order to grasp this idea it is important to make a distinction between systems that are in 'equilibrium', systems that are 'near equilibrium', and systems that are 'far-from-equilibrium'. Imagine a primitive tribe ... If its birth rate and death rate are equal, the size of the population remains equal. Now, increase the birth rate. A few additional births may have little effect. The system may move to a near equilibrium state. Nothing much happens. It would probably take a big jolt to trigger big consequences in systems that are in equilibrium or near to it. However, if the birth rate should suddenly soar, the system is pushed into a far-from-equilibrium condition, and here non-linear relationships will prevail. In this state systems do strange things. They become inordinately sensitive to external influences. Small inputs may yield huge, startling effects - the entire system may reorganise itself in ways that strike us as bizarre (Toffler in Prigogine & Stengers, 1984).

### **The initial flight**

The generator of unpredictability in complex systems is what Lorenz (in Gleick, 1987) calls "sensitivity to initial conditions" or "the butterfly effect" (p.23). The concept means that with a complex, non-linear system, very (infinitely) small changes in the starting conditions of a system will result in dramatically different outcomes for that system. If, as Lorenz demonstrated, a butterfly is flapping its wings in Argentina and we cannot take that action into account in our weather prediction, then we may fail to predict a thunderstorm over our home town two weeks from now as a result of this dynamic.

Such a concept raises the importance of considering where I was at prior to the untimely death of my brother, what type of space my family system was in at this time. How these two states influenced each other in a circular manner. It forces one to ask questions about previous loss experiences. Prigogine and Stengers (1984) explain that initial conditions arise from the previous evolution of

the system in question and are later transformed into states of the same class through subsequent evolution. This brings me to the centrality of considering passages of time when working with non-linear system, and the importance of considering patterns that evolve over time through the history of a system - I shall return to this below. Suffice it to say at this point that when considering an event in time it is of paramount importance to take into account the initial conditions of the system in question.

### **A bumpy ride**

When considering the initial conditions and history of a particular system, more often than not there are periods of random activity that appear chaotic and difficult to make sense of. Discontinuity and bursts of noise seem to have had no place in the analyses and geometries of the past two thousand years. The shapes of classical geometry are lines and planes, circles and spheres, triangles and cones. Throughout history, these have represented a powerful abstraction of 'reality', and they inspired a powerful philosophy of Platonic harmony. Euclid made of them a geometry that has lasted two millennia; this is the only geometry most people ever learn. However, when attempting to understand the complexity of non-linear systems, they turn out to be the wrong type of abstraction (Gleick, 1987).

Mandelbrot (in Gleick, 1987) reminds us that clouds are not spheres, mountains are not cones, lightning does not travel in straight lines. And, the process of mourning does not progress in an orderly, linear, universal fashion that is neat, and complete within a certain period of time. The geometry that chaos theory presents, its graphic presentation of process, mirrors a universe that is rough, not rounded. Gleick (1987) describes it as a "geometry of the pitted, pocked, and broken up, the twisted, tangled, and intertwined." (p. 94). To aim at a more whole understanding of nature's complexity demanded the dawning that the chaos, the noise, that is always present is not merely random, and not merely something to be swept under the carpet. It is this noise, this mess, that holds untold secrets. Mandelbrot's work made a claim about the world, and the claim was that such odd shapes carry meaning. The pits and tangles are more than blemishes distorting the classic shapes of Euclidian geometry. They are often the keys to the essence of

processes of change. And so, I came to see my periods of stuckness, my times of anger when I was supposed to be sad, periods of coping when I was meant to fall apart, as my own pattern with its own unique 'random noise'.

Prigogine and Stengers (1984) are of the opinion that for a long time turbulence has been identified with disorder or noise. Today, they say this is not the case. They explain that while the turbulent motion of a system appears as irregular or chaotic on the macroscopic scale, it is, on the contrary, highly organised on the microscopic scale. It is often the case that order masquerades as randomness, and this has been an invitation for me to look a little deeper at times that seemed filled with chaos and made little sense.

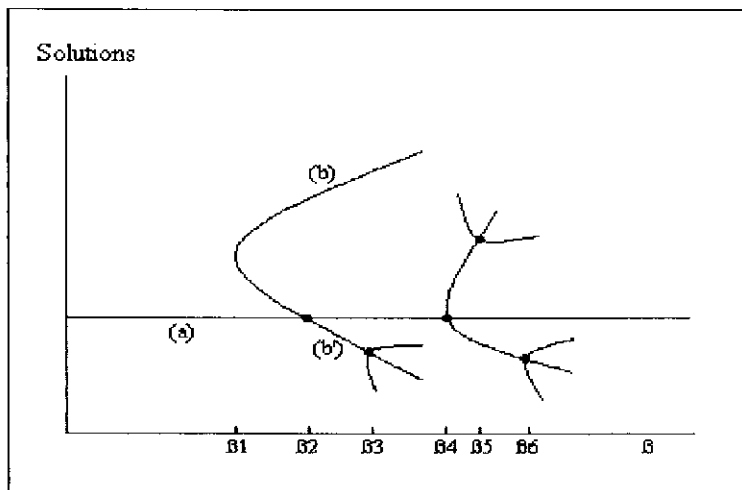
Gleick (1987) defines turbulence as a mass of disorder on various scales; it is unstable and highly dissipative. Thus, turbulence drains energy and creates drag as the system moves through it. It is, he explains, motion turned random. However, how is it that the flow or movement of a system changes from smooth to turbulent? When flow is smooth, small disturbances to the functioning of a system tend to die out. However, an accumulation of such small disturbances over time, or one, large disturbance at a point in time takes a system past the onset of turbulence - it is at this point that disturbances grow catastrophically and systems take on bizarre characteristics. This onset - this transition - became a critical mystery in the evolution of chaos theory. The channel below a rock in a stream becomes a whirling vortex that grows, splits off and spins downstream. Or, a plume of cigarette smoke rises smoothly from an ashtray, accelerating until it passes a critical velocity and then splinters into wild eddies. Or, only three years after the death of my brother am I finally able to sit down and write a narrative that was planned at the time of his death. Why now? How many small disturbances, slight perturbations have accumulated to trigger the putting together of this story?

### **The explosion**

Prigogine and Stengers (1984) explain that all systems contain subsystems that are continually fluctuating. At times, a single fluctuation or disturbance, or a combination of them may become so powerful, as a result of positive feedback, that

it shatters the pre-existing organisation of the system in question. At this revolutionary moment - a 'bifurcation point' - it is inherently impossible to determine in advance which direction change will take: whether the system will disintegrate into 'chaos' or leap to a new, more differentiated, higher level of 'order' or organisation. It is beyond a critical threshold that the system spontaneously leaves its present state due to the specific combination of previous disturbances.

When the bifurcation point is reached, deterministic description breaks down. It is impossible to know or determine in advance which direction change will take from this point on, as illustrated in Figure 1 below. Crossing a bifurcation is a stochastic process and prediction of the details of the temporal evolution of the system and its subsystems is impossible (Prigogine & Stengers, 1984). Reaching the point where I was able to sit down and begin this narrative can be distinguished as a bifurcation point - there were many fluctuations over an extended period of time that needed to transpire before I could take on such a personal inquiry. However, starting the process gave me no clues as to where it would take me from that point on, on a personal as well as professional level.



**Figure 1. Bifurcation diagram: steady state solutions plotted against bifurcation parameter**

Prigogine and Stengers (1984) find it remarkable that near-bifurcation systems present large fluctuations. They explain that such systems seem to ‘hesitate’ among various possible directions of evolution. And, go so far as to say that a small fluctuation may start an entirely new evolution that will drastically change the behaviour of the whole system. They highlight the fact that analogies with social systems are inescapable.

### **Dissipative structures and the art of self-organisation**

The interaction of a system’s subsystems, and the interaction of the system with the outside world, is what allows for fluctuation and disturbance. The system embeds itself in nonequilibrium conditions which, depending on the system’s history, will at some point lead the whole structure into chaos and to what has been called a bifurcation point. If the system re-organises after this point of crisis its new formation is known as a ‘dissipative structure’ (Prigogine & Stengers, 1984). Information gleaned from numerous experiments into thermodynamics reveal that when a system is in a state that is far-from-equilibrium, new types of structures originate spontaneously - there is transformation from disorder, from thermal chaos, into order. This is where the term ‘dissipative structure’ has its roots. One could punctuate the unexpected loss of my brother as a sudden and large fluctuation that led my family system to a bifurcation point. The family that has emerged and survived this event has a new structure, with different dynamics and qualities from the family that contained the physical presence of Steven. No part of this system had any idea in advance how our family would survive this tragedy, and how it would alter interactional sequences.

Chaos theorists find that one of the most interesting aspects of dissipative structures is their coherence - “The system behaves as a whole ... the system is structured as though each molecule were ‘informed’ about the overall state of the system.” (Prigogine & Stengers, 1984, p. 171). This will become evident as I move through my narrative, however, with regard to coping with Steven’s death, my family system seemed to allow different individuals a space to mourn at different times as we each walked our own path of mourning. The ability to mourn was in part made possible by other subsystems of the system holding the whole together.

