

CYBERNETICS AND CHRISTIANITY : THE PATTERN THAT CONNECTS.

by

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To act justly,
To love mercy,
And to walk humbly
with my God and fellowman.

**I declare that CYBERNETICS AND CHRISTIANITY :
THE PATTERN THAT CONNECTS is my own work and
that all the sources I have used or quoted have been indicated
and acknowledged by means of complete references.**

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SUMMARY

Two important trends have been noted in humankind's thinking of the world. These are increasing dissatisfaction with the rigid, dichotomous views of the Cartesian-Newtonian paradigm, and an increasing awareness of humankind's spirituality. This dissertation broaches both these trends by exploring the new paradigm, that of cybernetic epistemology, which is a far more holistic and spiritual perspective

This is done as follows. Certain concepts from cybernetics are discussed in terms of their implications and meanings. These are then discussed from a spiritual perspective, (specifically Christian), according to how they fit with the Biblical understanding of God and His creation.

The aim was to see if and how cybernetics and Christianity meet - how their basic assumptions about the world and life compare. The conclusion is that the relationship between cybernetics and Christianity is that they are *both similar and different* and this dissertation is about the pattern that connects the two.

KEY TERMS :

Cybernetics; Epistemology; Therapy; Christianity; The Christian therapist; Context; Wholeness; Interrelatedness; Pattern; Relationship; The self, The observing system; Meaning; Language

CHAPTER 1

INTRODUCTION

Sluzki (1983) tells the story of four blind men touching an elephant for the first time. The first one, touching one of the elephant's legs says, "This is the trunk of a tree. I can feel by the width and texture". The second one, feeling the elephant's side says, "No, this is a wall". The third, standing by the elephant's trunk states, "I don't know quite what it's for, but this is definitely some sort of pipe"; while the fourth man, holding on to the elephant's tail replies, "It is actually a rope, quite thick and frayed at the end". This, of course, leads to a great big argument about who is right and those who are wrong, being stupid.

What this story is about is what Shideler (1985) refers to as "multiple descriptions of the same thing" (p. 56), the 'same thing' in this case being an elephant, but in general, the same thing being the 'real world'. Shideler explains how this is a very common phenomenon which we encounter on numerous occasions - whenever we hear two people give different descriptions of the same event; whenever we learn something that throws a new light on a situation or problem; whenever we undergo a conversion, be it political, religious, romantic or whatever. Having seen and described the world and everything in it in one way, we now see and describe it in another. This points to an important imperative - that anything that can be described in one way can also be described in other ways, but most of us are only holding on to one part of the elephant, which brings us to the subject of this dissertation.

The purpose of this dissertation is 'multiple descriptions of the same thing'. In this case, the same thing will be the real world - "the real world of people and automobiles, mountains and planets, physicists and laboratories, priests and sacred places, computers and kitchen stoves" (Shideler, 1985, p.56) and anything and everything else that takes our fancy and we believe to be real and true and important to know. The multiple descriptions will come from cybernetics (a science) and Christianity (a religion).

Every individual, in the course of their daily living, is busy describing the real world, but there are two specific disciplines that have this description of the real world as their

focus and aim. This is science and religion. As Shideler (1985, p.56) explains, "Scientists purport to describe the real world. So do Christians, Jews, Moslems, Buddhists, atheists, and - no doubt - Australian aborigines, African pygmies, and everybody else between, below, and above". Scientists claim that their descriptions are the most accurate based on their scientific methodologies, while religion claim theirs' are the most fundamental because of the transcendental factor. The problem is, all these descriptions are extremely diverse, even between scientists. For example, although scientific descriptions may have some features in common, each scientist will describe the world differently, depending on whether he or she is a physicist, chemist, biologist, social or behavioural scientist or even a philosopher of science. Furthermore, every individual will have their own little twists and turns in meanings and descriptions that even two physicists or social scientists will differ. Religions, too, have vastly different portrayals - with descriptions ranging from many gods to one God, from holy wars to a command for peace. The fact is, descriptions of the real world are characterised by diversity, and more often than not, incompatibility. What then is the *real* description of the *real* world? Or is it ignorance that we simply cannot comprehend that *multiple* descriptions are the only *real* descriptions we will ever have?

The whole purpose of this dissertation, and specifically that of cybernetics is that multiple descriptions of our world is the only possibility, the only reality; but that some descriptions can and do 'fit' better than others, and this is indicated by the replacing of the old way of thinking, Cartesian-Newtonian thinking, with cybernetic thinking. And furthermore, what cybernetics, and Cartesian-Newtonian thinking for that matter, purports to describe can also be described in other ways, like from a Christian perspective. Thus, this dissertation aims to describe the real world from two perspectives - that of cybernetics and Christianity.

Specifically, it attempts to integrate the description of certain concepts from cybernetics with a Christian description of those same concepts, although the term 'integration' is not quite accurate. Rather, the dissertation attempts to link epistemological and pragmatic assumptions underlying these two descriptions/perspectives in terms of similarities and differences. Certain cybernetic concepts will first be described. These concepts and related ideas will then be discussed from a Christian perspective to see in which way they are similar or different. From this base, the discussion will then focus on

what implications these similarities or differences have in terms of epistemology and pragmatics.

The cybernetic concepts chosen to be discussed, or described, from a Christian perspective are *context, wholeness, pattern, relationship, the self, the observing system, meaning and language*. These concepts are all interrelated in one way or another, but for simplicity's sake, it was necessary to discuss them separately in the following chapters. The reason that these specific concepts from cybernetics were chosen to be discussed and not others is a personal decision. For me, they epitomise the essence of what cybernetic epistemology is all about; and they are discussed in the order presented because for me they logically follow from another.

To explain, the essence of cybernetics for me is based on the crucial understanding that pattern connects and organises our world. The rationale underlying this is the understanding that our world and everything in it is intimately interrelated and interconnected. Thus, before one can understand these interrelationships connected through pattern, it is necessary to understand the concept of interrelatedness which links to the concepts of context and wholeness. These concepts derive from systems theory and ecology which are important contributors to the cybernetic paradigm. Following this understanding of interrelatedness, comes the understanding of pattern and relationship. Of course, for me a crucial implication of these ideas of interrelatedness, pattern and relationship is the shift that cybernetics underwent. This shift is the one that brings the self into any description or observation and hence, the concepts of the self and the observing system. As a therapist, this understanding of self and the observing system is invaluable. Lastly, a consequence of bringing the self into any description or observation is the understanding that descriptions and observations are a way of making meaning through language.

Others may feel other concepts from cybernetics are more important for them. This dissertation simply represents my understanding, my description. Furthermore, discussing these concepts from a Christian perspective indicates this too - that it is my understanding of these concepts of cybernetics and my understanding of the Christian perspective on these concepts. I do not propose it is right or wrong for anybody else, this is simply my choice.

The structure of the dissertation will be as follows :

In chapter 2, the dissertation begins with an introduction to cybernetics and Christianity, in general. The chapter provides a brief introduction into the move from the

old way of thinking, the Cartesian-Newtonian paradigm, to that of cybernetic epistemology. The term epistemology is explained, as well as the three fields from which cybernetics originated - systems theory, ecology and cybernetics. The basic tenets of Christianity are introduced and lastly, the epistemological and pragmatic implications of cybernetics and Christianity are discussed. The pragmatic implications specifically refer to implications for therapy. This part of the chapter - the epistemological and pragmatic implications of cybernetics and Christianity is a thread that runs throughout the dissertation. Each chapter (2 to 6) has this important section.

In **chapter 3**, the first two concepts, *context* and *wholeness*, are discussed. Both a cybernetic and Christian perspective are provided, followed by the epistemological and pragmatic implications.

Chapter 4 focuses on the concepts of *pattern* and *relationship*. Related terms such as interactional patterns, feedback, communication as relationship are all discussed, with the Christian perspective on these provided as well, ending once again, with the epistemological and pragmatic implications.

Chapter 5 deals with the crucial concepts of *self* and *the observing system*. The post-modern underpinnings of constructivism are briefly discussed, as well as the implication the observing system has on the "objectivity" ideal and the self. The Christian perspective follows, and the implications conclude the chapter.

Chapter 6 is the last of the chapters dealing with the cybernetic concepts and the last two concepts of *meaning* and *language* are discussed. The format is the same as the previous chapters - cybernetic perspective, Christian perspective and epistemological and pragmatic implications.

Finally, **chapter 7** is the concluding chapter where everything that has been discussed previously is woven together and rounded off. Specifically, it focuses on whether cybernetics and Christianity can come together in a meaningful way. It does this by attempting a meaningful resolution of the similarities and differences discussed between cybernetics and Christianity. Of course, it must be mentioned again, that this is a personal resolution because it is based on my understandings of cybernetics and Christianity and thus, the resolution is my description. There are, of course, other descriptions.

CHAPTER 2

CYBERNETICS, THE NEW PARADIGM AND CHRISTIANITY

Cybernetics

If I am right, the whole of our thinking about what we are and what other people are has got to be restructured. This is not funny, and I do not know how long we have to do it. If we continue to operate on the premises that were fashionable in the precybernetic era, and which were especially underlined and strengthened during the Industrial Revolution, which seemed to validate the Darwinian unit of survival, we may have twenty or thirty years before the logical reductio ad absurdum of our old position destroys us ... The most important task today is, perhaps, to learn to think in the new way.

Gregory Bateson (Keeney, 1984, p.25)

This 'new way' can be said to underlie both cybernetics and Christianity, but before going onto a discussion of how this may be so, it is crucial to understand the ideas, assumptions, and aims inherent in both cybernetics and Christianity. The following chapter will provide a brief introduction to both. It will begin with a brief explanation of the foundations of this new paradigm, which has been referred to as epistemology, and then go on to elucidate the ideas and assumptions of this new paradigm, cybernetics. It will then focus on the basic tenets and beliefs of the Christian faith and conclude with the aims of both in terms of the implications for individuals, their lives, their mental health, and ultimately, the implications for therapy.

Paradigms

From the dawn of time, humankind has been on a quest - a quest to understand the world and the meaning of it. This quest has aimed at finding the truth about the world. However, the concept of truth is an elusive one. Ford (Lincoln & Guba, 1985) in her book, *Paradigms and Fairy Tales*, maintains that the concept may have four different meanings, which she refers to as Truth₁, Truth₂, Truth₃, and Truth₄. Truth₄ is the familiar *empirical* truth of the scientist - a claim in the form of an hypothesis is T₄ if it is consistent with 'nature' or 'preserves the appearances'. Truth₃ is consistent with some basic belief known to be true. Truth₂ is *ethical* truth - a claim is T₂ if the person who asserts it is acting in conformity with moral or professional standards of conduct and Truth₁, which is the crucial one, is *metaphysical* truth. Compared to T₂, T₃ or T₄ that can be claimed to be true based on some external norm, T₁ cannot be tested for truthfulness, but must be accepted at face value. These *metaphysical* beliefs can never be proven T₄ - in conformity with nature - or False since they represent the ultimate benchmarks against which *everything else* is tested. Such *metaphysical* beliefs form a *system of ideas* that "either give us some judgement about the nature of reality, or a reason why we must be content with knowing less than the nature of reality, along with a method for taking hold of whatever can be known" (Lincoln & Guba, 1985, p.15), and such a system of beliefs and accompanying methods is called a *paradigm*. Paradigms, then, represent a distillation of what we think about the world (but cannot prove) and our actions in the world cannot occur without reference to those paradigms.

Patton (Lincoln & Guba, 1985, p.15) explains it as follows:

A paradigm is a world view, a general perspective, a way of breaking down the complexity of the real world. As such, paradigms ... tell them what is important, legitimate and reasonable. Paradigms are also normative, telling the practitioner what to do without the necessity of long existential or epistemological consideration. But it is this aspect of paradigms that constitutes both their strength and their weakness - their strength in that it makes action possible, their weakness in that the very reason for action is hidden in the unquestioned assumptions of the paradigm.

The paradigm that has dominated the world for the last two to three hundred years has been the Cartesian-Newtonian paradigm that is based on Truth₄ - the empirical truth of science. It is currently being criticised for being atomistic, reductionistic, dualistic, lineal, and anti-contextual (Keeney, 1983) and is being blamed for the crises that our present world is experiencing - "high inflation and unemployment, energy crises, crisis in health care (mental and physical), pollution and other environmental disasters, a rising wave of violence and crime and so on" (Capra, 1983, p. xviii). Capra, in his illuminating book, *The Turning Point*, maintains that all these different 'crises' are actually different facets of one and the same crisis - a crisis of perception, and it derives from the fact that we are trying to apply the concepts of an outdated world view (paradigm) - the mechanistic world view of Cartesian-Newtonian science, to a reality that cannot nor will not be understood in those terms.. He goes on to say that what is needed is a completely new 'paradigm' - a new vision of reality; a fundamental change in our thoughts, perceptions and values; one that is based on the fact that the world in which we live is a globally interconnected one where biological, psychological, social, and environmental phenomena are all interdependent. This 'paradigm shift', that is so desperately needed according to Auerwald (Keeney, 1983, p.14) - "we seem hell-bent on a course of self-destruction", is actually based on epistemology and Auerwald goes on to say that "what is called for is a whole new epistemology" (Keeney, 1983, p.14).