The emergence of dissipative structures is often referred to by chaos theorists as evidence of non-linear systems' ability to self-organise. Examples of such self-organisation and reorganisation abound in Prigogine and Stengers' book 'Order out of Chaos' (1984): heat moving evenly through a liquid (by means of conduction), suddenly converts into a convection current that reorganises the liquid; 'chemical clocks', in which a chemical produces an enzyme whose presence then encourages further production of the same enzyme. These are examples of what the authors refer to as a positive feedback loop, and add that molecular biologists have found that such loops are the very stuff of life itself as they assist in explaining how we move from little lumps of DNA to complex living organisms. Prigogine and Stengers (1984) urge us to consider the relevance of these results for the understanding of living systems.

A system far-from-equilibrium may be described as organised, as the amplification of a microscopic fluctuation occurring at the 'right moment' can result in the system favouring one reaction path over a number of other possible paths. Prigogine and Stengers (1984) explain that self-organising systems in far-from-equilibrium conditions respond to a delicate interplay between chance and necessity, between fluctuations and deterministic laws. They are of the opinion that near bifurcation, fluctuations or random events may play a vital role in directing where the system moves to next, while between fluctuations the deterministic aspects would become more prominent. Steven's death took my family system to a point of crisis, a bifurcation point. In the midst of this crisis this system was left reeling from a fluctuation larger than any other fluctuation in the history of its evolution. Where it moved from this point on, none of us knew at the time. Many wondered about the survival of some of the parts of the system, and thus the survival of the system as a whole. Each subsystem of the system reacted with randomness to this explosive event, and all parts of the system were blown away so to speak. A clue as to how they would come together could probably be gleaned by taking a look at the system's history of recovery at other bifurcation points, and this is the process that Prigogine and Stengers (1984) refer to as more deterministic. Toffler (in Prigogine & Stengers, 1984) writes that "Prigogine insists that order and organisation can actually arise 'spontaneously' out of disorder and chaos through a

process of self-organisation.” (p. xv).

### Chaotic order? Or ordered chaos?

At all levels, be it the level of macroscopic physics, the level of fluctuations in a social system, or the microscopic level, nonequilibrium, nonlinearity, are proposed to be the source of order - “Nonequilibrium brings ‘order out of chaos’.” (Prigogine & Stengers, 1984, p. 289). The famous law of entropy describes the universe as evolving from order to disorder; however, biological and social evolution demonstrates the complex emerging from the simple. The flow of matter, energy, or information is what sets up states that are not in equilibrium, and may be a source of order. The units involved in the static description of dynamics are not the same as those that have to be introduced to describe a paradigm that is evolutionary in nature as it expresses the growth of entropy. One needs a new concept of energy that is ‘active’, and makes allowances for ‘irreversible’ processes of change. It is these irreversible processes that organise energy, matter, and information and make possible self-organisation (Prigogine & Stengers, 1984). The loss of my brother, an irreversible process in the history of my family’s evolution, took this system further from equilibrium than it had been. We moved closer toward entropy and into chaos. What has emerged, and continues to emerge, is a system with a new level of order that was not present prior to this particular bifurcation. I should, however, make it clear at this point that movement to re-organisation has not been a smooth, linear progression. There have been other points of crisis, other bifurcation points, along our path, that have shaped and shifted our re-organisation - moments that felt more chaotic than ordered, even while moving toward order. Prigogine and Stengers (1984) stress that the relation between order and chaos is highly complex where successive regimes of ordered (oscillatory) situations follow regimes of chaotic behaviour, and vice versa. This will become more evident throughout my narrative where I explore events and processes of chaos in my own life after the chaotic time of losing Steven.

### Evolutionary pathways

The historical path along which a system evolves is characterised by a succession of stable regions where deterministic laws of the system dominate, and unstable ones, near the bifurcation points, where the system seems to choose between or among more than one possible future path (Prigogine & Stengers, 1984). These periods of stability and instability are inextricably connected, and if observed and plotted over time may reveal a pattern that is unique for the system in question. And, the pattern may reveal itself at different levels at the same or different times - "Chaos theorists have an eye for pattern, especially patterns that appear on different scales at the same time. They have a taste for randomness and complexity, for jagged edges and sudden leaps." (Gleick, 1987, p. 5).

In order to view pattern, these theorists propose that it is vital to consider the historical path of a system. Prigogine (Toffler in Prigogine & Stengers, 1984) has been fascinated with the concept of time since boyhood. He once said that, as a young student, he was always struck by a contradiction in the way science viewed time. In the world model constructed by Newton and his followers, time seems to have been an afterthought. A moment, whether in the present, past, or future, was assumed to be exactly like any other moment. From this point of view, for example, the endless cycling of the planets can, in principle, move either backward or forward in time without altering the basics of the system. For this reason, scientists refer to time in Newtonian terms as 'reversible'. However, with the laws of thermodynamics emerging, time became a far more central concern. According to the second law of thermodynamics there is an inescapable loss of energy in the universe as time marches on - you cannot run the world backward to make up for entropy. Thus, events over the long term cannot replay themselves. And, this means that there is directionality or, as Eddington (in Prigogine & Stengers, 1984) called it, an 'arrow' in time.

For Prigogine and Stengers (1984) time makes its appearance with randomness, chaos. Consider a chemical reaction in which two liquids poured into the same pot diffuse until the mixture is uniform and homogenous. These liquids do not de-diffuse themselves. At each moment in time the system inside the pot is



different, the entire process is 'time-oriented' - "Only when a system behaves in a sufficiently random way may the difference between past and future, and therefore irreversibility, enter its description." (Toffler in Prigogine & Stengers, 1984, p. xx). It is these processes of randomness through time that leads to higher levels of organisation such as dissipative structures. For this reason, entropy is not merely a downward slide toward disorganisation. Under certain conditions, entropy, irreversible processes (for example death) become the progenitor of order. Again, looking at the untimely loss of Steven, it is clear that the process of his dying is irreversible. This was a random event in time. No one, no process, could have pre-determined such an event. As you the reader will later discover via my narrative, this random, irreversible event has made space for a level of order, within my family system, to develop out of the chaos.

### **Flexibly robust?**

Gleick (1987) explains that a critical issue to consider when examining a system's ability to move through states of chaos and order, and the system's ability to re-organise, is what he calls the system's robustness - how well the system can withstand small jolts. An equally critical issue in biological and social systems is a consideration of the system's flexibility - how well the system can function over a *range* of frequencies. Locking into a single mode or range of functioning can lead to what he calls 'enslavement' of the system as a whole, which ultimately will prevent the system from adapting to change, and could lead to its disintegration. My family system's robustness and flexibility have been pulled and stretched over the years via both small jolts and sudden leaps that I will explore in the narrative that follows. It seems that the more a system is placed under these stresses, the more its flexibility and robustness is exercised, the greater the system's ability not only to adapt to change, but to grow from it.

### **Can it be applied?**

With or without its fancy graphics, radical concepts, and magical language, today, chaos theory is being used to describe phenomena as diverse as chemical reactions and psychological crises (Woodcock & Davis, 1980). The position of

chaos theory offers an alternative way of looking at and describing the universe - not more correct than Newton's way, perhaps more complete, surely radically different. It points out qualitative similarities in a wide variety of processes, just as the analogies of ordinary language do. It is well suited to describe and sometimes even predict the shape of processes of change. Its descriptions and predictions are not quantitative; they are like maps without a scale (Woodcock & Davis, 1980).

“For three hundred years we have explored the world using maps in analysing quantitative relationships. Now, with new maps, there is a chance to see new territory: the landscapes of change.” (Woodcock & Davis, 1980, p. 22). The narrative that follows is a story of loss. It is a story of a family that has on some level chosen to create a world around the experience of loss. The family is my own, and the story I tell is only one possible description of this family. Other members of the same system may have different stories to tell. In carrying a heritage of loss over many generations, and having been confronted with it many times in my own life, I have embarked on numerous philosophical searches that would in some way give meaning to these experiences. I have found chaos theory to be most useful in this regard. This theory has opened up a new level of explanation and description for me that at last gives me a sense of the whole, that illustrates to me, via the examination of processes of stability and change, order and chaos, the other many faces of loss.

## CHAPTER 4

### THE NARRATIVE: LEARNING TO EMBRACE BOTH 'ORDER' AND 'CHAOS'

*"To see your drama clearly, is to be liberated from it." (Keyes in Hayward, 1990, p. 67)*

#### Introduction

Robert Winer (in Viorst, 1986) characterises the human family as, "the provider throughout life of 'transitional space', serving as a resting place between the individual and society, fantasy and reality, the internal and the external." (p. 108). I invite you now to join me in travelling a chaotic path, a path with many twists and turns, with hills and valleys. The narrative that follows is a story that tracks the movements of my family system through various generations as it 'transitioned' through 'space'. Via focusing on both individual and social familial transactions, a tapestry emerges that reflects both fantasy and reality. As you walk this path with me, the 'chaotic' colours and shapes of this tapestry will begin to form 'ordered' patterns, so that by the time you reach the end of my tale the application of chaos theory to assist in describing and understanding systemic transaction around the particular theme of loss, may become clearer and hold potential value for your own story.

#### The Genogram

For countless years my uncle has attempted to gather bits of information from all corners of the earth in a quest to put back together what some might call a 'shattered' family, in the form of a family tree (see Figure 2). I use the word 'shattered' to describe a family that, by the sheer forces of world politics, was split apart by the act of warring nations - a point of chaos for many families all over the world.

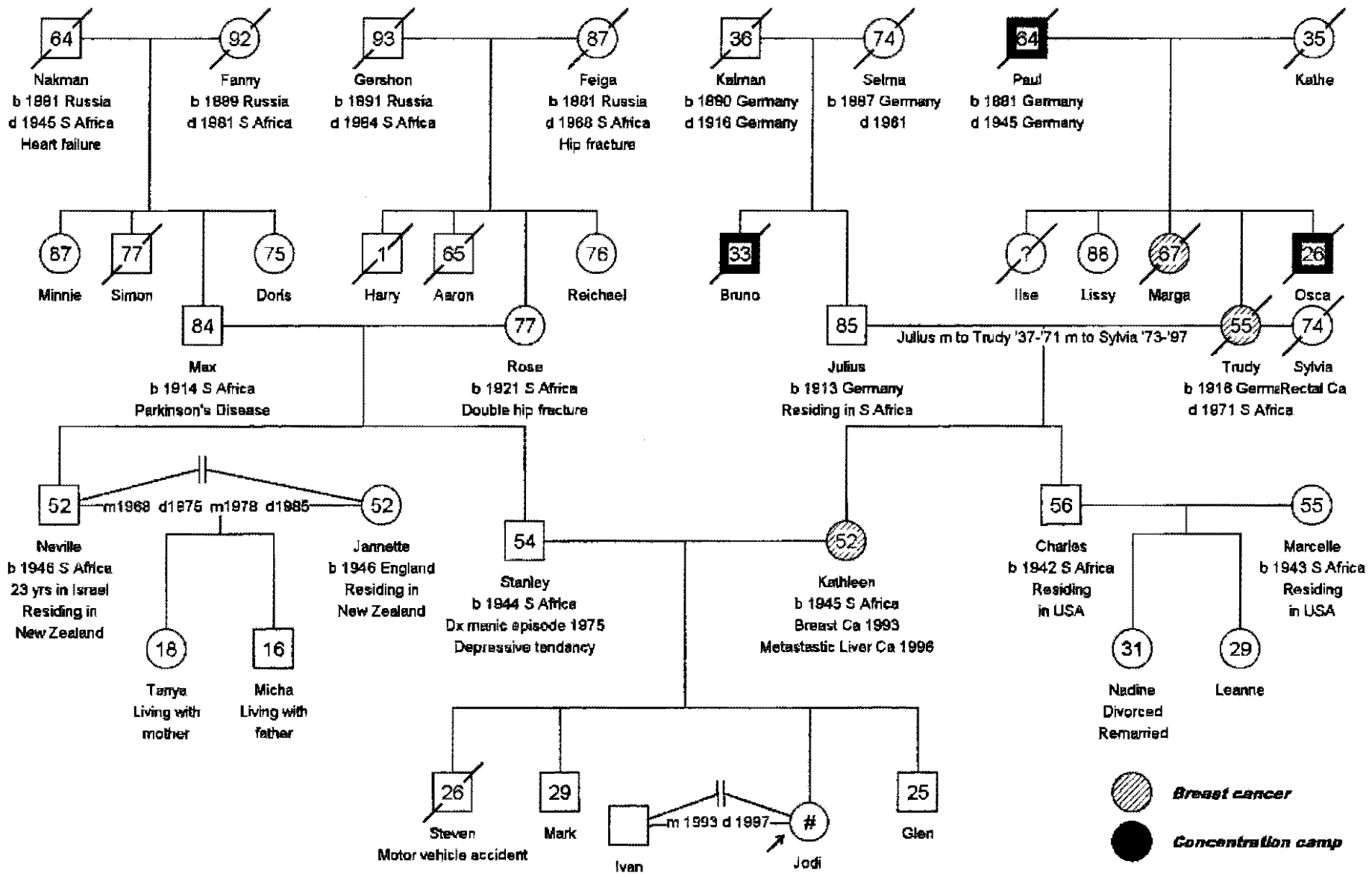


Figure 2. Genogram 1998

### The 'initial conditions' in Russian and Germany

This narrative thus begins at a point of bifurcation. My great-grandparents and grandparents lived wholesome lives in *shtetels* (small Jewish communities) in Russia and Germany. Fearing for their lives and those of their families in such times of human horror, they fled their countries of birth in search of safety. My mother's parents are said to have escaped the atrocities of the Nazis in the nick of time - arriving in South Africa to make a new life for themselves, leaving behind them a heritage which I will never know. Stories of their lives in Germany have been lost via the process of immigration. The same pattern repeats itself on my father's side of the family - his grandparents leaving Russia and hoping to find a more peaceful existence in South Africa. Again, their way of life and the rituals by which they lived were lost somewhere in their journey between Europe and Africa.

What was lost all those years ago still reverberates through my own life. The rich culture and rituals, which were so well entrenched in that old Jewish way of life, have been lost. In those times, being Jewish was more than just a religion to be adhered to, it was a way of life. Gleick (1987) explains that in daily life the Lorenzian quality of sensitive dependence on initial conditions lurks everywhere. A man leaves his house thirty seconds late in the morning, a flowerpot misses his head by a few millimetres, and then he is run over by a car - small perturbations in one's daily path can have large consequences. Over the years my family has become secularised, holding on to our Jewish identity by observing High Holy Days - a few days in each year when I seem to connect with this old, lost, way of life. On such days I often wonder about going back there, turning back to living by the old customs; however, the calling never seems to be strong enough - the lost stories seem too far removed from my own reality. The daily process of slowly losing the experience of ritual within my great-grandparents' and grandparents' generations became the 'initial conditions' that my family system have been 'sensitive' to, and this has been part of shaping the trajectory that evolved thereafter for us.

### A heritage of chaotic disconnection

Punctuating this dissertation by beginning my story at this traumatic time of immigration, I am creating via my narrative, the pattern of living with and through experiences of loss that seem to have been passed down through the generations - a pattern which my family carries with it today.

Due to the circumstances that these immigrants found themselves in, having to work very hard to survive in a strange country and learn all its unspoken rules, the cohesiveness that was so characteristic of that old-type Jewish family, fell away. There simply wasn't time for such a luxury. One could describe the experience of immigration as a bifurcation point, a point of chaos, where these family systems were thrown into unexplored contexts, where new rules for living had to be learned, new survival techniques created, and the old-style ritualistic way of life lost. Where these systems would move to from this point of landing was unknown at the time, and outcomes were unpredictable. All these stressors I define as turbulence, or the noise that preceded yet more bifurcation. In the process of surviving, these two families were thrown from connection to disconnection, from being engaged to disengaged.

My father's parents decided to send him, and later his younger brother, to boarding school. Perhaps life in this new country was too difficult to build with two young children. Perhaps these two children had to be sacrificed in order to save a marriage that was under immense pressure for any number of possible reasons. Initially, he was sent at the age of six to a place far away from what he knew as home. He lasted a term before he developed rheumatic fever and was sent home. As a family therapist in training, many hypotheses spring to mind in an attempt to make sense of the sudden onset of such a serious illness. Was the trauma of being away from the safety and security of a family too overwhelming, that the anxiety and stress of such an experience brought on this possibly fatal dis-ease? Was this an attempt by a desperate child to find his way back to what he felt he could not survive without? Or, did this child sense the possible destruction of a family that was so vital to his existence, that he needed to give this 'gift' of a serious illness to it, so that the 'dis-ease' may be the glue that could hold it

together? Later on, at age twelve, once again, my father was driven out of this system, together with his brother this time. He spent his high school career away from his hometown and his family. Interestingly enough, he did find himself a surrogate family by forming a strong **attachment** to the family of his girlfriend who lived in his high school town. On asking why he had been sent away, he was told that his father had had a heart attack and that he could not cope with his two sons being around. The result of this career of being transported in and out of his own family was disastrous for my father. He describes the ‘loss’ of his family at such a young age as an event that has had an enormous impact on who he is, how he lives his life, and what kind of a father and husband he is. Today he still carries the messages that were communicated to him via these **familial transactions**: you’re not good enough to be in this family, you have the power to put your own father at risk of dying, ...

Early on, my father had to learn about leaving when not being ready to do so, losing when not being ready to let go. Struggling to find order amongst this chaos, he learnt about disengagement as an approach to problem solving. However, he also learnt about creating order out of chaos, about creating new connections when the already established ones weren’t working. Having direct bearing on myself, he learnt about the type of family he didn’t want for his own children. Thus, it became vital to him to construct a family that was not ‘dis-eased’ with separation, but rather connected through an abundance of love. His early experiences of family systemic chaos set the ‘initial conditions’ for what was to, and is, evolving in my own nuclear family. More about this family later.

### **Redundancy as the tapestry emerges**

Gazing across the ocean I find an uncle, my father’s brother, plagued with many of the themes already mentioned here. The exquisite patterns described by chaos theorists begin to emerge. His time at boarding school and the experience of loss that came with and after it, leaves many of the same patterns repeating themselves in his own nuclear family system. Having finished his ‘sentence’ away from home, my uncle chose to live the part that had been ascribed to him throughout his formative years - the caring, good son, who lives far away from his

parents. Again, the theme of leaving, disconnecting. He ‘made *aliyah*’ (immigration) to Israel. Making *aliyah* implies more than immigration to a foreign country. It means making a commitment to the building of this struggling nation, irrespective of the necessary sacrifices that would have to be made. And there were sacrifices. In this move my uncle lost the roots of his old South Africa, and all that went with belonging to this complicated nation. He also lost the chance to be part of the extended family he now craves (so much so, that he has devoted much time and head space to putting this family together on paper by building an extensive family tree). Like my father, he went in search of a surrogate family - only the one he constructed was on a much larger scale. He committed himself to belonging to the family of Israel, he committed himself to belonging to the family of the *kibbutzniks* - selflessly giving up the way of life that he knew in order to devote his life to this new, far-reaching family. This family, however, could never abandon him - perhaps this explains his choice.