Epistemology

The reason why epistemology underlies this paradigm shift is that epistemology underlies all paradigms, theories, models, ideas and behaviour. This is because epistemology is concerned with the rules of operation that govern cognition - it actually refers to those basic premises underlying any and all action and cognition (Keeney, 1983). It is those "unquestioned assumptions of paradigms"(Lincoln & Guba, 1985, p.15) described by Patton, and it basically refers to how individuals and groups of individuals come to construct their understanding of their world and what they regard as 'fact', 'true', and 'real'.

Everybody adheres to an epistemology - it is impossible for anyone not to have one, although they can be unaware of it, because every individual starts with those most basic acts that are the foundations of epistemology - the epistemological operations of drawing distinctions and making punctuations. And it is those epistemological operations that underlie the assumptions we have about the world, life, relationships, problems, and suffering, as well as those assumptions that influence how we perceive and experience the world. In fact, the deepest order of change that human beings can undergo is epistemological change and such a change means transforming one's way of experiencing the world (Keeney, 1983).

What then is involved in epistemology - what is involved in those basic epistemological operations? According to Keeney (1983), the most basic act of epistemology is drawing a distinction or creation of a difference. Keeney (1982, p.156) defines drawing a distinction as "distinguishing an 'it' from the 'background' that is 'not it'". It is only by distinguishing one thing from another that we are able to know our world. All that we know or ever can know rests upon the distinctions we draw and this command by Spencer-Brown - *draw a distinction!* (Keeney, 1983), is actually the starting point for any and every action, decision, perception, thought, description, theory, paradigm and epistemology (Keeney, 1983). The consequence of this fundamental command is that our world can be discerned in an "infinite of ways depending on the distinctions established" (Keeney, 1983, p.19).

There is a biological basis for this drawing of distinctions which will be explained in chapter 5, but the point is that distinctions are drawn in order to observe and describe - what Bateson (Keeney, 1983) referred to as 'punctuation'. Punctuation refers to the idea that when an observer draws a distinction and formulates a description of that distinction, one of the sides of the distinction is indicated as primary - for example, cause OR effect, right OR wrong, sane OR insane, and so on. And because there are various ways of punctuating events, individuals can vary with regard to how their world of experience is punctuated (Keeney, 1982), and hence, how their world is experienced. Watzlawick (Keeney, 1983, p.25) states it very succinctly - "ordering sequences in one way or another create what, without undue exaggeration, may be called different realities" and the reality that the Cartesian-Newtonian paradigm is completely different from what cybernetic epistemology (paradigm) offers. The following discussion will now elaborate on these two paradigms.

Cartesian- Newtonian Epistemology

The Cartesian-Newtonian paradigm has been subject to tremendous criticism over the past few decades. It has been criticised for being mechanistic, dualistic, lineal, reductionistic, atomistic, deterministic, and anti-contextual. A brief historical explanation of how this paradigm and its ideas originated will now be provided to sketch a backdrop for how cybernetic epistemology originated, and this is crucial because without the one, there cannot be the other; as with all distinctions.

There were many contributors to the Cartesian-Newtonian paradigm, like Copernicus, Kepler, Galileo, and Bacon, but only the ideas of Rene Descartes and Isaac Newton will be presented. The reason for this is that these two individuals were the most prominent contributors of this paradigm and from which the name of the paradigm derives. Furthermore, their basic ideas formed the cornerstone of the basic principles and assumptions of the paradigm upon which the other contributors added to and thus, their basic ideas need to be elucidated in order to understand the paradigm.

Rene Descartes is usually regarded as the founder of philosophy. His celebrated statement, "*Cogito, ergo sum*", "I think, therefore I exist", was a crucial building block in the Cartesian-Newtonian paradigm and had tremendous consequences for our world. This statement led to the consequence that individuals began to equate their identity only with their rational mind rather than with their whole organism. Bateson (Keeney, 1983, p.188) maintains how this emphasis on "mere purposive rationality unaided by such phenomena as art, religion, dream and the like, is necessarily pathogenic and destructive of life". Descartes' statement can be equally true with "I feel, therefore I exist", but it led to a complete schism between the mind and body and thus, a dualistic way of viewing the world was born. This dualism led not only to a separation of mind and body, but also mind versus matter, thinking versus feeling, self versus other, self versus environment, self versus God. Matthews (Adams, 1995, p.205) describes dualism as follows:

Dualism is thus identifiable as an organisational principle which systematically divides what is in reality undivided. In pursuit of

objectivity science splits the subject from the object, and effects a split within the subject himself ... science requires the subject to separate himself from the object absolutely, to see it as totally 'other', in no way implicated in his own existence ... the quarantining of this way of knowing from the influence of values reflects the fact/value duality, which has also been central to the organisation of knowledge in the western tradition.

A further consequence of this separation was the mechanistic view of the world. Descartes separated the "thinking thing", the mind, from matter, the material universe and according to him, the material universe was a machine and nothing but a machine with no purpose, life or spirituality (Capra, 1983). Nature was then regarded as a machine and thus began the 'rape' of the earth.

Isaac Newton, not only a brilliant scientist and mathematician, but also a lawyer, historian and theologian, furthered and confirmed this mechanistic view to being additionally deterministic, lineal, atomistic, and reductionistic. The Newtonian model of matter was atomistic - the basic building blocks of matter could be of different sizes but consisted of the same 'stuff' and this stuff all adhered to the same physical laws (forces) of nature. These laws functioned in a deterministic, lineal manner - force A impacting on B to cause C.

Thus, the paradigm, influencing all manner of disciplines, viewed the world as being comprised of forces impacting or acting on objects in a lineal cause and effect process. It isolated events and objects from their contexts and broke them up into discrete parts or elements. Human beings were also viewed in this way - acting in a straightforward cause and effect process; isolated from their relationship contexts and broken up into discrete parts or elements. An example of this is the 'nature versus nurture' debate.

Initially it was argued that our basic biological make-up - our genes - was responsible for who or what we are, not only in terms of our intelligence, but also in terms of character traits and temperaments, as well as any psychological problems or mental illnesses. This argument received a backlash from the nurture thinkers, who proposed that our family environment and upbringing were responsible for these things, more so than our biological nature. This is an example of an either/or way of perceiving things with nature or nurture acting in a straightforward way to impact on the individual and where the individual was

isolated from his or her context where both nature and nurture could be seen to interact and mutually influence each other, instead of being regarded as discrete entities that were mutually exclusive.

Thus the distinctions drawn in the Cartesian - Newtonian epistemology were of a dualistic, either/or nature and it is those distinctions that have led to our present crisis and need for a new perception, and this is what cybernetic epistemology offers.

Cybernetic Epistemology

Cybernetic epistemology emphasises ecology, complexity, relationship, and context. It views the world as a complex system made up of varying subsystems and levels all mutually interacting in relationship with each other in a circular causal process. Phenomena and individuals, instead of objects, are regarded in their relationship contexts and although they are sometimes divided into parts and elements, the parts and elements are never regarded as discrete but always as interrelated and intertwined.

How did cybernetic epistemology come about? One could say that 1943 was the year of the birth of cybernetic epistemology. It was during that year that two crucial papers were published (by Rosenblueth, Wiener & Bigelow and by McCulloch and Pitts) that aimed at discerning "the patterns of organisation that underlie purposeful behaviour and perception, respectively" (Johnson, 1993, p.60). This culminated in a series of biannual conferences known as the Josiah Macy Conferences where the individuals involved were concerned with 'self-regulating mechanisms'. This concern for self-regulating mechanisms was carried over and applied to the field of living, human, and social systems. Two important aspects that brought about cybernetics being applied to the new paradigm were firstly, the new physics and secondly, major limitations of the Cartesian-Newtonian paradigm.

To begin with, the new physics, brought about by Albert Einstein, initiated two revolutionary trends in scientific thought - the theory and idea of relativity and the theory of quantum physics. What these two trends invoked was a completely new way of viewing the world because the Cartesian-Newtonian ideas and concepts simply did not fit. Thus, in contrast to the mechanistic Cartesian view of the world, the world view emerging from modern physics can be characterised by words such as organistic, holistic, and ecological

(Capra, 1983). The universe is no longer regarded as a machine, made up of a multitude of objects, but is pictured as one indivisible dynamic whole whose parts are essentially interrelated and can be understood only as patterns of a cosmic process (Capra, 1983).

Secondly, the Cartesian-Newtonian paradigm came up against criticism because of its limitations in understanding and explaining the world. Instead of the promises offered by technology based on Cartesian-Newtonian science, it appears humankind is headed for ever greater crises and disasters. Cartesian-Newtonian epistemology has brought us to ecological and environmental crises; has not been able to bring us to either perfect physical or mental health, instead there seems to be ever-rising statistics of physical disease and mental disease. There have been no solutions to crime, war, violence, unemployment, inflation. For all the progress technology has made, there has been equal regression. This is especially so in the realm of psychology that offered magic cures for the mentally ill and disturbed, but actually delivered much less. There are still the 'mentally ill and disturbed' in addition to ever increasing dissatisfaction, unhappiness, and crises in relationships between people. The reason for these crises and how Cartesian-Newtonian epistemology has contributed to them is because of its dualistic and fragmented perspective. When things, events and people are chopped up into bits and pieces and there is no conceivable whole, actions and decisions relating to these bits and pieces are also dualistic and fragmented, where the effects of these actions and decisions cannot be seen as having a repercussion on other seemingly unrelated bits and pieces. For example, when the rain forests are being decimated for the purposes of technology, why should we have concerned ourselves with the threat of global warming - the planet's trees and temperature did seem unrelated a hundred or so years ago.

Cybernetic epistemology emerged slowly out of the Cartesian-Newtonian paradigm based on three different but interrelated ideas - systems theory, ecology, and cybernetics. Systems theory emerged in the 1950's out of the work with schizophrenics and juvenile delinquents. Individuals began to be observed in their family contexts and the ideas of systems theory was applied to the family 'system'. The idea of ecology and ecosystems is even older than that - originating almost a century ago. But this understanding of ecology and ecosystems as being interrelated and interactive systems composed of elements and their environments was only applied to biological ecosystems and it has only been recently - the last two or three decades - that this has been broadened to include the human component

into that understanding. Lastly, cybernetics, based on the Josiah Macy conferences starting in the 1940's, was concerned with self-regulating mechanisms or systems and later began to be applied to living, human, and social systems. Between these three contributors, cybernetic epistemology has emerged as a world view that is holistic, ecological, contextual, and emphasises complexity, mutuality, interrelatedness, and even more importantly, aesthetics and respect. Systems theory, ecology and cybernetics will now be discussed separately to provide a brief exposition of all three. However, it is imperative to note at this point that the descriptions and definitions provided in the discussions on systems theory, ecology, and cybernetics in this chapter and the descriptions and definitions in the consequent chapters are simply that - descriptions and definitions. They are not real or fixed entities but simply descriptions and definitions which individuals have found useful when languaging about these concepts.

Systems theory

Systems theory looks at the world in terms of the interrelatedness and interdependence of all phenomena, and in this framework an integrated whole whose properties cannot be reduced to the sum of its parts is called a system (Capra, 1983). The most general definition of system is the ordered composition of (material or mental) elements into a unified whole (Simon, Stierlin & Wynne, 1985). General systems theory was developed and proposed by Bertalanffy in the 1940's and according to him, a system can be seen as a complex of elements or components standing in interaction with each other (Rocco Cottone, 1992). Each component is linked to each other component by relationship and relationship is the key word here. Thus, everything in a system is related to everything else in it and a change in one part of the system will change the whole pattern of interaction/relationship within the system as a whole (Sundberg, Taplin & Tyler, 1983). Every unity, regardless of the material composition of its elements can be viewed as a system, but what is to be designated as a system; that is, where the boundaries between system and environment are to be drawn is a question of definition (Simon et al., 1985). As a rule, all natural systems are part of a larger context and thus do have boundaries. Living organisms, societies and ecosystems are all living systems (Capra, 1983).

The following ideas are also crucial to understanding systems :

Open and closed systems. Although all systems have boundaries, not all systems have extensions beyond those boundaries. Systems are thus, either open or closed. Open systems take in new information or material from outside their boundaries and they export whatever is processed within the system to outside systems. Closed systems are closed to input and output to and from the outside (Rocco Cottone, 1992). However, true closed systems, except for the universe, do not exist in nature (Bloch, 1984). Living creatures are open systems through which there is a continuous flow of matter, energy, and information. Their inputs (anything that penetrates their boundary) and outputs (anything that results from processing or throughput that occurs within the system) can be observed and such matter, energy and information flow is crucial to their survival.

Multi-levelled (hierarchical) organisation. Systems do not stand alone. They are linked to other systems and organised in such a way that they form multi-leveled structures in a hierarchical fashion, each level consisting of subsystems which are wholes in regard to their parts, and parts with respect to the larger wholes (Capra, 1983). The term hierarchy here, however, does not imply a system of authority where higher levels influence and control lower levels. Influence and control extends in both directions - up and down - where changes made at one level will affect all other levels. However, hierarchy does imply that 'systems' become broader and larger and more complex the higher one goes; for example, cell, tissue, organ, organism, group of organisms, ecosystem.

Homeostasis/homeodynamics. Systems appear to be self-preserving. Accordingly, they are homeostatic, which means that they tend toward a steady state (Rocco Cottone, 1992). Teichman (1986, p.11) defines homeostasis as a "self-regulating process which maintains the stability in the system and protects it from deviations and changes". However, systems also tend to evolve over time, thus the term homeostasis was replaced by homeodynamics. The term homeodynamics indicates the dual nature of systems - the need for stability and the necessity for change. This refers to the presupposition that all variables in a system rarely, if ever at all, can be held to an exact constant and furthermore, no behaviour, interaction, or system of choreography is ever consistently the same. The term homeodynamics also indicates something more - that stability is actually maintained through constant change (Keeney, 1983). The way in which this is done is through a system of feedback loops - negative and positive - and this is where cybernetics comes in.

Cybernetics derived from engineering systems where feedback loops were built into systems in order for them to maintain a particular level of functioning by themselves - in other words, to be self-governing systems. An example is a thermostat in a home heating system. Feedback loops involve feedback mechanisms or processes that feed information or communication back into the system so that any or all changes can be adapted or accommodated to, thus ensuring a continuous feedback cycle of information or communication.

Negative feedback loops feed any information or communication about change back into the system to limit such change, thus maintaining the particular functional status of the system (homeostasis), while positive feedback loops feed information or communication about change back into the system to amplify such change to bring about a change in the particular functioning of the system (morphogenesis). In fact, Keeney and Ross (1992) actually define cybernetics as the study of a particular recursive complementarity concerned with the interrelation of stability and change.

Causality. Causality refers to the process of producing an effect. Generally, causality can be viewed as either lineal (A causes B) or circular (where there is a reciprocal, recursive process) (Rocco Cottone, 1992). Within systems, causality occurs in a circular, reciprocal, mutual process where causes and effects are fed back into the systems so that an event or element may be both a cause and effect. Thus, change in one element affects all the other elements in the system, as well as the system as a whole (Teichman, 1986).

Non-summativity. This refers to the principle that any system is greater than the sum of its parts because the system is not only comprised of the individual parts, but also the organisation and interaction of the parts. Nonsummativity or holism is the fundamental premise upon which systems theory is based because of the insight that a system as a whole is qualitatively different and 'behaves' differently from the individual elements and thus, emphasises the need to observe and intervene in systems as wholes (Simon et al., 1985). This is also known as synergy. In a synergetic system, the interaction of the system components taken together have a greater total effect than the sum of their individual effects.

Rules and roles. Systems act in patterns that are characteristic of their rules and roles. The rules are the parameters by which a system operates. The roles are the task orientations that components fulfil in carrying out the system's rules.

Relationship. Relationship is the essence of systems. By this it is meant that all the interactions and connections between the members of the systems provide the energy, rules, and roles of the system. The entirety of the relationships of a system is generally described as the system's structure (Simon et al., 1985), but is more akin to the system's organisation, where the structure refers to the members of the system but the organisation refers to the members as well as the interactions between them. It is through relationship or relatedness that systems are either open or closed; connected to other systems in the hierarchy; and characterised by homeodynamics, circular causality and non-summativity.

Ecology

The broadest view for looking at all possible systems, levels of systems, and interrelations among systems is defined as ecology. Ecology refers to the fundamental doctrine that all things in nature are complexly but systematically interrelated. Roszak (Keeney, 1983, p.135) maintains that if you "extend this idea as far as it will go, you can imagine the Earth at large, including ourselves and our culture as a single, evolving system of life". The American Indians proposed that we regard the whole earth as a single organism with the rivers as veins and the soil as flesh and the living creatures (plants, animals, and humans) as parts all making up that organism (Keeney, 1983).

But what does ecology imply? Ecology implies a complex and delicate balance between the parts that make up the ecology. It implies diversity, variety, complexity. Healthy ecosystems are those ecosystems that have achieved a dynamic equilibrium between all the various levels and parts that comprise the ecosystem. There is a delicate balance between the parts such that no one particular part completely dominates, influences or controls the others, but that all the parts depend on all the other parts for growth and survival because any change in one part will affect the entire ecology. In ecology, parts or wholes do not dominate because the whole of ecology necessitates the cybernetic complementarities of its parts : life and death, success and failure, health and sickness, good and bad. Capra (1983) maintains that the essence of ecological thinking and one of the most difficult things for people in Western culture to understand is the fact that if you do something that is good, the more of the same will not necessarily be better. Ecosystems

sustain themselves in a dynamic balance based on cycles and fluctuations, which are patterned over time through nonlinear processes, and this balance is crucial, mysterious, and beautiful. Suzuki (Keeney, 1983, p.140) actually describes the aesthetics of this balance between all parts, good and bad, very nicely:

Lice, fleas -
The horse pissing
Beside my pillow
the real world is a world of lice as well as butterflies,
horseflies as well as vintage champagne, and to the
person who has truly realised this,
one is as good as the other.

Cybernetics

Defined by its creator, Norbert Wiener, as “the entire field of control and communication theory, whether in the machine or in the animal”(Miermont, 1987, p.88), cybernetics is concerned with the regulation of and communication between living organisms and artificial systems. The word cybernetics is actually derived from the Greek word *kubernetes* which literally refers to the steersman or pilot of a ship and hence, the idea of ‘regulation’. Bateson (Keeney, 1983, p.16) referred to cybernetics as “the biggest bite out of the fruit of the Tree of Knowledge that mankind has taken in the last 2000 years” and the field has actually become the major context for studying epistemological issues (Keeney, 1983). But what does it actually mean?

Cybernetics refers to the science of information, pattern, form, and organisation. It is concerned with the pattern and organisation of all living process, whether it be amoeba, redwood forests, human beings, social groups, or whole planets (Keeney & Ross, 1992). That pattern organises all physical and mental process is the primordial idea that gave birth to cybernetics and to adopt a cybernetic view is to enter a radically different world of description. It is to enter a world that is vastly and intricately connected and woven together in a sacred dance of interrelatedness and recursiveness. Cybernetics is the world of

recursive process where recursive patterns connect our entire universe - "In a recursive universe, the whole earth may be found in a single living cell" (Keeney, 1983, p.92).

In cybernetics, anything, or rather any idea is 'real', because cybernetics makes the leap from the world of material and matter, things and forces to the world of information and pattern. The epistemology underlying cybernetics is one that indicates a way of discerning and knowing that patterns organise events, rather than forces that operate on things, as in Newtonian thinking. It involves changing our conceptual lens from substance to form, rather than parts to wholes because in the world of cybernetics, both parts and wholes are examined in terms of their pattern of organisation (Keeney, 1983). In fact, parts and wholes do not even exist in any absolute sense at all (Capra, 1983), but are merely distinctions individuals make in order to understand their world, and it is the fact that cybernetic distinctions are of a both/and nature that provides an entirely new understanding, which brings us to the idea of cybernetic complementarities.

Cybernetic Complementarities

The emphasis on epistemology and the realisation that individuals draw their own distinctions led to the understanding that the either/or distinctions drawn by Cartesian-Newtonian epistemology were not necessarily the 'true' or 'real' distinctions. Cybernetic epistemology, based on the principles of systems theory, and ecology which emphasise wholeness, began to draw different distinctions - both/and distinctions, meaning that both sides of any distinction drawn need to be embraced to form a whole. Keeney (1983) refers to it as 'cybernetic complementarities'.

Cybernetic complementarities provides an alternative framework for looking at distinctions. Generally, based on Cartesian-Newtonian science, most people regard distinctions to be representatious of an either/or duality, a polarity, a clash of opposites - A / not A ; right / wrong ; good / bad; sane / insane; cause / effect. Cybernetic epistemology proposed that the two sides of any distinction are parts of a whole or continuum and that they form a both/and distinction, because depending on context, one side of a distinction may be both/and. For example, depending on the context, a cause may be both a cause and an effect. And furthermore, we can only know one side of a distinction through knowledge

of its other side. For example, we can only know right or good by knowing wrong or bad. In general, all distinctions propose multiple communications. One cannot refer to change without implying stability, autonomy without interdependence, parts without wholes and so on. When any differentiation is made, two ways of talking about its sides are always present:

- we may speak of their *distinction*; or
- we may talk about their *connection* (Keeney & Ross, 1992).

Cybernetic epistemology talks about their recursive pattern of connection.

This is true even for Cartesian-Newtonian versus cybernetic epistemology. Cartesian-Newtonian epistemology is criticised for being too lineal, and it is suggested that cybernetic epistemology, based on circular thinking, replace it, but this too cannot be regarded as an either/or dichotomy. It is impossible to be either lineal or nonlinear, we embody both (Keeney, 1983), and sometimes, depending on the context, it is useful to think lineally and other times useful to think circularly. The importance of distinctions cannot be emphasised enough because it is the foundation for epistemology and the distinctions we draw influence how we act in our world. This will be explained in later sections where the practical implications of epistemology and distinctions are discussed under the heading, *Implications for Therapy*.

To sum up, cybernetic epistemology derives from ecology, cybernetics, and systems theory. All three emphasise interrelatedness, interaction, organisation. All three imply complexity and context. Cybernetics looks at pattern and organisation between parts, phenomena, and people. Ecology embraces relatedness between everything in nature, as well as balance. Systems theory focuses on parts that make up wholes or systems and the interaction, organisation, and functioning of those parts and the whole. All three subscribe to pluralistic distinctions and circular causality. All of them provide a different reality and thus, a new meaning for psychotherapy. However, before going on to the next discussion - that of Christianity, it is important to discuss two crucial points here - that of orders of cybernetics and the idea of time.

Orders of Cybernetics

As in all paradigms and perspectives that develop and change over time, so too has cybernetic epistemology developed and changed over the past few decades. This change has become to be known as the change from *first-order* cybernetics to *second-order* cybernetics. This aspect is addressed in chapter 5 where the idea of the observer and the objectivity ideal are discussed, but it is important to mention it briefly here. The reason for this is that some of the concepts and ideas of cybernetics have different implications depending on whether it is discussed from a first-order or second-order perspective. This, of course, will have ramifications for the discussions in this dissertation and thus, it is necessary to explain this difference between first- and second-order cybernetics, as well as to point out what implications it has for certain concepts and for this dissertation as a whole.

First-order cybernetics originated from the machine metaphor. It conceptualised systems as homeostatic machines that were regulated by feedback loops and the inputs and outputs linking these feedback loops could be observed. At this stage systems theory was very prominent, with its key ideas of circular causality, feedback loops, homeostasis, and non-summativity, as well as the idea of power and control over such systems by influencing the feedback loops. Individuals, families or groups were also conceptualised in this way - as a homeostatic machine. Any problems or symptoms were regarded as playing an important role in maintaining this homeostasis; thus, the idea that the "system creates the problem" (Sauber, L'Abate, Weeks & Buchanan, 1993, p. 172), meaning that a dysfunctional family system creates the problem.

Over time, however, cybernetics began to be understood on another level. The result of this was that people began to describe the ideas of feedback of feedback; homeodynamics; recursivity instead of circularity, and hence cybernetics of cybernetics. In other words, second-order cybernetics began to link the observed with the observer in such a way that it was no longer possible to stand outside the system and treat it as something distinct. The idea of relatedness was broadened to extend to the idea that the observed and observer are connected by a recursive pattern of mutually influential interactions. The idea of a recursive pattern of interaction, spiralling on and on, conveyed a better understanding of system interactions, feedback, non-summativity, than the idea of circularity. Furthermore, the observer was understood to be an integral part of this pattern of interaction, thus forming

another system and no longer seen to be in control or having power over it, but simply as one other part that would influence and be influenced by the other parts. The developing ideas of constructivism and social constructionism also helped this shift from first to second-order cybernetics along. It gave impetus to the idea that all we have is self - our own descriptions, our own meanings, our own versions of reality; hence the idea of a multiverse of realities.

This is just a brief discussion of first- and second-order cybernetics. Due to space limitations it is not possible to discuss this or its implications fully. However, it is necessary to give a brief review of what implications this has for the concepts discussed in this dissertation, as well as for the dissertation itself.

To begin with, it is necessary to explain that I have attempted as far as possible to write this dissertation from a second-order perspective. The concepts discussed in chapters 5 and 6, the self, the observing system, meaning and language are clearly from this perspective. However, as far as it was attempted, it is not always possible to prevent oneself from slipping into thinking from a first-order perspective, just as it is not always possible to prevent oneself from often slipping into a lineal, deterministic way of perceiving. Thus, it must be made explicit here that I may slip into these ways of describing in this dissertation without realising it, even though my intention was to discuss and describe cybernetics from this second-order level.

As for the concepts discussed in this dissertation, they have different implications depending on whether they are from a first- or second-order perspective. Chapters 3 and 4, the chapters on context and wholeness, and pattern and relationship bring in both the first and second-order perspectives and in those chapters, I mention, where necessary what the implications of those are. Chapters 5 and 6, as mentioned previously, discuss the concepts of self, the observing system, meaning and language, which are all second-order concepts and thus the implications are not addressed, because the discussion is clearly from a second-order perspective.

Time

The concept of time is crucial in cybernetic thinking. It links with all the other concepts in the sense that it can be described as the background against which everything else takes place. It forms an integral part of context - just as nothing can take place outside of a context, so nothing can take place outside of time. Time can also be regarded as part of the pattern that connects. The understanding that cybernetics has of a recursive pattern of interaction connecting the members of any relationship (or system) can only make sense when one considers time. Patterns and relationships occur in and develop over time and furthermore, the idea of recursivity necessarily implies a repetition of a pattern which can only occur over time. The other concepts of self, the observing system, meaning and language also all occur within the context of time and at what point in time they occur will have a tremendous influence. For example, the meaning of depression will have very different implications in regard to the time at which it may present itself. Consider the different meanings depression has after the death of a loved one or a divorce or when it occurs at a time when there seem to be no 'understandable' circumstances.