Within his surrogate family my uncle met his wife, with whom he had two wonderful children. Yet, even in what he thought to be this safe haven, my uncle continued the battle of forming connections, of changing the pattern of leaving and of the subsequent loss. He and his wife divorced, married again, and divorced again. Today, they have gone in search again - the family lives, divided, in New Zealand. Father and son live together, as do mother and daughter. Alone, he is without his country of birth and the extended family who live here, he is without his surrogate family of the Jewish nation and the safety of his kibbutz family - isolated, he attempts to put us all together on paper in his continuing quest to build our family tree. Here is an exquisite illustration of how the ‘initial conditions’ established in his family of origin created a sensitivity that has led to the living out of the same patterns as he moves through life struggling to create order out of the perpetual chaos he finds himself in.

### **Quiet chaos as Germany enters South Africa**

When comparing my father’s side of the family to my mother’s, I find striking similarities (of course these similarities are my own construction). Again, here is a family riddled with separation, disconnection, and loss. Being first



generation immigrants to South Africa from Germany, my mother's parents found themselves in the typical immigrant position of having to work very hard in order to make some gains. My mother often speaks with fondness about her grandmother always being at home when she arrived back from her day at school. Both her mother and father worked into the late hours of the day. It seems here, everyone was suffering their own losses: my grandparents lost out on being an integral part of their children's formative years; my great-grandmother suffered the loss of the privilege of being a 'granny' - someone who could spoil her grandchildren - and instead had the task of being 'mother' all over again.

The above describes some of the more obvious deficits suffered by this family system. There were, and still are, deficits that run a lot deeper. When my mother reminisces about her childhood days, she often paints a picture of the following scene: dinnertime, the table is set to perfection, only the best crockery and cutlery in its correct place, the family of five is seated. Once settled, the head of the household rings a bell for the service of their 'black' servant (dressed in tails and red sash), who appears promptly to serve the first course. Each night four courses are to be had. The scene seems to run so smoothly when she describes it, however, I am jolted when she mentions in passing, how she was always too afraid to ask for second helpings from her father, and how her mother would pass her a second piece of chicken under the table.

This scene depicts so beautifully the transactions that seemed to repeat themselves throughout my mother's childhood. My mother's experience of her father is that of a hard, stubborn, and rigid man (perhaps he had to choose this style as a means of survival through Nazi rule, his way of creating order within a context of horrific chaos) - to say the least she was terrified of him, terrified of disappointing him, of stepping out of line, and, terrified of the punishment that would follow such crimes. What a sad loss for both of them - the loss of a warm, loving, and nourishing relationship. Once again, this unique father-daughter relationship has had spin-offs in my own nuclear family - some losses, some gains. Either way, the 'initial conditions' were well-entrenched for what was to evolve in my own family via systemic transaction that were a source of great 'noise' for my mother.

The complete antithesis of the above is true as regards my mother's relationship with her mother. I never had the privilege of knowing this special lady; however, she is spoken of with tenderness and respect by all who knew her. Even though out at work while my mother was growing up, this woman managed to create a wonderful connection with her daughter - it seems this was made possible by an abundance of unconditional love and caring. Looking at photographs of the two of them together, they look like the best of friends, or even sisters. Sadly, we all lost when she died at an early age riddled with cancer. Theories abound in the field of psychoneuroimmunology with regard to the withholding psychological state of people suffering at the hands of cancer and other serious dis-eases. If my mother was afraid to ask her father for more food, I am left wondering about the many things my grandmother was not able to request and share with this man, how much, and for how long, did she withhold before she literally began to fall apart at the seams. I am told that even in her dying days, this woman seems to have been the glue that was holding this fragile system together - her death seems to have marked the beginning of a period of chaos and crisis, which overflowed into my own family.

#### **A mother's final gift**

At the time of my grandmother's death I was almost a year old. Reflecting back on this time in her life, my mother often comments on how young she was to have had three children. Re-defining the family a little, I would describe her as having four: my father being the fourth. She describes the first ten years of her marriage as very difficult, and has often said that she may have made different choices at the time, if her mother were alive. Perhaps she would have walked out of this young marriage if she felt she had somewhere 'safe' to go. It seems this mother-daughter relationship was a lifeline for her through the early part of her marriage. I have to wonder about the impact of this close tie on the union of my mother and father. Who in fact was my mother 'married' to? Was she able to let go, and 'separate', from this rich source of unconditional love? And, why would she want to do this when what my father offered her was so conditional? Irrespective of explanation, this is a good illustration of the way in which random events - the death of my grandmother - often lead to increasing the level of 'noise'

in a system, which eventually takes the system to a point of bifurcation. As explained earlier, where the system travels from this point is unpredictable.

Perhaps with the loss of the unconditional love, my mother was forced to create something beautiful with the family she had. So, although finding herself in a position of utter chaos, my mother began to create not only a new family, but, a whole new definition of her own 'self', and in so doing slowly discovered a new level of order. Another gain that resulted from the painful loss of her mother. It was almost as if she was so tied to her mother, that she was very little without her - and in the face of losing her, she was in a sense able to re-create herself. Could a mother leave a more beautiful gift for her daughter in her death? The emergence of this 'dissipative structure', a re-defined 'self', from this bifurcation point has had, and continues to have, a ripple effect throughout my family system.

### **'Cementing' the chaos**

Although the re-creation of her 'self' sounds like a wonderful experience, the road to such re-definition has been long and very hard. There she was, a very young mother of three, and a wife to a man who was on the verge of what has been called a 'nervous breakdown'. Pretty much alone, my mother had to 'dig deep' (a family phrase coined by my brother Mark) to create a new courage. She became the 'cement' that would hold this fragile structure together - this was the 'dissipative structure' that evolved.

In the face of a marriage under enormous stress, soon after the loss of my grandmother, another bomb was about to be dropped. I was beginning to walk, beginning to find my feet, and on the verge of finding a little independence, when it was discovered that I had congenital dislocation of both my hips. What I remember of this time is very vague, and what I do recall is probably more from what has been passed down to me via stories from my parents. This birth defect was to have far-reaching consequences for the entire family. The system had no knowledge at the time of how this random act of G-d would impact on the evolution of my family system.

One could call this a bifurcation point in the history of my family system, a point of chaos that could have led to many possible outcomes. I would imagine that the greatest loss at this time for me was the new-found independence I was struggling to gain. Just as I was 'finding my feet', so to speak, they were taken away. This image has evolved into a metaphor that seems to repeat itself through my life. However, the image also holds true for the family system through which such an act of G-d then rippled - my family too lost their feet. My parents had to face what is possibly one of the worst fears for most parents - a damaged child, and thus the loss of a 'whole' daughter. My father, already under tremendous pressure financially, in a fragile state within himself, experienced tremendous trauma in what was to follow after this discovery. My mother, forced into a complementary position, had to be the 'strong one', again she had to 'dig deep', again holding us together - and so, her pattern evolved. As it did, so did my father's - as long as she was the 'strength' of the family system, he could take the 'weaker' position, as she held it together, he could allow himself to fall apart. Almost as if he could play the part of 'chaos', as she played 'order'.

What transpired after the discovery of this congenital defect was that the family found a new home - the hospital. A new context in which chaos was played out. Over the next few years the family system was to endure a series of nine major operations. Moving in and out of doctor's rooms, staying at a range of different hospitals, packing, unpacking, flashes of faceless people in white uniforms became more familiar than my own brothers, medication, intravenous drips, trolleys, operating theatres - and always, the ever-present, tears. I remember little of my own pain; however, the sadness in the eyes looking down at me will remain with me forever. My parents spent more time at these 'houses of healing' than they did at home - for the next few years my father paced the long, waxy walls of these hospitals, while my mother sat waiting outside operating theatres, or sitting beside my bed. While all this was happening, my three brothers were orphaned, so to speak. Although the words were never uttered, I have often had the sense that they felt abandoned. And, why shouldn't they have felt this way - for many hours at a time they were without the comfort and safety they had come to depend on from our family unit.

### **Crippling chaos**

Losing my independence at a time when I was supposed to be discovering it has had a chaotic impact on my life. It sometimes feels as though this is something I have struggled with on many levels throughout my twenty-seven years. At a time when I wanted to move away from my mother, I found myself clinging to her. Dependent on her for fulfilling numerous basic needs that I should have been fulfilling myself, I became emotionally dependent on her too. Too afraid to walk without her (when I was out of plaster casts), this extended, over the years, to becoming too afraid to talk without her - I lost my self-confidence to do anything really. My temporary physical crippling left me emotionally crippled for the rest of my childhood and young adulthood. It seems that my body became my voice, this is what people responded to. My real voice was somehow lost. I have mourned this loss for so long. So, although the physical pain abated many years ago, the pain of having no voice, no confidence, no sense of self, has been constant until very recently. Still, today, there are moments when I find my 'self' slipping back into old patterns of muteness. Old spaces of silent chaos.