The point is that time is so interrelated with our interactions, meanings and lives that it is not possible to distinguish it from them. This is one of the reasons why time was not chosen as a specific concept to be discussed and elaborated on at length. However, it will be a thread that will run throughout the dissertation and will be focused on quite extensively in the concluding chapter.

The above discussion focused on the underpinnings of cybernetic epistemology, that of systems theory, ecology and cybernetics. It also brought in the idea of cybernetic complementarities, as well as the crucial points of first- and second-order cybernetics and the idea of time. The next discussion will explore the basic tenets and beliefs of Christianity and from there, the attempt to integrate these two perspectives will begin.

Christianity

Before going on to explain the fundamentals of Christianity, it is important to understand the fundamentals of religion in general. According to Rizutto (1993), everyone

has a religion and is religious, regardless of how it manifests, whether one adheres to a public religion or has created private beliefs to find personal meaning in life. Why?

For many people religion helps make life bearable. Jourard (Lapierre, 1994, p.157) explains it in terms of the following:

Man needs reasons for living and if there are none, he begins to die ...
man is incurably religious. What varies among men is what they are
religious about. Whatever a person takes to be the highest value in life
can be regarded as his God, the focus and purpose of his time and life.

Thus, religion is concerned with fundamental questions about human existence and furthermore, as an integral part of society, religion often relates to other societal issues or questions, like social problems or politics. Functionally speaking it could be said that religion refers to the way in which human beings react to a variety of existential needs and issues, for instance, the need for security; for alleviation of our inherent loneliness; the quest for meaning in our world, life, death, and suffering, and to express happiness and sadness.

Religious questions and experience encompass the most vital needs, passionate hopes, and existential longings that each individual has, and this is because each individual has a need to make meaning of his or her life in particular and life in general. This need stems from the inescapable recognition of our mortality, of the finitude of our existence. Beneath this shadow of mortality, people seek to understand why they are here, the meaning and value of their lives, the purpose of their being (Randour, 1993).

No human being can avoid dealing with the awesome question marks of what precedes and what follows life on earth. To account for these question marks, humankind gives life's journey a context, a 'before' and an 'after' life, beyond the allotted lifetime on earth. But, whatever the form these 'before' and 'after' lives take, they are all by definition a sacred, religious answer about another reality (Rizzuto, 1993), a hope and belief in a transcendent reality that gives our limited lives ultimate meaning.

Any particular system of meaning that gives meaning to people's lives can thus be considered religious and so, whether it be Judaism, Islam, Christianity, Paganism or Atheism, all have this one fundamental quest in common - the quest for meaning and the hope of transcendency. The purpose of this discussion is to discuss the system of meaning known as Christianity.

So what is a Christian? A Christian is a person whose primary purpose in life is to know, love, and serve Jesus Christ, the Son of God made man (Schreck, 1984). The next question then would be, what does it mean to be a Christian? What does it mean to know, love and serve Jesus Christ - in our world, in our relationships, in daily living.

The answer to this question, however, will be without ultimate meaning if the basic tenets and beliefs of Christians, of Christianity, were not first understood. Christianity is actually God's revelation about Himself and His relationship to mankind and the basic tenets - of which there are five and upon which all Christian faith, behaviour, and living is founded, is based on that revelation (Shreck, 1984).

The Basic Tenets

- Firstly, belief in the reality of God is the alpha and omega of the Christian religion (Whale, 1941). This belief in the reality of God is the belief in God as the Creator, who created our world and everything in it, including humankind. It is the belief that God is all-powerful, all-knowing, all-perfect and all-being; without Him, there would be nothing. Everything that was, is, or will be is completely dependent on Him Who Was, Is and For Ever Shall Be. This idea of creation, however, is not one where God created the universe and then left it to its own devices, but is rather one of a process of ongoing, age-long creation, which is not yet complete. This implies the fundamental belief that God is still present and working (creating) in our world now.

- Secondly, that because God as Creator is all-knowing and all-perfect, He would create a world that is also perfect and beautiful *in design* - "God saw all that He had made, and it was very good" (Genesis 1:31). Humankind, too, was created with that design in mind - "So God created man in his own image, in the image of God He created him; male and female He created them" (Genesis 1:27).

However, God made humankind in 'His image' for a purpose - so that humankind would be in fellowship and union with Him, their Maker, glorifying, worshipping and serving God in knowledge of their utter dependence of Him who gives "life to the full" (John 10:10). God's design had perfection planned for humankind if they *chose* to follow God's plan and His Word; because, since God created humankind in His likeness,

humankind also thus shared in God's power to choose freely and to direct its own path in life (Schreck, 1984).

- But humankind abused its power to choose freely and used it to disobey God and the history of the world confirms this - that humankind has not chosen to do everything according to God's purpose or to glorify and serve Him, but has upset its right relationship to God through pride, self-aggrandisement, and false independence and thus, chosen self-glorification over God-glorification (Shutte, 1993). It is what is commonly known as sin.

Yet sin is not only that which is monstrously evil, like mass murder, racial oppression, child abuse, and so forth. It is also the subtle habits of greed; lack of interest or concern in another's suffering; prejudice, and all those other acts of non-love. But it is not a case of God as a dictator who sets down laws and then rains down judgement on those who break those laws and commit sin. Sin is actually far more grievous than that - humankind does wrong, catastrophes follow. It is not just because laws are broken, but because sin is an attitude and activity that has destructive long-term psychological and social consequences for individuals, families, groups, entire societies. In other words, God's laws against sin are simply there to save us from ourselves (Ramsey, 1970).

What God wished humankind to do was to emulate His laws and to humble themselves before others, before God. Humankind failed and God then sent humankind something real, something as close to them as could be, to emulate - "The Word became Flesh and dwelt among us" (John 1:14) and His name was Jesus Christ - the Son of God.

- And this is a basic belief where Christianity is 'unique'. The Christian religion claims that God became One with us, by sending His son, to dwell among us and this is the heart of Christian belief - that the divine Creator humbled Himself to take on Himself the entire experience of existence as humankind, in all the conditions of humanity and it is called the Incarnation (Ramsey, 1970). But why did God do this? Because man is an embodied spirit and God knows that we need to relate to Him through that which is physical, visible and tangible (Schreck, 1984).

However, what was the purpose of the Incarnation? The answer to this question is the basis for the fourth fundamental tenet. There were two main purposes of the Incarnation. Firstly, that Jesus Christ came to teach about God and His kingdom and to point the way to that kingdom - what people should do and be like to achieve it. Secondly, with Christ's death on the cross at Calvary, He died for all the sins of the world, and with His resurrection

three days later, He broke the hold of death and Satan in the world and offered humankind salvation. He died so that we could live.

It can be said that Jesus' death and resurrection brought two things - judgement and forgiveness and these two go hand in hand (Ramsey, 1970). God is merciful and forgiving, but there will be a judgement day and Jesus' life as the Incarnation points to both; that as God's creatures, as His children, we are saved because of His infinite love, but as His children, we are called to follow the word of God and obey.

An important aspect about God's offering of salvation to us is the incredible assurance that we have been saved by the grace of God and nothing else. It is not that we can ever achieve salvation - either by faith or good works. In fact, there is nothing we need to do or can do to be saved. We are simply saved through grace and that grace is a gift from God (Ramsey, 1970).

This idea of salvation has a further implication - that of liberation. God did not only send His Son to us to save us from death and sin, but to liberate us from the hold of sin so that we could grow and triumph. In doing this, God was making a clear choice to side with us, His creation. Jesus' sharing of our humanity implies the sharing of this in its fullest sense - the sharing of our joys and sorrows, our pain and passion, our greatest needs and burdens as well as our greatest victories.

- But that does not mean that because God's grace has saved us that we can do what we like. And this brings us to the fifth tenet. God's word is clear - if we are to call ourselves Christians, we must act like Christians and strive "to be perfect, therefore, as Your Heavenly Father is perfect" (Matthew 5:48). But what does it mean to be a Christian?

To be a Christian, we are commanded to live by God's commandments and those commandments are: to love God and to love others. Very clear and straightforward, except when we realise what that definition of love entails - complete selflessness.

But God did not leave us to do this alone - He provided us with a helper, the Holy Spirit and it is only through this Spirit of God that we can be truly Christian. Not even Jesus could do anything without this helper. In fact, it was only after He was baptised with the Spirit that He began to perform miracles and He assured His followers that they too would be helped in all they say and do. Similarly, Christians too can experience miracles in their lives through this helper. As the Holy Spirit guided Christ and assisted Him to grow in God's grace, so too will the Holy Spirit guide and assist us to grow in God's spirit so that we

will be able to love, as God loves, through the fruits of the Spirit - "love, joy, peace, patience, kindness, goodness, faithfulness, humility and self-control" (Galatians 5 vs 22-23).

The basic assumptions of both cybernetics and Christianity have now been discussed. The rest of the chapter will now focus on attempting to integrate these two systems of meaning. It will do so by attempting to elaborate on their similarities and differences, or connection and distinction as in cybernetic complementarities. This will form the backbone of this dissertation, where the both/and position will be embraced by discussing cybernetics and Christianity in terms of *both* their similarities (connection) *and* their differences (distinction).

Cybernetics and Christianity

To begin with, it is necessary to return to Ford's (Lincoln & Guba, 1985) conceptualisation of Truth. It was explained how she regards Truth as having four different meanings - Truth₁, Truth₂, Truth₃, and Truth₄ - with Truth₄ being the empirical truth of the scientist and Truth₁ as being metaphysical truth with no reference to some external norm, but accepted at face value and against which *everything else* is tested. It was further explained how the Cartesian-Newtonian paradigm that has dominated the world for the past two to three centuries was based on Truth₄ and basically undermined and threw out Truth₁ because of its emphasis on 'truth' being only 'true' if it is empirically proven to be so. The paradigm shift now taking place in numerous disciplines can be said to be toward that metaphysical truth, Truth₁, upon which both cybernetics and religion (like Christianity) are based.

Metaphysical beliefs were described as a system of ideas that "either give us some judgement about the nature of reality, or a reason why we must be content with knowing less than the nature of reality" (Lincoln & Guba, 1985, p.15), and that such systems of ideas came to be called paradigms which represent a distillation of what we think about the world, but cannot prove. This is completely opposite to Cartesian-Newtonian science that attempts to 'prove' everything and anything that cannot be proved is regarded as 'nonsense, myth or fiction'. Cartesian-Newtonian science does not represent metaphysical beliefs since it

accepts nothing at face value, and it actually replaced metaphysical beliefs as a foundation for a paradigm.

Bateson in his book, *Mind and Nature* (1979), wrote that the very first presupposition that every schoolboy should know is that “science never proves anything”(p.34). He goes on to explain how scientific proof is based on the idea that something is proven to be ‘truth’ when there is a precise correspondence between our description and what we describe or between our abstractions and deductions and some total understanding of the outside world, and then he goes on to state that truth in that sense is not obtainable. Shideler (1985) explains how in our imperative to know the absolute, irrefutable and inviolable Truth, we need to be reminded that truth or falsity is a property of statements, not objects or reality. She goes on to explain that an object, process, event or state of affairs cannot be true or false but simply is what it is. Statements, however, about those elements can be true or false, but are not always verifiable and so truth is a status we assign to statements, but things are what they are independently of the status assigned to the statements about the things.

Cartesian-Newtonian science forgets this and begins to regard these status-assignments as reality-judgements without realising that such status-assignments are also value-judgements reflecting what those judges take to be important. But Shideler (1985) explains how it is not the claim to be right that is disastrous, but the claim to be *exclusively* right; and this is where the Cartesian-Newtonian paradigm differs from metaphysical paradigms, like cybernetic and religion (Christianity), which both represent metaphysical beliefs and paradigms. However, it cannot be denied that on a meta-level, all religions, including Christianity, do claim to be exclusively right too. This point is a crucial one where cybernetics and Christianity may begin to diverge but it will be discussed more extensively in chapter 5 where this controversy over what is ‘right’, ‘true’, and ‘real’ is discussed.

To return to the discussion, however, of how cybernetics and Christianity represent metaphysical beliefs and paradigms, how is this so? Firstly, both cybernetics and Christianity subscribe to a view of reality that is metaphysical by nature - that cannot be proven but accepted at face value, or *faith* value in the case of Christianity. For example, cybernetic epistemology is founded on the understanding that individuals draw distinctions in order to know their world and that these distinctions are merely distinctions, they do not indicate the realness of anything and so “any position, perspective, conceptual frame of

reference, or idea is a partial embodiment of a whole we can never completely grasp (Keeney, 1983, p.3). Cybernetics realises the wholeness of the 'nature of reality' and that it is impossible to get completely inside that 'wholeness' and so it is inevitable that we will know 'less than the nature of reality'.

With regards to Christianity, as with any religion it is purely metaphysical, with a belief in something that is transcendental and can never be proven or tested against any external norm, but must be accepted on the basis of faith. It is also similar to cybernetics in terms of realising that we can only know in part, not in full, but with the difference that there will come a time when we will know the full - "Now I know in part, then I shall know fully, even as I am fully known" (1 Corinthians 13 vs 12). And furthermore, within Christianity, there is the constant mystery of who and what God is and the knowledge that human understanding of God (and by implication, His creation) will always be limited, 'less than' : "Oh the depth of the riches of the wisdom and knowledge of God! How unsearchable His judgements and His paths beyond tracing out! Who has known the mind of the Lord? Or who has been His counsellor?" (Romans 11 vs 33-35).

Secondly, both cybernetics and Christianity can be said to represent a paradigm or world view. It was explained previously how paradigms are founded on epistemology and the distinctions drawn within that epistemology. It was also explained how cybernetic epistemology differs from Cartesian-Newtonian epistemology and so invokes a completely different understanding of reality or world view. Adams (1995, p.201) explains how religious orientations subscribe to being a paradigm too:

Clients' religious orientations are as important a consideration in clinical work as race ... because the *sine qua non* of all the various religions is their provision of worldviews, or interpretive lenses, through which believers apprehend and order their experience and reality (both moral and social).

However, it is necessary to be made explicit that from a purely Christian perspective, Christianity is not regarded as merely a worldview or a paradigm, but *the* worldview or *the* paradigm to which all of humankind should subscribe; and this is because of the hierarchical assumptions inherent in Christian belief. This hierarchy issue needs to be kept

in mind throughout this document as it is a point of serious divergence from which many other differences may emerge and thus it will be expected to crop up time and again. This issue should not be dismissed too quickly as it plays a crucial part in this entire dissertation and may form the crux of whether cybernetics and Christianity may be integrated and to what extent.

For the purposes of this dissertation, however, both cybernetics and Christianity will be regarded as world views, paradigms, that have their foundation in epistemology and epistemological operations of drawing distinctions. The reason for this is that in order to discuss their similarities and differences, it is imperative to have a common starting point and since both share a common purpose, that of ordering one's experience of the world and hence being a worldview or paradigm, this is how they will be regarded. And it is from this point that the following discussion will embark. It will focus on the epistemological foundations of cybernetics and Christianity, as well as the pragmatic implications in terms of behaviour, since behaviour is 'determined' by epistemology and especially the implications for therapy.

Epistemological Distinctions

Historically, science and religion have always been considered mutually exclusive, where what each one describes and explains being two completely different and unrelated realms of experience. Time, however, has led to a narrowing of this gap where the realms of experience are no longer regarded as different and unrelated, but it is now suggested that science has something to contribute to religion and vice versa. And this relates to the idea of cybernetic complementarities.

Therefore, from previously regarding religion as opposite to science on a continuum of epistemologies (Adams, 1995), with the advent of cybernetics and the consequent understanding that there are two ways of viewing distinctions - in terms of their *distinction* or their *connection*, that has changed. Now there has been a convergence of science and spirituality towards a both/and position so that they are no longer seen as being diametrically opposed or mutually exclusive.

As to how this convergence of science and spirituality came about, there were various contributors - modern physics, ecology, systems thinking, and cybernetics. Capra (1983) explains how in the twentieth century, physics had to go through several revolutions in thinking from the limited mechanistic world view to an organic, ecological view of the world. As a result, the universe is no longer regarded as a machine, made up of a multitude of separate objects, but appears as a harmonious, indivisible whole; a network of dynamic relationships that include the human observer and his or her consciousness in an essential way. This ecological and systems view of life is actually spiritual in its deepest essence (Capra, 1983), and this is supported by Goldberg's (Lapierre, 1994, p.158) understanding of spirituality as "simply the realisation that one's separateness from everything else in the universe is an illusion".

It was discussed previously how cybernetics adheres to this both/and thinking and refers to it as cybernetic complementarities. What is not realised is that one of the oldest books of the world, the Bible, also adheres to such both/and thinking. For example, in Ecclesiastes 7 vs 14:

"When times are good, be happy; but when times are bad, consider: God has made the one as well as the other", and Ecclesiastes 3 vs 1 to 8:

There is a time for everything, and a season for every activity
under heaven:
a time to be born and a time to die
a time to plant and a time to uproot
a time to kill and a time to heal
a time to tear down and a time to build
a time to weep and a time to laugh
a time to mourn and a time to dance
a time to scatter stones and a time to gather them
a time to embrace and a time to refrain
a time to search and a time to give up
a time to keep and a time to throw away
a time to tear and a time to mend
a time to be silent and a time to speak
a time to love and a time to hate

a time for war and a time for peace.

How do these passages convey this idea of cybernetic complementarities or both/and thinking? The understanding behind both/and thinking is that instead of seeing sides of a distinction in terms of their distinctness, like cause versus effect, they need to be seen in terms of their relatedness or connectedness, in other words, that one only understands cause relative to effect and vice versa. However, both/and thinking goes beyond simple relationality. It also extends to the idea that two sides of any distinction are always connected by means of some pattern that weaves the two sides of the distinction into some meaningful whole. Often this connecting pattern can be seen as the context in or time at which these distinctions are found, so that in one context or at some point in time, a cause may be an effect and the effect a cause and in another context or another point in time, vice versa. The point of both/and thinking, however, is to understand that in itself something is not either a cause or effect, but that it can be both cause and effect, depending on the context in or time at which it occurs. Thus, the two sides of the distinction form a meaningful whole, with the separate sides emphasised at different times and in different contexts, but always remaining connected through a pattern of interaction over time.

How do these ideas then fit with the above passages? Firstly, it is quite clear that these two passages are making distinctions - between good and bad, birth and death, war and peace, and so on. But by making the idea of time explicit, it connects the two sides of the distinctions, relating one side of the distinction to the other with time as the connecting pattern because of there being a time for everything. Furthermore, there is also an implicit idea of context, that the time to weep and the time to laugh relates to the context in which it occurs and it is this context that makes it meaningful and relates the two.

An additional point is that from a Christian viewpoint, God would be regarded as the ultimate connecting pattern who weaves the threads of life into a meaningful whole through the connecting essence of time and this is also what these passages imply, especially Ecclesiastes 7 vs 14. Of course, if God is this ultimate connecting pattern, this begins to show up the hierarchy in Christian belief and how God is at the top of this hierarchy.

However, if this is not one of the best examples of cybernetic complementarities, ecological and both/and thinking, then it is simply unfathomable what could be. The balance, harmony and aesthetics conveyed in these two passages is clearly in keeping with

the principles cybernetics, ecology, and systems thinking all convey - the principles of pattern, interrelatedness, context, wholeness, balance, circularity, and thus spirituality. Thus, the similarities between the epistemological distinctions made by cybernetics and Christianity as a form of spirituality, is itself an example of both/and thinking - it is both cybernetic and spiritual (Christian). To think cybernetically is to think spirituality and vice versa.

Change and Epistemological Change

It was mentioned previously that a different order of change that an individual can undergo is that of epistemological change - a change in one's drawing of distinctions and making punctuations and thus, in one's experiencing of the world. Cybernetics proposes that individuals in Western society undergo this radical change out of necessity to save our planet. But such a change - in one's experiencing of the world - is not only limited to change towards cybernetic epistemology. It can also occur in two other contexts - in therapy and religious conversion.

Shideler (1985, p. 63) explains how in religious conversion, "the person changes and therefore his/her world changes - or conversely, where his/her world changes and he/she becomes a new person". Either way, it can be said that the fundamental change occurring in religious conversion is one of epistemology, where the distinctions drawn change. The distinctions change from either/or distinctions - self vs others to self-in-relation-to-God (as in Christian conversion) and hence, self-in-relation-to-my-brothers/sisters.

In terms of epistemological change in therapy, McLemore (1987a) mentions how many theorists regard therapy as a means of giving people new philosophies of life, a new way to make sense of old experiences. This relation between epistemological change and religion is then carried even further because McLemore goes on to add that if that is the purpose of therapy ('giving new philosophies of life, new way to make sense'), then "therapy may be more of a religious activity than any of us heretofore have been willing to admit" (p.12).

Furthermore, if one considers the dimensions of epistemological change in cybernetics, therapy and religious (Christian) conversion, they are all the same. These

dimensions are perceptions; thoughts; actions/behaviour; feelings/emotions; physiology; and values (McLemore, 1987a), and the reason why they are all the same is that all three involve a change in one's way of experiencing the world. With such change, people begin to see 'differently' or in a new light and they undergo changes in the way they think. Our experience of the world is based on our perceptions and cognitions of it and thus a change in one's experience of the world will obviously entail a change in one's perceptions and thoughts. As a result of such change, people learn to behave in new ways or not to behave in old, dysfunctional ways. This is because how we experience the world influences how we act in and upon it. Such change also assists people in developing different emotional reactions or different ways of handling existing feelings and this is due to the fact that emotions and experiences are very intertwined and change in one's experiencing will affect one's emotional life. Epistemological change can often contribute to improved physical health - the link between psychological dis-ease and physical ill-health has been accepted as a very important factor in people's well-being and a change to a more harmonious way of thinking (which is found in both cybernetics and Christianity often leads to more harmonious physiological functioning. Lastly, epistemological change entails a change in values and in regards to cybernetics and Christianity, it is a change to valuing relationship, wholeness, respect for the aesthetics of ecological systems.

The changes and distinctions occurring in cybernetic and Christian epistemology are the same, but there is one fundamental difference - the rationale underlying them. Cybernetics proposes the changes and distinctions as a way of and need for saving the crises occurring on our planet because the old ways do not work. It respects the sacredness and beauty of life simply because of the essence of life. Christianity proposes these changes and distinctions because of its belief in humankind's need for God and it respects the sacredness and beauty of life because of the essence of God and His creation which includes us. This rationale points to the hierarchy inherent in Christianity (this issue once again), where the assumptions, experiences, and decisions Christians have and make is due to this submission to the one who heads this hierarchy - the Creator.

But what does all of this have to do with therapy? What implications do epistemological distinctions and epistemological change have for therapy?

Implications for Therapy

Szasz (Adams, 1995, p.204) wrote that “psychotherapy and religion are in direct ideological competition” and Adams (1995) maintains that not even the “ecosystemic focus” (p.204) of family therapy has extended enough to include a spiritual dimension even though the majority of the world’s families adopt some form of expression of spirituality. However, both McLemore (1987a) and Hart (1994) disagree with this. McLemore (1987), as mentioned previously, is of the opinion that therapy may be more of a religious activity than we believe or wish to believe, and Hart (1994) maintains that human evolution has reached a point where it is recognised that psychotherapy and spirituality are not an either/or but a both/and. He goes on to explain that sound spirituality is itself therapeutic and from its inner convictions supports every other therapeutic effort. He also quotes Jung as having called the religious traditions as “the great psychotherapeutic symbol systems of humankind” (Hart, 1994, p.2).

How is it that psychotherapy and spirituality can have this commonality? To begin with, it is suffering that brings people into therapy and as White (1987) maintains, the problems that people are suffering with and for which they seek help from psychotherapists are increasingly involving spiritual and religious issues. It is because these problems are caused or exacerbated by the increasing complexities of modern life, which include life-span adjustment, conflicts, trauma, situational crises, problem-solving deficits, communication problems, interpersonal struggles, as well as existential issues where individuals are searching for meaning to life and death, a sense of inner peace and integration, release from anxiety or despair, and greater fulfilment. Thus, psychotherapists are often confronted with pleas for help in areas that are not restricted to the ‘mind’ but include the soul.

Secondly, psychological treatments are inextricably connected with moral and ethical issues. According to McLemore (1987b), virtually all forms of verbal psychotherapy embody some conception of the ‘good life’ or how one ought to think, feel and act. People in psychotherapy often ask “What is wrong with my life?” or a similar question which expresses the yearning for something better, something that is ‘more right’, which is

ultimately a moral and ethical dilemma. From the above, it is clear that it may be difficult to always draw the line between psychotherapeutic and spiritual issues, but the next question then is, what has this to do with cybernetics and Christianity?

Firstly, cybernetic epistemology has definite implications for therapy, because the epistemology individuals bring to bear on their world influences what they experience and this experience of their world has a tremendous impact on their lives, relationships, and mental health. When individuals perceive the world in dualisms (either/or distinctions), lineal causality, and isolated elements, the result is blaming, labelling and the resulting attitude and behaviour to the world and those in it, because such individuals do not see the connection between what they perceive and what they do. When individuals perceive the world in multiplicity (both/and distinctions), circular causality, and interrelatedness, the result cannot be blaming, labelling or such an attitude and behaviour because with such interrelatedness and circular causality, things return to us, reflect back at us and we begin to see how we are very much a part of all the suffering and pain. Underlying this is the fundamental assumption that what people do, how they act and behave is based on how they view and perceive the world - their epistemology.

Cybernetic epistemology therefore has implications for both the therapist and client alike in therapy. The therapist too has an epistemology and needs to be aware of that, because if not, therapists can "easily fall prey to perpetuating the very problems they seek to cure" (Keeney, 1983, p. 23) by drawing distinctions that demarcate 'pathology' and the consequent 'treatment'. Thus a therapist who subscribes to a cybernetic epistemology has a far different idea of therapy and mental health than a therapist who does not. A therapist who does not follow a cybernetic epistemology is a therapist who is concerned with diagnosing the identified problem or patient and through various procedures and techniques is concerned with 'fixing' the problem. Such a therapist does not reflect on the larger patterns surrounding and maintaining the problem, nor on the ideas and assumptions he or she as a therapist has and which are part of these patterns. Such a therapist has not realised that fixing is different from 'healing' and that fixing does not work. On the other hand, the therapist who subscribes to a cybernetic epistemology is one who focuses on context, relationships, patterns and the systems of which the problem or patient is a part. The general goal of the therapy is then to help the context evolve so that the patterns and

relationships making up the context change towards more harmonious ones where the individuals do not have to suffer.