### **The tapestry explodes**

It was around this time that my father's period of 'silent chaos' came to an abrupt end. The combination of enormous financial pressure and the stress of enduring the long haul of my operations, together with a long history of familial trauma as a child, exploded into what was diagnosed as a 'manic phase' of 'bipolar depression'. From my father's descriptions, this seems to be one of the most significant bifurcation points of his life up to this point. He describes himself as a changed man after this experience. Prior to this crisis he defined himself as a man unable to express any of his internal world in a direct way and as a result lived his life expressing only reactionary anger and frustration - my mother being the one to be at the receiving end of his bitterness. So, it appears that even when my father is finally able to express some of what he had carried with him for so many years, he is yet again labelled as the 'sick patient', talking with his physiological state about his psychological suffering as he did from the time he was a child. Nevertheless, this point of chaos marked the beginning of the emergence of a 'dissipative

structure' as my father began to search for new meaning, as new noise led to the slow evolution of a man who was to build a far greater capacity for feeling and expressing love and care.

### **Turbulent times**

Beginning nursery school I was undergoing the last of my operations. This meant that at times I was attending school; however, when I was there I spent much time in a somewhat 'lower' position than the other children - because I was unable to walk, I lay on a mattress. Looking back on this now it seems like a beautiful metaphor for what much of my life has felt like: looking up at the world as it passed me by. I often felt as if I was losing out, looking up from my somewhat lowered position on the floor, watching the other children climb on jungle-gyms, ride bicycles, play catches. They were taking the risks of falling; I was safe, cocooned, yet not really living. I was a spectator rather than a participant. I learnt a dangerous pattern - arranging my life so that I wouldn't have to climb on the jungle-gym, and so that I wouldn't have to be in a position of risking the fall. The problem was that I lost out on the most exhilarating part of life - taking risks. Much energy went into creating order in a world that felt desperately chaotic for me. Being protected (by the plaster, my family, and especially my mother) as I was, I became terrified of exploring what was beyond the parameters of my safe cocoon within my family system. Today, I still find myself fleeing back to this place; however, with the awareness and understanding that I have gained, I now force myself out of it and onto the jungle-gym of my mind, looking chaos straight in the eye.

Starting primary school I began to find my feet again. The operations were complete, and all the world could see of them was a limp when I walked. Today, this limp is so much a part of me I hardly think about it, and am often surprised when people comment on it. It's almost as if it's not there for me. At the age of six, however, this limp made me different from all my peers. And, at the age of six, all I wanted was to finally be the same as everyone else. Over and above this, I was a Jewish child in a non-Jewish school. Again, I felt left out, excluded from the life around me. Again the observer. I recall shedding many tears over being

'different', this pain seems far more real to me than any physical pain I suffered throughout the surgery I endured. With little sense of self, little courage to endure this 'difference', I began to hate who I was. Although I found approval and love within my family system, the one place where I needed it more than any other at that stage of my life - my peers - I could not find it there. The sense of self that was non-existent at this stage now evolved into a negative frame that I placed around my entire being. I began to see my 'self' as bad, or not good enough. The turbulence I experienced in such a short time seems to have led to a 'dissipative structure' that was to frame much of my experience of life. At this young age I was already a therapist in the making, spending much time introspecting, examining who I was, and hating what I found there, what I constructed. My greatest loss at this time was the sense of freedom and carefreeness that accompanies young childhood. I never felt 'free' enough to let go of all my inhibitions, all of my guilt at being such a 'bad' child, to lose myself in genuine play.

Living with the 'bad' self that I had constructed, I spent much of the rest of my life trying to repair the damage and to create a new 'dissipative structure' out of this turbulence. Enormous amounts of energy went into being the 'good' daughter, sister, friend and wife. Achievements at school became a way for me to gain my parents' approval. The problem was that I could never quite achieve enough. Whatever I did, I defined as not good enough. I had to work harder, do more, become more. I had positioned my 'self' in a no-win situation, a double bind. If I was 'bad', I could never have the carefree feeling that I longed for. If I was 'good', I was never good enough - therefore, I still could not attain that sense freedom.

### **Getting to know the 'noise'**

When the chaos inside became loud enough and the noise had been around for long enough, I reached a point where I felt as though my whole being may explode - one could say that the system I call 'self' reached a bifurcation point and this propelled me into a search at altering my familiar patterns and ways of being. According to Gleick (1987), beyond a certain point, the 'point of accumulation', periodicity gives way to chaos - the non-linearity drives the system harder and harder. It was only as I approached my twenties, when I entered psychotherapy,

that I began to construct new meanings around this time of my life. It was only then that I began to realise what I had lost through my childhood years of self-flagellation. It was only then that I realised the person I wasn't good enough for was myself.

The process that led to this realisation was painful for me. In therapy, my psychoanalyst defined many of my painful experiences as 'normal', often silencing what I experienced as 'noise' by the mere power of her position as therapist. Once again, another silencing, another loss. For close on four years I attempted to work with her definition of my experiences. I attempted to accept her theories and explanations as truth. Later, I came to realise that this was her truth, not the truth. That the truth she had constructed for my experience was not meaningful for me, as I had not been part of that construction. Looking back on this therapeutic system, I now see how I allowed my analyst to impart her truth, how I allowed my 'self' to be silenced as I was many times before, how I allowed the noise and chaos to persist. I also see that my analyst was part of this silencing, part of constructing another context in which the only pattern I had come to know could repeat itself. All through my therapy with her I was unable to accept her definition of my experience. Yet, I persisted - I needed to be the 'good patient' too. I experienced much of my childhood as quietly traumatic, and what followed, the way in which I grew to define myself as a result of these experiences, was even worse. However, the therapeutic context did become a space where I could, in the final analysis, find a voice, a space where I felt safe enough to challenge my therapist's constructions by taking leave of a therapeutic relationship that was not useful for me. The four years of therapy seemed like an endless drift of turbulence and bifurcation cycles in search of love of 'self'.

### **Loving and leaving in search of order**

In not finding what I needed within my 'self', in retrospect, it seems I went in search of it with the men I came to love. From my late teens through to my early twenties I became involved in a few long-term, serious relationships with men. In all of these relationships, I searched for the unconditional love I wanted so badly to come from within - and in most of these relationships I was able to construct the



illusion that this is what I was getting. In all, the warm, safe feeling, was fleeting - and never quite what I was searching for. In all, I would endeavour to be the 'good' girlfriend. In this way I was never able to be all of who I am - 'good' and 'bad'. So, the unconditional love was always conditional (within my own construction), on me being perfect. I had created a brilliant double bind situation for my 'self' - one that I could never really win in. The result - I would leave, in search of something, which was not possible.

'Leaving', in fact, emerges as a pattern throughout the relationships I had with men, as it does throughout the generations of my family. I often wondered, at times when I did leave, about how strange it was that I was always the one ending these connections. Always creating chaos on some level in these relationship systems, and in so doing pushing them to points of bifurcation until the dissipative structure that emerged was one in which I was a separate system. I pondered that I, insecure and fragile at the time, was able to end something that presented me with an opportunity for that very security I had longed for. This is something I still wonder about today. Having constructed this story, however, has assisted me somewhat, in creating some kind of meaning for this redundancy. It seems that setting myself up for loss, and resultant chaos, was easier for me to deal with than having the same sprung on me unexpectedly. By the time I began to enter into relationships with men, I had become quite the expert on dealing with the chaos of loss. So much so, that it was pretty much all that I knew. With this knowledge, I began to construct situations and relationships that would hold this familiarity for me. In my 'purposeless drift' (Maturana, 1991) through a medium that held any number of random experiences, I chose what was paradoxically safe, and tended toward repeating chaotic cycles of loss.

My experience of 'losing' these special connections has always fascinated me. One would think that such a loss in a young girl's life would be devastating. However, at these times in my life the tears I cried always seemed to be for the other. I would experience hurt only on thinking about the pain of my partner. At such times I would wonder about the kind of person I was - defining my 'self' as hard and un-emotional, the ice-maiden, creating the 'bad' person I seemed to need to be. Now, I have been able to construct a new, more meaningful, understanding

of my strange emotional reaction. Recognising and acknowledging my own hurt was just too painful for me - it was much easier to touch another's pain rather than my own. Much easier to enter another's experience of chaos than my own. These became early lessons in my training as a therapist. As Yorke (in Gleick, 1987) understood, "The first message is that there is disorder ... but people have to know about disorder if they are going to deal with it. The auto mechanic who doesn't know about sludge in valves is not a good mechanic." (p. 68).

With these multiple relationship losses there were definite gains. Order began to emerge out of the chaos. It was in these relationships that I began to refine the therapeutic skills that I would later come to master. I have often questioned where exactly my training as a therapist took place. For me, the informal learning situations far outweigh the formal ones. It was within these intense connections that I first shared the ramblings of my mind with peers, my endless analyses shared over hot coffee in the early hours of the morning. This is where I first tasted the thrill of languaging and the awesomeness of conversation. 'Words' shared, began to hold tremendous meaning for me, for it was in these conversations that I began to experience my 'self' as something other than 'bad'. I discovered that my words touched the other in kind and gentle ways, and that I could make a difference with my words. It was with my words that I could begin to define my 'self' as worthwhile. And with words, make sense of the repeating cycles and chaos, and in so doing shift to new levels of chaos and order - "Discontinuity and qualitative change occur everywhere, in thought, language and perception." (Woodcock & Davis, 1980, p. 21).

### **A mirrored tapestry**

In the early days of expanding on my self-definition, while basking in the 'discovery' of the 'good' parts of me, I met the man I was to marry. A gentle person. A man of high morale and a set of passions all of his own. His kindness abundant. A man who would grow to love my 'badness', and celebrate my 'goodness'.

When we met, I was at a cross-roads with regard to my career, and with regard to my family. I was in the midst of a bifurcation point. I had moved out of home at the age of eighteen into a residence on campus. Having spent two years there, a friend and I moved into an apartment together. For the following two years we completed our bachelor and honours degrees in psychology. It was in the year that I obtained my honours degree that I met my husband. Unsure of what was to happen next with regard to a career move, and with the prospect of having to fend for myself financially for the first time, it seems I 'fell into' marriage. In retrospect, this is what it felt like. With a quick and intense courtship, I was swept off my feet. I was offered a viable alternative to having to make all these decisions. Getting married seemed to change all the moves of the game. Instead of searching for a job, or applying to do a masters degree, I was choosing crockery and cutlery. Instead of learning to fly on my own, and embrace the chaos, I shifted parental set - from my real mother and father, to a surrogate parent. A parent who offered me the elusive unconditional love I had been searching for. I thought I had finally found order within a new 'dissipative structure' - the system of husband and wife. Only later came the realisation that this was chaos masquerading as order. According to Gleick (1987) complex systems can give rise to turbulence and coherence at the same time.

At a time during which I was constructing my own value for who I was, he came along and entered my private conversational domain, so that this became a co-construction. Reminiscing about the early days of this romance, it seems that there was little romance - but much love and caring. What felt like romance at the time was anything but. Perhaps it was the lack of romance that allowed me to stay in this relationship longer than others. I was given the space and time to explore, without any boundaries.

According to Viorst (1986), unaware, we make demands on our marriage prompted by our past. It is fascinating that the man I marry offers me a relationship with blurred boundaries. How reminiscent of the relationship I had with my mother. It seems I moved from one system of chaos to another. The chaos that I define now was not what the experience was of either of these relationships at the time. This was all that I knew. It felt safe and familiar, and the level of noise was

tolerable. Some would define the point of marriage in one's life as a bifurcation point, a point of chaos and turmoil. This was not my experience of the event. I moved smoothly from one system of chaos to another without noticing the difference.

### **Patterns of bifurcation**

The bifurcation points I was to experience were waiting for me in the wings. Six months into this new marriage my mother was diagnosed with breast cancer. I recall feeling frustrated and angry at not being able to be with my mother as much as I wanted to during this time. I resented the fact that I was married and that my first priority was meant to be my husband. I wanted to rush back into the safe boundary-less haven of the family system I knew so well. I wanted to throw myself back into the familiar chaos. In the years that have passed since cancer has become a part of my everyday life, I have spent much time creating different hypotheses in attempts to explain the re-occurrence of this same dis-ease within my family system, the same repeating chaos left over from my mother's system of origin. There are a number of similarities that are quite alarming. Both women had experiences of various systems in which they felt repressed and somewhat out of control, systems in which they strangely enough seemed to lose their voices on various levels. Both my mother and her mother developed cancer at a time when their daughters were newly married and had left their systems of origin. Again, the theme of dis-ease re-uniting family systems - this is reminiscent of my father's early experience of rheumatic fever, and my own experience of congenital hip dislocation.

As was the experience of my mother early on in her marriage, I too wanted to leave at this bifurcation point. As she wanted to escape to the warmth of the relationship she had with her own mother, my instincts were to leave my husband and return to the system of chaos I knew so well. We both remained where we were. I continued what felt like a daily struggle to 'do the right thing' - how could I consider leaving such a new marriage? There were moments when I did however - I silenced these thoughts and 'dug deeper', as I pretended to the world that all was in order. Just as my own mother did in the early days of her own new marriage.

Thom (in Woodcock & Davis, 1980) describes a special kind of stability or regularity within processes of chaotic unfoldings, "Almost any natural process exhibits some kind of local regularity ... which allows one to distinguish recurrent identifiable elements ..." (p. 17). He goes on to explain that the 'recurrent identifiable elements' can be characteristic shapes, like that of a snowflake, or they can be characteristic stages of a dynamic process.

### **When the 'cement' crumbles**

The dis-ease that seems to have been passed on through the generations of my family system on both my parents sides of the family, have meant that the experience of loss and the chaos that accompanies it has been felt on many levels. The entering of cancer into my family system meant the loss of a mother and wife who was defined as the 'cement' of the family. Viorst (1986) explains that we begin life with loss when we are cast from the womb. However, she goes on to say that the presence of 'mother' comes to represent safety, and thus fear of her loss is the earliest terror we know. All of a sudden my mother appeared fragile to me. All of a sudden she seemed so helpless. I experienced the loss of a strong, ever-present, and ever-resourceful mother. I was devastated, and felt completely alone. Being the only sibling married in the family I felt excluded from the immediate system. It was difficult for me to reach out to that old system, yet I didn't quite feel part of the new system I had entered. In what I experienced as 'never-never' land, I mourned the loss of the mother I had grown to share a co-dependency with.

### **Discovering new levels of order and chaos**

While in a marriage that now offered me little room for the chaos I was experiencing, and mourning the loss of the mother I had come to depend on, I found a new context in which to live out my patterns of order and chaos. I applied, for the first time since completing my honours degree, to do a master's course in clinical psychology. A brief comparison reveals that at the same time in my mother's life when her own mother became ill and later died, it seems she added to her chaos by having more children - within a year of her death my mother gave birth to her fourth child. It seems I found another way to increase the chaos by first applying

for this course (the application itself being a source of noise and turbulence) and then managing to get selected to undertake a three year project at a time in my life when everything else seemed to be falling apart. Perhaps when all else felt chaotic I created a new level of order by finding a context in which I could feel more in control than other contexts of my life. Although the course was highly challenging and was an enormous source of turbulence, at least here I had a sense of agency, a sense that the chaos was containable. Thom (in Woodcock & Davis, 1980) explains that a system can exist in more than one state or follow more than one pathway of change at a time. Clearly, at this time of my life this is precisely what was occurring - everything felt chaotic; however, some contexts presented more noise than others did.

The family system response to this crisis was evident in my own personal reaction to it - to move in closer. An already enmeshed system under threat, thrown off balance, tended toward what it knew. Originating from families of disconnection, my parents had co-constructed a system with over-abundant love and cohesiveness. The possibility of losing our 'cement' was all the more threatening - no one knew what he or she would do without it as we had all, in our own unique ways, come to depend on it. So, everyone clung on tight. The patterns already established, only intensified. I felt more and more sucked back into my family of origin at this time.

### **'Playing' on my island of chaos**

In the midst of all this flooding chaos, I discovered the island I had been searching for. My training in psychotherapy. It was in this context that I found the freedom I had longed for throughout my childhood. It was in this context that I began learning the art of play, began climbing on that jungle-gym, and began taking the risks I had been so hungry to take. According to Gleick (1987), where one sees wild disorder and chaos, one should expect to find 'islands of structure' appearing. This course, the people who were a part of it, the spaces in which I experienced it - these became my 'island of structure' in the random chaos. It was on this island that I was able to risk experimenting with new positions in relation to my clients, thereby expanding not only my definition of psychotherapy, but my definition of

'self' too. Exquisite moments when I, as therapist, found myself on the floor of the psychotherapy room with a client – he teaching me how to draw – make up my early memories of the thrilling time I had on this island.

As I relished more and more in risk-taking within my work context, this began to over-flow into the other contexts of my life - primarily with my husband and with my family of origin. This manifested not only in different actions, but also in the conversations I was having with my 'self'. It was in many of these private conversational domains that I began to realise the extent of how stifled I felt in both my old and new family systems. Neither seemed flexible enough to allow for my experimental risk-taking activities. And, the more I risked, the more unhappy I came to feel in both of these systems, as the noise level slowly increased day by day.

Within the year that followed, my mother endured countless treatments of chemotherapy. With each treatment she seemed to become more and more fragile. However, in the face of her fragility her fighting spirit always conquered. This remains an inspiration for me to this day. Perhaps it has been this spirit that continued to maintain a level of order within my family system, witnessing her courage and strength to attempt to go on as normal allowed the rest of this system to go on with their lives.

With the termination of her treatment came the wonderful news that she had entered a period of remission. I recall how difficult it was to adjust to living life without cancer on a daily basis. It always seemed to be there, only it didn't seem as present. There were periodic check-ups that threw the family out of balance all over again, where panic would set in while waiting to hear the results of her tests. So, for a while, we all seemed to move in and out of states of ever-evolving order and chaos. We were learning to live with this pattern.

### **Contexts of order and chaos**

As my mother regained her strength, and as I once again began to perceive her as the 'cement' of the family, my marriage slipped further and further into

chaos. Almost as if, when there was relative order in my family of origin, chaos set in within my new family system. With my mother's health improving, I seemed to want to get more and more involved in risk-taking. And, with this, I seemed to be testing the boundaries of this new system. As much as I enjoyed playing with new positions in my everyday life, the disintegration of my marriage before my eyes was devastating for me. At first I fought the possibility that it was falling apart, and continued to make efforts to re-install order in the midst of chaos. The system, however, rejected my efforts over and over again. It could not bend with me. I became more and more desperate living in and with the turbulence.