The implication for the client is that a cybernetic therapist would realise that he or she can understand an individual's experience only by observing how the individual punctuates his or her context. Since an individual/couple/family (system) enters the therapist's office with established habits of punctuation (epistemology), the therapist must have a way of punctuating their punctuation (or an epistemology about their epistemology) (Keeney, 1983). The consequence of this is that, as a result of the therapist's exploring the client's epistemology, the client himself or herself will also begin exploring his or her epistemology and begin to perceive those 'unquestioned assumptions' that are impacting on his or her life, relationships and happiness.

What about Christianity and therapy? It was shown earlier that psychotherapy has a definite spiritual component and Christianity is simply a specific form of spirituality. Thus, all that was mentioned previously regarding the link between psychotherapy and spirituality, may also apply to psychotherapy and Christianity specifically.

It is often taken for granted that Christianity has to do with God, but it is too often forgotten that it equally has to do with humanity (Shutte, 1993). Christianity is not only about the kingdom of God, but also about the brotherhood and sisterhood of humankind in God. That implies relationship and interrelatedness because it refers to love. Furthermore, everything that makes up an individual's life - joys and sorrows; tears and smiles; love and hate; growth and stuckness; meaning and despair, all of it belongs to God as Schillebeeckz (Hart, 1994, p.37) puts it, "the human cause is God's cause". This is because God stands on the side of life and all that belongs to life. To support this, it is possible to cite particular biblical texts, but it is actually the entire biblical narrative that is the proof, because throughout it all, God labours for humanity's good. Hart (1994, p.38) states:

First from primeval chaos, then from a state of slavery, then from being lost, then from hunger, then from opposing armies, God keeps saving people. God gives land. God gives direction (the Law) as to the purpose of human life and the kind of behaviour that supports life for all.

Thus the argument that maintains that therapy and Christianity are incompatible because therapy promotes self-actualisation and personal fulfilment, which is anti-Christian, falls flat, since God himself stands on the side of self-actualisation and personal fulfilment. Jesus' words in John 10 vs 10 confirm that: "I have come that they may have life and have it to the full". Therefore if therapy is what is needed for people to:

seek to free themselves from the damage of their past, to find their true selves, or to grow into the fullness of their possibilities, their purpose is aligned with God's purpose, and the energies of God support their efforts. To put it another way, where healing, reconciliation, liberation, wholeness and love are happening, God's purpose is being realised. (Hart, 1994, p.39)

What implications does this have for the therapy itself? Carlson (Benner, 1987) maintains that there is no recognised set of techniques that are exclusively Christian and that there is no agreed-upon focus of change, but it is the style of relating where a therapist may be most explicitly Christian. This style of relating, according to the Bible would be based on love, but it would also be based on the therapist's epistemology - what distinctions and punctuations he or she makes; whether they are distinctions emphasising *separateness* or *connection*. And Christian epistemology would emphasise connection because it is not only about God, but about humanity and God's greatest command is to love, not only Him but our fellow humans too and so any actions towards our fellow humans, including and especially therapy, should be actions of love.

In sum, both sound psychotherapy based on cybernetic epistemology and sound spirituality, in this case Christianity, are united in their goal of promoting human growth and well-being (Hart, 1994). This is because both emphasise the importance and need for wholeness, through relatedness, in promoting health (growth and well-being) and this principle of wholeness thus takes us to the next chapter.

CHAPTER 3

CONTEXT AND WHOLENESS

The following chapter will focus on the two concepts of context and wholeness. It will elaborate on these and related ideas, like ecology, the human ecosystem, and health. It will include a discussion of both the cybernetic and Christian perspective and then focus on the integration of these two perspectives in regard to the key ideas.

The Cybernetic Perspective

Context

Ortega y Gasset (Minuchin & Fishman, 1981, pp. 208-9) writes:

This ash tree is green and is on my right ... when the sun sinks behind these hills, I shall follow one of the ill-defined paths open like an imaginary forest in the tall grass ... then the ash tree will go on being green, but ... it will no longer be on my right ... How unimportant a thing would be if it were only what it is in isolation. How poor, how barren, how blurred! One might say that there is in each thing a certain latent potentiality to be many other things, which is set free and expands when other things come into contact with it. One might say that each thing is fertilised by the other; that they desire each other as male and female; that they love each other, and aspire to unite, to collect in communities, in organisms, in structures, in worlds ... The meaning of a thing is the highest form of its coexistence with other things ... that is to say, the mystic shadow which the rest of the

universe casts on it.

What this beautifully poetic statement is referring to is the fact that things, events, people do not have meaning in isolation, but only in coexistence with other things, in context. Bateson (1979, p.24) agreed with this when he wrote, "nothing has meaning except it be seen in some context". He went on to say,

And 'context' is linked to another undefined notion called 'meaning'. Without 'context', words and actions have no meaning at all. This is true not only of human communication in words but also of all communication whatsoever, of all mental process, of all mind, including that which tells the sea anemone how to grow...
(p.24)

And according to Watzlawick, Beavin and Jackson (1967, pp.20-21), "a phenomenon remains inexplicable as long as the range of observation is not wide enough to include the context in which the phenomenon occurs".

The Penguin Dictionary of Psychology (Reber, 1985, p. 153) defines context as "generally, those events and processes (physical and mental) that characterise a particular situation and have an impact on an individual's behaviour (overt and covert), and the specific circumstances within which an action or event takes place". Or, according to Keeney's (1983) idea of distinctions, it is the background from which an 'it' is distinguished. Basically, however, context can be understood to be the circumstances and factors surrounding an event or phenomenon which gives it meaning and without which, it will be meaningless, inexplicable or misunderstood. According to Bateson (1979), every form of experience or learning occurs in a context possessing specific formal properties. In fact, all complex experience or learning is indissociable from the contexts (internal and external) in which it occurs (Miermont, 1987).

Most of the old paradigm schools of thought in psychology did utilise the context in which a phenomenon occurred, but only in a limited way - either in terms of the context of the immediate situation or environment or the context of the individual's intrapsychic dynamics - personality, thoughts, emotions. For example, in psychoanalysis, there is the fundamental assumption that the human mind is governed by the same laws as in the

physical universe. Freud referred to it as *psychical determinism*, which is opposite to that of 'agent causation' where people act through autonomous acts of choice. The laws underlying the psychical determinism of the human mind were based on the forces of the structures of the personality - the id, ego, and superego. The forces and conflicts engendered by those forces determined the behaviour of the individual. Here we have a very limited understanding of context - the context included is that of the individual's intrapsychic dynamics which function deterministically, and although one of the ego's functions is to adapt to external reality, this external reality is given limited scope. In fact, the actual basis for it is for the ego to appease the conflict between the id and superego. Any family context included in psychoanalysis is also very limited because it still revolves around how 'functionally' the individual's personality structures developed within it and does not include a process of mutual influence. This is just one example but it shows how the schools of thought in psychology developed according to the thinking of the day and since Cartesian-Newtonian thinking predominated, it concurred with the deterministic, lineal, dualistic and anticontextual ideas of the time.

On the other hand, cybernetic epistemology places great emphasis on context and here, context would imply the broadest possible range of observation one could imagine, because the emphasis is on interrelatedness and wholeness. And the broadest possible way for humankind to view context is what is known as ecology.

Ecology

As it was explained in the previous chapter, ecology refers to the fundamental doctrine that all things in nature are complexly but systematically interrelated (Keeney, 1983). Ecology is regarded as having the broadest view because it attempts to look at all possible systems, levels of systems and interrelations among systems, and this is the broadest possible view of context one could get, although it can never be complete. There are three main principles about ecology that are crucial - interrelatedness, balance, and self-healing.

Firstly, ecological thinking proposes ecosystems are self-organising and self-regulating systems in which animals, plants, micro-organisms, and inanimate substances are

linked through a complex web of interdependence and *interrelatedness*, involving exchange of matter and energy in continual cycles. Lineal cause-and-effect relationships exist only very rarely in ecosystems, if at all, and this non-lineal nature of all systems' dynamics is the essence of ecological awareness. This ecological awareness was referred to by Bateson (Keeney, 1983) as 'systemic wisdom' and this wisdom is based on a profound respect for the wisdom of nature which has existed for millions of years recycling the same molecules of soil, air, and water. This respect is further supported by the insight that the dynamics of self-organisation that exists in ecosystems is the same for human organisms and from this we realise that our natural environment is *alive and mindful*. This mindfulness reveals itself through ecosystems' pervasive tendency to establish co-operative relationships that facilitate the harmonious integration of systems components at all levels of organisation (Capra, 1983). And this harmonious integration occurs because of the mutuality and interrelatedness of all the components.

Secondly, this non-lineal interconnectedness of all living systems suggests two important rules which refer to the second principle mentioned earlier, that of balance. These two rules are optimality and fluctuations. Optimality refers to the idea that ecologies and ecosystems function according to the principle of intransitivity. This is the opposite of transitivity which implies the *more* of something will always be better. Intransitivity maintains that goods become toxic if they become greater than some optimal level or size, for example, population, oxygen, protein (Keeney, 1984). It must be remembered that the essence of ecology and ecosystems is *balance*, which means there must be a balance of elements - not always abundance. The quest for transitivity is actually detrimental to balance. But this idea of balance brings us to the second rule - fluctuations. Balance is maintained over time through a pattern of interconnected fluctuating cycles of life and death, growth and decay, chaos and order, deluge and drought. If one observes a completely undisturbed ecosystem, one will observe these fluctuations and cycles and begin to perceive how together they bring about perfect harmony and balance.

And thirdly, due to the interrelatedness, balance, and harmony that exists in all ecologies and ecosystems, we encounter the Taoist understanding that organisms and ecologies are self-healing. They heal themselves if *uninterfered* with (Keeney, 1984). Bateson (Keeney, 1984) concurs with this. He maintained that the world is circuit-structured and hence self-corrective if we leave it alone. An example is if one reduces one

of the species in a forest by a certain percentage, ten years later it will have adjusted itself to the original level, assuming, of course, that no other interference took place. This self-healing principle is especially taking place now because of humankind's destructive influence on nature and it is this that many find difficult to grasp, that "nature goes on healing itself in spite of what we do" (Keeney, 1983, p.140).

Thus, the understanding of ecology is an understanding of balance, harmony, aesthetics, and wisdom. Wisdom is inherent in ecology and Bateson (Keeney, 1983, pp. 141-2) requested that we have respect for this:

It is of no use to plead that a particular sin of pollution or exploitation was only a little one or that it was unintentional or that it was committed with the best intentions. Or that, "If I didn't, somebody else would have". The processes of ecology are not mocked.

The Human Ecosystem

Ecological thinking began with the understanding of nature as an ecosystem but did not include the human component. It has only been recently that the idea of the ecosystem has included human systems, and due to the fact that this inclusion of human systems was incorporated by human-oriented science, the human ecosystem has as its main focus, human systems with the natural environment and all it entails forming the overarching context for those human systems. Thus, in human ecology, the person-environment context constitutes the totality of relationships among individuals and their environments (Jasnoski, 1984). Jasnoski depicts the human ecosystem very nicely and her understanding will be utilised here to illustrate system concepts.

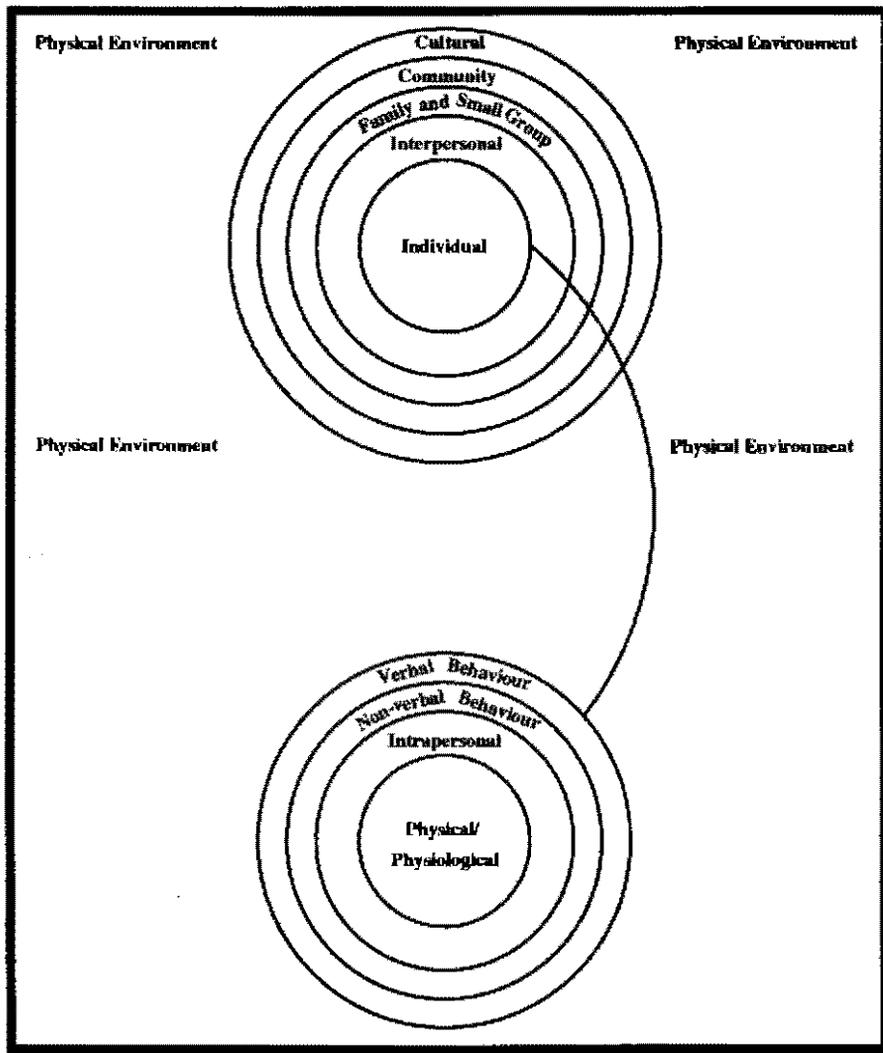


Figure 2.1 : The Human Ecosystem

Structurally, the human ecosystem can be represented as a set of concentric circles (refer to Figure 2.1), each representing a level of functioning within the overall system. Each level forms a boundary that is useful for functional analysis of the ecosystem. The environment forms a part of the overall human ecosystem and is defined as the surrounding or context of the individual's experience and behaviour. The analysis of context actually concerns the study of the circumstances and situations in which a living being interacts with its environment (Miermont, 1987). Psychosocial and physical subsystems make up this environment. The psychosocial subsystems are the following: the interpersonal, the family or small group, the community, and the cultural subsystems. The physical subsystem includes the natural and the man-made environment. At the centre of this ecosystem, occupying the most central role is the individual, since all events and experiences are still

ultimately interpreted by the individual and impact on the individual. Yet the individual is also a system that is made up of subsystems - physical, physiological functioning, intrapersonal dynamics, and verbal and non-verbal behaviour (Jasnoski, 1984).