Looking back a generation to the time in my mother's life when she felt this desperate in her marriage, it seems that she attempted to instil order in her life with her children. First by deciding to have them, and then making them the core of her life. This is where our patterns tend to be dis-similar. It seemed attractive to start a family at this point for me. It would be taking a risk, and that held much weight for me. However, on some level, the whole system was rejecting this path. We were not in a position financially to start a family. I was in the midst of my master's course. My mother's illness had consumed much of my energy. And, I felt too disconnected from my husband to contemplate this as the next move in the game. As a result, I began to create more and more order within the context of my training. This is where all my time and energy was channelled as my marriage slipped further and further from my hands. Gleick (1987) explains that in the middle of complexity or chaos, stable cycles appear within a system, even though the increasing non-linearity is driving the system harder and harder, a window may suddenly appear with a regular pattern amongst the chaos. Repeatedly, my work became my place of ordered chaos.

### **Entropic, chaotic order**

Within the context of my mother gaining strength, a marriage in chaos, and work as my place of relative order, my brother Steven was tragically killed. The details of this event have been described in the previous chapter, suffice it to say here that this was yet another bifurcation point in a system still reeling from the rhythm of the last crisis. To fully understand the impact of such an event in this



specific system it is vital to have some historic knowledge of where this family system had been prior to this tragedy. This is where chaos theory seems to be more all-encompassing than other stage theories of loss and mourning. It is important to track the history of a system in order to gain a more holistic understanding of its present responses to the universe.

According to Toffler (in Prigogine & Stengers, 1984), under non-equilibrium conditions within a non-linear system, entropy may produce rather than degrade the existing order or organisation of the system. He explains that some systems run down as they approach entropy, particularly closed systems; however, most open systems evolve and grow more coherent. In the week that followed Steven's death interesting patterns evolved within both the systems I was a part of. I moved back into the home of my family of origin both physically and emotionally, and did not return to the home that I shared with my husband. I recall that when that week was over I did not want to move away from my family of origin and going back home with my husband was very traumatic. My father, whom I have described as often playing the part of 'chaos' relative to my mother, swung to a new position - that of relative 'order'. For that week he seemed more contained than the rest of the family, spending much time searching for meaning to the senseless tragedy in religious writings and in conversation with spiritual leaders. My mother seemed unable to play her usual role and withdrew into a painful sadness, isolating herself, unable to interact, and with little strength to be the 'cement'. My older brother, always relatively quiet, but very contained moved into a position that seemed to intensify the role he had been playing on a much quieter scale. He now appeared more contained, taking on more responsibility to care for the rest of the family, already taking on some of the positions that Steven had filled. My younger brother's usual style was also heightened and he appeared more anxious than usual, withdrawing from the system like a wounded animal hiding in a dark place when injured. My husband began to feel more and more like an outsider as the days passed by, unable to share my anger with him, it seems I pushed him further and further outside of this system. This bifurcation seemed to scatter all the parts of my family system; usual patterns seemed impossible as a cloud of pain veiled these reeling parts - it was Freud who wrote, " We are never so defenceless against suffering as when we love, never so helplessly unhappy as when we have

lost ...” (in Viorst, 1986, p.121).

### **Emerging order**

Unlike previous responses to crises and experiences of loss, where this system's style intensified and it became more enmeshed, it now was more disengaged than ever. Prigogine and Stengers (1984) explain that the play of chance factors, or randomness, is sufficient to produce symmetry breaking processes of change within systems. Already at this early stage, the random event of Steven's death was breaking down well-established symmetrical transactions within this system. Irreversible processes, such as death, play an essential role in nature, and lie at the origin of most processes of self-organisation when symmetrical transactions begin to shift (Prigogine & Stengers, 1984).

From a family system that I had grown accustomed to experiencing as very cohesive, every part of the system now entered its own private cycle of mourning. No one part of the system seemed to touch another for a long time. Sharing the experience of mourning seemed too painful, and for a long time my brother's name was not uttered between members. This family system now resembled those described in the previous generation - a collection of disconnected parts. It seems that what can be called a 'primary bifurcation' occurred when this family system was finally pushed beyond the threshold of stability via cascading bifurcations (Prigogine & Stengers, 1984).

Forced into an entirely new position of disengagement from my system of origin, in the face of the first loss I had experienced through death, my already disintegrating marriage only became more fragile. During the most turbulent time of my life, my marriage only became another system from which I felt alienated and, rather than being a system in which I found solace and quiet, it merely heightened the noise for me. Again, I found relative order in the context of my work.

Feeling more separate from both these systems than I ever had, space was made for me to play with risk-taking. Out of the chaos, this was the order I began

to find. This was the gift that began to emerge for me. The more I began to risk in my daily life, the more what I have described as disengagement began to feel like a healthy separateness. And, with a greater sense of separateness, so my risk-taking increased. My marital system felt much like my family of origin system as the days passed - a system where it was impossible for me to spread my wings, grow, and discover the universe.

### **Embracing ‘far-from-equilibrium’ and the gift of order out of chaos**

In the midst of exploring my newly discovered separateness, and as my family was very slowly recovering from the loss of Steven, my mother was once again diagnosed with cancer. Another blow, another bifurcation point that fell randomly upon us. With this diagnosis her prognosis was not nearly as positive as with the initial diagnosis. On delivering the news to us, her doctor was reluctant to make any predictions, and remained reserved with regard to how much medical treatment can assist this time around. This, together with the history of chaos that my family system now carried with it, left us all feeling very fragile and weak in the face of the battle that lay ahead of us. However, Goldberger (in Gleick, 1987) writes that, unlike ‘periodic states’ with ‘narrow-band’ spectra which display monotonous, repetitive sequences that are depleted of information, periods flooded with chaos are associated with ‘broad-band’ spectra that are rich in information processes of change. A system with a history of the latter often implies the broadening of a system’s ‘spectral reserve’ and its ability to range over many different frequencies without falling into a locked periodic channel.

Woodcock and Davis (1980) use the term ‘mechanical buckling’ to describe the sudden change in the shape of a more or less elastic structure when the stress on it reaches a critical value. Although feeling battered and bruised, the experience of successive bifurcations, all associated with loss on various levels, left me questioning my own mortality and thus how I had, and was, living out my own life. The answers I came up with were unsatisfactory. It dawned on me how much my life was not as I wanted it to be, how I was still living it out in contexts that prevented me from climbing on the jungle-gym. Over and above this realisation, I came to see that there were no laws cast in stone that declared that I had to continue

along the path I had chosen. As I came to the end of the second year of my master's training, I separated from my husband after four years of marriage, and took a trip to New York City. I now call it my flight into 'risk city'. This trip marked the emergence of a new 'dissipative structure' for my 'self', a self that is learning about the exquisite embracing of life and all that it has to offer when I do risk. And, the lessons in 'risk city' are not only about risking in search of happiness, but also about risking feeling the sadness and pain that is part of this narrative. For this too, is part of the process of living and not dying. With these awakenings and risks taken, my system began to 'buckle', and the 'buckling' rippled throughout my family of origin as well as my marriage.

Under far-from-equilibrium conditions an accumulation of successive perturbations or fluctuations can become amplified into 'gigantic, structure-breaking' processes, and, this can shed light on 'qualitative' or 'revolutionary' processes of change within non-linear systems (Toffler, in Prigogine & Stengers, 1984). Soon after my mother's diagnosis, my oldest brother announced that he was going to be moving out of the family home. Separation in the face of chaos? A new response in this system. He also sold the 'family' business that he was a partner in and managing, and found a job separate from the family. My younger brother invested in the company he had been employed by for a few years, to become a partner there. My husband and I divorced during the year of my internship, and I moved into an apartment with my older brother. Roots and connections were being made outside of the nuclear family system. As each sibling began to spread his/her wings, new connections seemed to grow amongst us. Each sibling spending more leisure time with the next, outside of the nuclear family system – establishing friendships with each other. With this movement in the sibling sub-system, I have noticed slow changes in the spousal sub-system. As their children have begun to spread their wings, I have witnessed the blooming of a new connection between my parents. More content to be together without their children, they seem to have re-discovered the spousal dimension of their relationship, moving slowly away from defining themselves purely as parents. Another gift that has emerged out of the chaos, a new undiscovered level of order not only for my parents, but for their children too. As we move through processes of change, each individual action or each 'local intervention' has a collective aspect

that has resulted in unanticipated global changes (Prigogine & Stengers, 1984). This development in the history of my family system illustrates how when a non-linear system, which is in a non-equilibrium state, comes close to a bifurcation point, the fluctuations become very high and local events have repercussions throughout the whole system. Within the context of a system with such a lengthy history of loss and subsequent chaos, it seems that the various parts of this system were beginning to learn about flexibility, about the ability to love and respect each other enough to let go and celebrate the life choices and positions of the other.

As I continue to explore 'risk city', I plan to embark on a new adventure exploring other contexts around the world. Taking leave of my family system to live on another continent for a while is reminiscent of the travels of my great-grandparents and grandparents in previous generations. Another bifurcation point, another pattern repeating itself. Ardrey (in Woodcock & Davis, 1980) suggests that we pass on patterns of territorial behaviour within families and families of species. Perhaps this narrative will change my own constructions, and the story I will pass on to my own children will be one of risk-taking, where movement around the globe will become a story of adventure as opposed to one of loss.

## CHAPTER 5

### CONCLUSION: TO END AND BEGIN

*"We shall not see the end of uncertainty or risk. Thus we have chosen to present things as we perceive them now, fully aware of how incomplete our answers are."*  
(Prigogine & Stengers, 1984, p. 18)

On the occasion of a visit to Kronberg Castle, Bohr said to Werner Heisenberg:

Isn't it strange how this castle changes as soon as one imagines that Hamlet lived here? As scientists we believe that a castle consists only of stones, and admire the way the architect put them together. The stones, the green roof with its patina, the wood carvings in the church, constitute the whole castle. None of this should be changed by the fact that Hamlet lived here, and yet it is changed completely. Suddenly the walls and the ramparts speak a different language ... Yet all we really know about Hamlet is that his name appears in a thirteenth century chronicle ... But everyone knows the questions Shakespeare had him ask, the human depths he was made to reveal, and so he too had to have a place on earth, here in Kronberg. (in Prigogine & Stengers, 1984, p. 293)

Bohr expresses here the important role that our intellectual constructions play in our concept of 'reality'. Engaged in a process of constructing meaning via narrative for a number of losses suffered by both my family system and myself, I began by seeking out general, all-embracing schemes that could be expressed in terms of universal laws. Instead, I found no absolutes with accompanying algorithms, but rather random chaos. However, in shifting perceptual set during the course of this search I began to discern order and patterns of order within the chaos. It was during the course of such discoveries that I found myself turning more and more toward the 'natural' order, and chaos, of the universe to assist me through my

constructions.

While engaging in the ritual of narrating I have constructed a personal model inspired by the ideas of chaos theory and the concept of 'order through fluctuations'. This model has made apparent a new level of meaning, providing me with access to the complex interplay between individual and collective aspects of being and becoming within the non-linear system of my family. Constructing this model opened up a passage from working within the world of 'quantity' and prescribed stage theories of loss, to engaging in, and being part of, a world of 'quality' and pattern - a world that seems to reflect the natural order of the universe.

As is evident from the tale just told, constructing such a personal model has involved a journey of the 'self'. Prigogine and Stengers (1984) advocate that:

Scientists would be wrong to ignore the fact that theoretical construction is not the only approach to the phenomena of life; another way, that of understanding from within (interpretation), is open to us ... Of myself, of my own acts of perception, thought, volition, feeling and doing, I have a ... knowledge that represents the 'parallel' cerebral processes in symbols. This inner awareness of myself is the basis for the understanding of my fellow-men whom I meet and acknowledge as beings of my own kind, with whom I communicate sometimes so intimately as to share joy and sorrow with them. (Weyl in Prigogine & Stengers, 1984, p. 311)

This narrative, and the constructions contained within it, are my own. They have evolved via processes of dialogue and interchange with people and literature, and are in this sense co-constructed. However, in the final analysis, the words I have chosen, the way in which they have been ordered, the mood they have been given, makes this narrative highly personal. The family system portrayed is merely my own description and any other member may present to you an entirely different story of the same family. It is via this personal construction that I have found an interpretation of chaos theory to elevate the meaning of my life experiences to a new level of order, yet at the same time comes the realisation that this is only the

beginning of this chaotic exploration.

As I write the closing words of this story, my threads of 'blue' and 'white' at times appear distinct, at times blurred, and sometimes, new colours seem to play within my field of vision.



## REFERENCES

- Aries, P. (1985). *Images of man and death*. Cambridge: Harvard University Press.
- Atkinson, B.J., & Heath, A.W. (1987). Beyond objectivism and relativism: implications for family research. *Journal of Strategic and Systemic Therapies*, 6(1), 8-17.
- Atkinson, B.J., Heath, A.W., & Chenail, R. (1991). Qualitative research and the legalisation of knowledge. *Journal of Marriage and Family Therapy*, 17(2), 161-166.
- Babcock, B.A. (1980). Reflexivity: definitions and discriminations. *Semiotica*, 30, 1-14.
- Barbato, A., & Irwin, H.J. (1992). Major therapeutic systems and the bereaved client. *Australian Psychologist*, 27(1), 22-27.
- Bateson, G. (1972). *Steps to an ecology of mind*. New York: Ballentine.
- Bateson, G. (1979). *Mind and nature: a necessary unity*. New York: Dutton.
- Bateson, G. (1991). *A sacred unity*. New York: Harper Collins.
- Belsky, J. (1992). *Thread of blue*. Jerusalem: Nof Books Ltd.
- Bioch, S. (1991). A systems approach to loss. *Australian and New Zealand Journal of Psychiatry*, 25, 471-480.
- Bolton, C., & Camp, D.J. (1987). Funeral rituals and the facilitation of grief work. *Omega*, 17(4), 343-352.
- Bogdan, R., & Taylor, S.J. (1975). *Introduction to qualitative research methods: a phenomenological approach to the social sciences*. New York: Wiley.
- Bowlby, J. (1985). *Loss: sadness and depression*. London: Penguin Books.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge: Harvard University Press.
- Capra, F. (1983). *The turning point*. London: Fontana Press.
- Gergen, M., & Gergen, K.J. (1984). *The social construction of narrative accounts*. Hillsdale: Erlbaum.
- Geyman, J.P. (1983). Dying and death of a family member. *Journal of Family Practice*, 17(1), 125-134.
- Gleick, J. (1987). *Chaos: Making a new science*. London: Abacus.

- Goldman, L. (1982). Defining non-traditional research. *The Counselling Psychologist*, 10(4), 87-89.
- Guy, R.F., Edgeley, C.E., Arafat, L., & Allen, D.E. (1987). *Social research methods: Puzzles and solutions*. Boston: Allyn and Bacon Inc.
- Hayward, S. (1990). *A guide for the advanced soul*. Australia: In-tune Books.
- Henwood, K., & Pidgeon, N. (1995). Grounded theory and psychological research. *The Psychologist*, March, 115-118.
- Keeney, B.P. (1983). *Aesthetics of change*. New York: Guilford Press.
- Keeney, B.P., & Morris, J. (1985). Implications of cybernetic epistemology for clinical research: a reply to Howard. *Journal of Counselling and Development*, 63, 548-550.
- Kissane, D.W., & Bloch, S. (1994). Family grief. *British Journal of Psychiatry*, 164, 728-740.
- Lakoff, R.S., & Azim, H.F.A. (1991). Society's changing views on mourning: some clinical implications. *Group Analysis*, 24, 355-362.
- Lamm, M. (1992). *The Jewish way in death and mourning*. New York: Jonathan David Publishers Inc.
- Landau, M. (1984). Human evolution as narrative. *American Scientist*, 72, 262-268.
- Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. USA: Sage Publications.
- Maturana, H.R. (1991). Science and daily life: the ontology of scientific explanations. In F. Steier (Ed.), *Research and reflexivity* (pp. 31-52). London: Sage Publications.
- Maturana, H.R., & Varela, F.J. (1987). *The tree of knowledge: The biological roots of human understanding*. Boston: New Science Library.
- McGoldrick, M., & Gerson, R. (1985). *Genograms in family assessment*. Canada: Penguin Books.
- Mishler, E.G. (1986). The analysis of interview-narratives. In T.R. Sarbin (Ed.), *Narrative psychology: the storied nature of human conduct* (pp. 233-255), New York: Praeger.
- Neimeyer, G., & Resnikoff, A. (1982). Qualitative strategies in counselling research. *The Counselling Psychologist*, 10(4), 75-85.

- Owen, I.R. (1992). Applying social constructionism to psychotherapy. *Counselling Psychology Quarterly*, 5(4), 385-402.
- Parkes, C.M. (1986). *Bereavement: studies of grief in adult life*. London: Tavistock.
- Plug, C. (1990). Writing scientific articles: a review, and guide for authors. *South African Journal of Health Education*, 4(2), 2-25.
- Prigogine, L., & Stengers, I. (1984). *Order out of chaos: Man's new dialogue with nature*. USA: Bantam Books.
- Reason, R., & Rowan, G. (Eds.). (1981). *Human inquiry: a source book of new paradigm research*. Chichester: Wiley.
- Shapiro, K.J. (1986). Verification: validity or understanding? *Journal of Phenomenological Psychology*, 17(2), 167-178.
- Steier, F. (1991a). *Reflexivity and methodology: an ecological constructionism*. London: Sage Publications.
- Steier, F. (1991b). *Research and self-reflexivity, self-reflexivity as social process*. London: Sage Publications.
- Stroebe, M.S. (1993). Coping with bereavement: A review of the grief work hypothesis. *Omega*, 26(1), 19-42.
- Tautelbaum, J. (1981). *The courage to grieve*. Great Britain: Redwood Burn Ltd.
- Van der Watt, D. (1993). *Constructions of constructivism*. Unpublished master's dissertation. University of South Africa, Pretoria.
- Viorst, J. (1986). *Necessary losses*. New York: Ballentine Books.
- Woodcock, A., & Davis, M. (1980). *Catastrophe theory*. Great Britain: Penguin Books.