When information from all these various levels is integrated into a total ecosystemic picture, then the broadest possible view and understanding of an individual that we are presently capable of can be achieved.

Since all these various levels and subsystems within the human ecosystem are systems in their own right, they all have the properties of systems mentioned in chapter 2. To illustrate how these properties work in real living systems, the family system will be used as an example, because this is considered to be one of the most significant groups (system) to impact on the individual and because this is the group (system) most often seen in therapy.

All the systems within the human ecosystem are living systems and as such they are open systems. Open means that the system is in a constant exchange relationship with its environment (Teichman, 1986), but within the human ecosystem, the environment has both physical and psychosocial components, and thus, living systems, like the family system interact with both their physical and social contexts.

The boundaries surrounding these systems form a division that separates them from their environment and other systems, but being open systems, these boundaries are semi-permeable, allowing exchange of energy and information to occur. Within families, the term boundary may have two connotations. Firstly, it may be thought of as that which separates the specific attributes of one system/subsystem from another and of course, depending on one's purposes in defining them, a system/subsystem has many boundaries. Or it may refer to the limit beyond which behaviour or communication will not be tolerated or allowed and this is especially crucial to the stable functioning of a system. Boundaries, then, are rule, role, and communication markers and controllers (Warner, 1980).

Within every system, there are subsystems or levels and these form a hierarchy of levels. That is, each system has a relationship among its parts and also interacts with other systems. The family system, for example, is a system made up of many individuals, but each person is a system in his or her own right yet part of one or more subsystems within the total family unit. The family is furthermore contextualised in its extended family and its sociocultural setting (Teichman, 1986). This hierarchy of levels also implies an interrelatedness between all the parts where each part can influence or be influenced by the

other parts or the system as a whole. Koestler (Capra, 1983) actually coined the word 'holons' for those subsystems which are both systems or wholes and subsystems or parts. Every holon - the individual, the nuclear family, the extended family, and the community - is both a whole and a part, not more one than the other (Minuchin & Fishman, 1981), and this coincides with the understanding of cybernetic complementarities - not one, not two but both/and, meaning both a whole or system and a part or subsystem. Part and whole contain each other in an ongoing process of communication and interrelationship (Minuchin & Fishman, 1981). Thus, within the human ecosystem, all the various levels and subsystems are related and interconnected.

Within these living systems in the human ecosystem, homeostasis refers to the tendency to perpetuate a particular manner of relating and to prevent this way of interacting from changing. However, because these systems are open, they do have the capacity to absorb inputs from the environment, adapting to them and thus changing. Families, therefore, have a simultaneous capacity to change and to counteract change - homeodynamics. Compromise between these opposing tendencies is reached by a "dynamic homeostasis which tolerates small and gradual changes and rejects great and sudden changes" (Teichman, 1986, p. 11), and this compromise is achieved through a continuous feedback cycle.

This feedback cycle is based on the behaviours of the members of the system because all events and behaviours are regarded as communication which provide positive or negative feedbacks. The feedback mechanism has two very important functions in human systems, like family systems. Firstly, it provides information about ideas, feelings, and behaviours and secondly, it defines relationships among the members of the system.

Circular causality suggests that in living systems "change in one element affects all the other elements in the system, as well as the system as a whole" (Teichman, 1986, p. 12). In a circular system, effects of events at any point in the system can be carried all around to produce changes all around, as well as at the point of origin (De Shazer, 1982). In the context of a family, this principle illustrates how each family member influences and is influenced by other family members.

Thus, a phenomenon, for our purposes, an individual's behaviour, needs to be considered within the ecosystemic context - in other words, the individual as a system

comprised of subsystems within his or her physical and social situation or environment as a system made up of subsystems.

However, before going on to the next section it is important to mention Koestler's (Capra, 1983) concept of holon again just briefly. The reason for this is to show how the idea of holon incorporates the concept of holon/*self-in-context*. The example of the individual holon will be used here to illustrate this. The individual holon as *self-in-context* includes the personal and historical determinants of self, as well as going beyond that to include the current input of the social context. Specific transactions with other people elicit and reinforce those aspects of the individual's personality that are appropriate to the context. The individual, in turn, affects other people who interact with him or her in certain ways because his or her responses have elicited and reinforced their responses (mutual influence). There is a continuous circular process of mutual affecting and reinforcing which tends to maintain a fixed pattern (homeostasis), but both individual and context also have the capacity for flexibility and change (homeodynamics). This idea of holon/*self-in-context* can be extended to other holons, like spouse holon, parental holon, sibling holon, family holon, extended family holon, group holon. Constant interaction in different holons at different times, however, requires the actualisation of different segments of self, since different contexts (holons) call forth different facets (Minuchin & Fishman, 1981). This is important point for therapy, but will only be discussed later, in the section on therapy where it is more appropriate.

Wholeness/Holism

A crucial assumption underlying the understanding of context, ecology, and ecosystems is that of wholeness. This is because,

every part of a system is so related to its fellow parts that a change in one part will cause a change in all of them and in the total system. That is, a system behaves not as a simple composite of independent elements, but coherently and as an inseparable whole. (Watzlawick et al, 1967, p. 123)

The Penguin Dictionary of Psychology (Reber, 1985, p. 325) defines holism as : “ A general label applied to any philosophical approach that focuses on the whole living organism. The basic axiom of a holistic position is that a complex phenomenon cannot be understood by an analysis of the constituent parts alone”.

Holism is a unitary approach to understanding the world. Opposing Cartesian-Newtonian thinking, such an approach refutes the belief that wholes can be analysed by the reductionistic methods of science which attempt to reach an understanding of the nature and behaviour of ‘wholes’ from observation and knowledge of the individual parts (Simon et al., 1985). However, our habit of divisive thinking and our assumption that the fragmentary nature of human thought corresponds with actual fragmentation of reality is based on the understandable realisation that we are finite; and that although it is natural that our thoughts tend to seek out differences and draw distinctions, this is generally accompanied by the unreflexive habit of assuming that these differences and distinctions are real. We then experience the world as broken up in fragments. Holism, however, proposes that reducing the wholes to the individual parts loses essential information about the relationships between the parts or as Bateson describes it - “the pattern that connects” (Walrond-Skinner, 1986), and that the term ‘holistic’, derived from the Greek *holos* (‘whole’) actually refers to an understanding of reality in terms of integrated wholes whose properties cannot be reduced to those of smaller units (Capra, 1983).

Holism takes the view that all systems - physical, biological and social, are made up of connected subsystems which together create a whole that is more than the sum of its parts. Thus, the whole can only be explained as a totality and Peters (1992), in writing of postmodernity, says that of all the categories, wholeness is the one that most thoroughly embraces the proposal to put the world back together again. Basically, this idea of wholeness can be summed up in this principle - the whole is more than the sum of its parts. Music is more than the sum of individual notes, a picture is more than the sum of blobs of paint, and poetry is more than the sum of words. That the whole is more than the sum of the parts is the essence of systems theory (Warner, 1980). The corollary to this is: everything is related to everything else (Peters, 1992). This can also be understood in this way, the whole is more than the sum of the parts *because* everything is related to everything else.

Since any system is greater than the sum of its parts, it is not possible to examine parts of the whole as separate items nor to group together the parts in order to understand the

whole. Rather, the functioning and structure of a group of interacting parts are examined with the principle that the whole group of the parts, working together, is different from the mere sum of the parts. Morin (Miermont, 1987, p. 180) epitomises the complexity of holism very adequately - "a system is more, less, other than the sum of its parts. The parts are less, possibly more, but in any case other than what they were or would be outside the system".

This is also referred to as synergy and this synergistic whole has a functional structure composed of interacting connections of communication (feedback). This functional structure refers to the way in which the parts are organised and although this cannot be changed without disturbing the system as a whole's functioning, the parts themselves may be replaced with similar parts with little disruption to the functioning. This idea simply emphasises that what the part *does* for the functional structure or organisation of the system as a whole is far more important than what the part *is* (Jasnoski, 1984).

That brings about the idea of the rules and roles within the system that organise the functioning and behaviour of the parts of the system. Jackson (Simon et al., 1985) refers to rules as 'relationship agreements' that act as parameters for the individuals' behaviour, thus prescribing and limiting the behaviours over a wide variety of content areas and organising their interaction into a reasonably stable system. Rules within a system, like a family, are revealed by a persistent pattern of (family) interactions. Some rules are intentionally announced and followed, but the more important rules, however, are more often than not outside the family's explicit awareness and composed of the repetitive behaviours that make up the routine of daily family living (Sauber et al., 1993). Interactional rules also contribute to the definition of the relationships between members of a system (Simon et al., 1985).

Roles refer to the totality of expectations and norms that a system or group, like a family, have in regard to an individual's position and behaviour within that group. A role is thus equivalent to the behavioural expectations that are directed toward an individual in a particular situation or context (Simon et al., 1985).

Thus, in terms of understanding an individual in context, it is not enough to view the broadest context of the individual as a system in his or her interpersonal, family, community, cultural, and physical environment, because it is more important to understand *how* that individual as a system *interacts* in that environment - what role he plays in his interpersonal, family, community, and cultural systems; what rules maintain her functioning and behaviour

within a certain range of tolerated functioning and behaviour; what are the boundaries that mark and control roles, rules and communication?

Wholeness and Health

How does the essence of wholeness relate to health? If one considers that the method of restoring health is healing and the word healing means 'to make whole', it is clear how wholeness and health are related. However, there are two understandings of holism in regard to health. In a somewhat narrow sense, holism means that the human organism is regarded as a living system whose components are all interconnected and interdependent; but in a broader sense, holism also recognises that the human organism system is also an integral part of larger systems, which implies that the individual organism is in continual interaction with its physical and social environment and that it is constantly influenced by the environment and influences the environment in turn (Capra, 1983). To remain congruent with systems and cybernetic thinking, the broader understanding of holism must obviously be adhered to. However, before going on to a discussion of that, it is important to give a brief explanation of Hippocratic medicine, which was the foundation for Western medicine. The reason for this is the fact that Hippocratic medicine was far more holistic than its present derivative and many are now proposing that we go back to our roots.

Hippocratic medicine goes back as far as ancient Greece. At that time, healing was considered a spiritual phenomenon and the most prominent healing deity was Hygieia. With changes in the social structure and order to a more patriarchal one, Hygieia was delegated to a lesser role, that of daughter of Asclepius who then became the dominant healing god. In addition, Hygieia was often portrayed with her sister Panakeia and these two goddesses of ancient Greek mythology represent the two aspects of the healing arts that exist even today - prevention and therapy. Hygieia ('health') was concerned with the maintenance of health, personifying the wisdom that people would be healthy if they lived wisely, while Panakeia ('all-healing') refers to knowledge of remedies and treatments to cure, and this search for a 'panacea', or cure-all has dominated Western medicine and psychology, instead of retaining the balance between the two.

Hippocratic medicine evolved from Asclepius and at its core is the conviction that illnesses are natural phenomena that can be studied scientifically and influenced by therapeutic procedures and wise management of one's life. This conviction has permeated and dominated Western medicine while ignoring the breadth, vision and depth contained in the Hippocratic writings. For example, in *Air, Waters, Places*, one of the most significant books of the Hippocratic Corpus, exists a treatise on human ecology because it shows how the well-being of individuals is influenced by environmental factors - quality of air, water, food, land, general living habits. According to these writings, health requires a state of balance among environmental influences, ways of life and various components of human nature. Hippocrates also recognised the healing forces inherent in living organisms which he referred to as 'nature's healing power'; so that all the physician had to do was assist these natural forces by creating the most favourable conditions for the healing process (Capra, 1983). The Hippocratic tradition, then, emphasises the fundamental interrelation of mind, body, and environment, which is a holistic and systems view. Unfortunately, this wisdom was not carried over entirely into Cartesian-Newtonian medicine.

To understand how wholeness and health are related, one needs to first look at the concept of health and what it means. It is very difficult to define health because it refers to a subjective experience and it cannot easily be quantified. But generally speaking, health refers to a state of 'well-being' that arises when the organism functions in a certain way, and this manner of functioning also depends on the organism and its interactions with its environment. Thus the concept of health and related concepts of illness, disease and pathology are not well-defined or even discrete entities, but integral parts of "a web of relationships among multiple aspects of the complex and fluid phenomenon of life" (Capra, 1983, p. 351-2). In addition, especially in regard to human beings, health and ill-health varies from family to family, group to group, culture to culture, and these contexts also influence how individuals behave when they get sick.

It can be seen here how systems and ecological thinking permeate the interrelation between wholeness and health. The systems thinking influence underlines how health is a phenomenon based on the interrelatedness and interdependence of elements and processes. This process thinking that exists in the systems view also indicates how health should be viewed in terms of ongoing process. This process is one of ongoing fluctuations and cycles patterned over time which is dependent on the individual's context, and because a person's

health will always be in relation to his or her environment, there can also be no absolute level of health independent of the environment. To carry this even further, since both organisms and environments are also constantly changing, growing, evolving, so too does health.

Health is thus a multidimensional phenomenon involving physical, psychological, and social dimensions which all function interdependently. The idea that health and illness are opposite ends of a continuum is erroneous because a sense of well-being is based on a multiplicity of factors and physical ill-health can be balanced by psychological and social well-being and vice versa. From a systems point of view, the experience of illness results from patterns of disorders that may become manifest at various levels of the organism as well as at various levels of interaction between the organism and the systems in which the organism is a part, as well as at different times. In particular, there are three interdependent levels of health - individual, social, ecological, and what is unhealthy for the individual is also generally unhealthy for the society and overarching ecosystem. Also, health is an intransitive phenomenon - an unhealthy individual should not be so healthy as not to need other individuals.

The ecological influence can be seen throughout this all too. Of especial importance is the principle of balance. Health is an experience of well-being that results from a dynamic balance involving physical, psychological, and environmental influences and elements. This balance is a balance of complexity, an integration of diverse sequences of behaviour and experience as well as a balance of the sequencing of those sequences. This refers to the fact that health is not achieved through repetition of the same variables, behaviours or experiences but through fluctuations and diversity patterned over time because this is how balance is achieved. Consider how the body achieves a stable body temperature or blood sugar over time through constant fluctuations or change. In addition, systems are self-organising and self-healing and individual organisms, as systems, are also capable of this self-healing if uninterfered with.

To sum up, health and wholeness are intimately related. The concept of wholeness, based on systems and ecological thinking, refers to a dynamic balance and harmony occurring as a result of the interrelatedness and interdependence of parts, and the concept of health, too, refers to and relies on this. Context, ecology, ecosystems, wholeness, and health - in essence, they all refer to the same cardinal principle of: everything is related to

everything else. The following discussion will now focus on the Christian perspective and how it regards the two concepts of context and wholeness, as well as the related ideas of ecology and health. Furthermore, it will also touch on the key ideas underlying these concepts - that of interrelatedness, balance, harmony, aesthetics, and wisdom.

The Christian Perspective

Interrelatedness

The most fundamental assumption and key idea underlying that of systems thinking is that of the interrelatedness and interconnectedness between parts. Ecology is also based on this principle. But what systems thinking and ecology propose - interrelatedness, context, and wholeness - is not new. The Bible, which can be considered one of the oldest sources of knowledge, also reflects these self-same ideas. In addition, the implications following from the principles of interrelatedness and wholeness, that of balance, harmony, aesthetics, and wisdom, are also implied in the Bible.

The Bible, however, never uses the concepts context, wholeness or interrelatedness, but there are certain passages that refer to interrelatedness and interconnectedness and these are enough to imply that God's wisdom fully understands context and wholeness. In addition, these passages also imply the human ecosystem, as Jasnoski (1984) refers to it, or ecological thinking.

For example, 1 Corinthians 12 vs 12 to 27 says,

The body is a unit, though it is made up of many parts; and though all its parts are many, they form one body. So it is with Christ. For we were all baptised by one Spirit into one bodyBut in fact God has arranged the parts in the body, every one of them, just as he wanted them to be. If they were all one part, where would the body be? As it is, there are many parts but one body.....But God has combined the members of the body and has given greater honour to the parts that lacked it, so that there should be no division in the

body, but that its parts should have equal concern for each other. If one part suffers, every part suffers with it; if one part is honoured, every part rejoices with it. Now you are the body of Christ, and each of you is a part of it.

This passage is clear about how different parts make up a whole or unit and that each part is an equal functioning part and that where there is a change in one part, all the other parts and the whole are also influenced, thus they are all interrelated. It can be understood that the repetition of the words 'one', 'many', 'many', 'one' are very symbolic, in that it refers to the idea that there is unity in diversity and diversity in unity. This idea implies both ecology (balance through variety and diversity) and holism (unity). For Talbert (1987), the idea that comes across is that the Christian community, which for God would exclude no individual, is comparable to the human body in that it is an organic unity made up of a multiplicity of parts. Once again, the emphasis on holism (unity), as well as systems thinking - a multiplicity of interrelated parts making up a whole. Although the analogy is that of the human body, it reflects the idea of the 'human ecosystem', where each individual is an equal part in this ecosystem, all mutually influencing and interacting with the other parts.

In John 15 vs 1 to 5, this is also implied. Jesus says,

I am the true vine and my Father is the gardener. He cuts off every branch in me that bears no fruit, while every branch that does bear fruit he prunes so that it will be even more fruitful. ...Remain in me and I will remain in you. No branch can bear fruit by itself; it must remain in the vine. Neither can you bear fruit unless you remain in me. I am the vine; you are the branches.

This analogy is between branches of a vine and God's creation, humankind. Jesus is stating that no branch, no individual, can bear fruit (live an effective, fulfilling life) on their own. Each and every branch or individual must remain in the vine, part of and related to the vine to do so.

There are two important implications in these verses. Firstly, that life, according to these verses, is not static, but a dynamic process of continual renewal ("He prunes") and

growth (“that it will be even more fruitful”). Cybernetic epistemology also has this understanding of life as a dynamic, ongoing process, as Hoffman (1981, p.347) says, “the processes of life are always irreversible. Nothing can ever go back or step in the same river twice”. Here the understanding that time plays a crucial role is conveyed - the idea that life is a process occurring over time and that as such it is crucial because it is inevitable and once time has passed, it is unchangeable.

Secondly, these verses imply reciprocity and mutual interaction which underlie systems and cybernetic thinking. “Remaining” in the vine, part of the vine is the condition for being “even more fruitful”. The reciprocity and mutual interaction comes out in the words “Remain in me and I will remain in you”, since it conveys a sense of a mutual exchange of give and take where both sides contribute to a dynamic, growing relationship (Marrow, 1995).

However, a note to add is that here the hierarchy issue becomes evident once again, since there is a definite hierarchical implication in this verse. This hierarchical implication comes across in the idea that God is responsible for pruning the vine so that it will be more fruitful, thus conveying an impression of a lineal, top-down relationship. Furthermore, by making it clear that Jesus is the vine and God the gardener, and we are just the branches that need to be linked to the vine to bear fruit and need to be pruned, the impression is quite clear that although we as individuals are equal, we are not equal to the vine (Jesus) or the gardener (God). *Mutual* interaction, however, is still conveyed by the words “Remain in me and I will remain in you” because it implies there is something we must do, must contribute to the relationship and also something God will do, thus, making it, paradoxically, both hierarchical yet mutual.

Ecological Thinking

The idea of context and ecology and the human ecosystem that Jasnoski (1984) refers to all also include the physical environment and so too does the Bible. In fact, it would be inconceivable that God, the Creator, who created the world and every thing in it, would discount this part of his creation. In Genesis 9 vs 8, 16, when God makes his covenant with Noah after the flood, He says:

I now establish my covenant with you and with your descendants after with you and with every living creature that was with youWhenever the rainbow appears in the clouds, I will see it and remember the everlasting covenant between God and all living creatures of every kind on the earth.

Thus, God establishes his covenant not only with humankind alone but with every living creature. In other words, for God, there is no distinction between the living creatures - they are all equal parts of his creation and related so that what affects one, will affect all.

This ecological thinking that God shows, is abundant throughout the Bible. Consider the parables and analogies that Jesus uses; they all involve nature - the Parable of the Sower (Matt 13:1-9); the Parable of the weeds (Matt 9: 24-30); the Parable of the mustard seed (Matt 9: 31-32) and so on. Consider the powerful metaphor of the Lord, the Good Shepherd who cares for His flock of sheep and the instruction that we should be like the lilies of the fields or the birds of the air who do not worry about what to eat, drink or wear because God shall provide. And in the Old Testament, there are numerous analogies between nature and human behaviour. For example, in Proverbs 25 vs 26, "Like a muddied spring or a polluted well is a righteous man who gives way to the wicked", as well as in Jeremiah 17 vs 7 to 8, "But blessed is the man who trusts in the Lord, whose confidence is in Him. He will be like a tree planted by the water that sends out its roots by the stream. It does not fear when heat comes; its leaves are always green. It has no worries in a year of drought and never fails to bear fruit".

Of course, throughout these verses too, there is quite a clear impression of a God or Creator who is in clear control of this ecology as He is its creator. This is in keeping with Christian doctrine that regardless of circumstances, God is always still in control. Once again, this conveys the idea of a hierarchy, as well as a lineal causality or control on God's part. However, the fact that God gave us power over our earth and everything in it, as well as the gift of free will, implies, as mentioned previously, that to an extent, there is still a mutual, reciprocal relationship between us and God, and we are to choose what kind of relationship it will be.

Balance, harmony and related ideas

And what about the balance, harmony, aesthetics, and wisdom implied by the principles of interrelatedness and wholeness?

In chapter 2, the verses quoted from Ecclesiastes conveyed a beautiful sense of balance and harmony between life and death, good and bad, creation and destruction and so on. This balance and harmony is actually conveyed throughout the Bible, beginning with the very first act of creation: "And God said, 'Let there be light', and ... He separated the light from the darkness" (Genesis 1 vs 3-5) and "Thus the heavens and the earth were completed in all their vast array" (Genesis 2 vs 1). In His very first act of creation, God created two separate entities that would be connected together, as a whole, through a pattern of time, to form 'day' and 'night' and thus, provide balance and harmony to the passing of time. And furthermore, with the word 'completed', which according to the Pocket Oxford Dictionary (Sykes, 1978, p. 163) means "having all its parts, entire; ... total, in every way", it implies a creation so detailed and interconnected that a *part* of it would have to be balance and harmony too. In fact, William James, a renowned psychologist, even defined religion (or in this case Christianity) as "the attempt to be in harmony with the unseen order of things" (Adams, 1995, p. 202).

Also, throughout the Bible, there are verses exhorting the aesthetics and wisdom of God's creation. For example, the Psalmist (Psalm 104) exclaims:

Oh God, how manifold are your works!
In wisdom you have made them all;
the earth is full of your creatures.
Yonder is the sea, great and wide,
which teems with things innumerable,
livings things both small and great.

and as Elihu said to Job,

Listen to this, Job;
stop and consider God's wonders.

Do you know how God controls the clouds
and makes his lightning flash?
Do you know how the clouds hang poised,
those wonders of him who is perfect in
knowledge?
You ... can you join him in spreading out
the skies hard as a mirror of cast bronze?

The above discussion has elaborated on the Christian perspective relating to the concepts of context and wholeness and all that those two concepts imply - interrelatedness, ecology, health, balance, harmony, and so on. Throughout the discussion it could be seen that the Christian perspective does often reflect these self-same ideas proposed by cybernetics, but in other ways, there is a major distinction, especially in terms of the hierarchy issue and all that that entails.

The following discussion will now elaborate on these similarities and differences, in regard to the epistemological implications, as well as the implications for therapy.

Cybernetics and Christianity

Epistemological Implications - Similarities and Differences

The move to postmodernism which has underlied the paradigm shift from Cartesian-Newtonian to cybernetic epistemology has come from many quarters - revisionist physicists, feminists, new age consciousness. This post-modern mood is expressed by the New England Network of Light, an informal association of new age organisations that considers its members "seeds of a new culture and civilisation, based on co-operation rather than competition, on love and respect for all of life, and on living in harmony with the earth, with each other, and with God" (Peters, 1992, p. 15). This emerging post-modern consciousness has as its main desire to transcend the boundaries of modernity and to find healing for the wounds it has left. And this is what both cybernetics and Christianity also aim for.

From the previous discussion, it is clear that both cybernetics and Christianity emphasise the ideas of interrelatedness, wholeness, balance, harmony, aesthetics, wisdom, and health. What then are the underlying epistemological and pragmatic implications of this similarity in emphasis?

The Hierarchy Issue

To begin with, one crucial difference between cybernetics and Christian epistemology must be made and this also includes Cartesian-Newtonian epistemology. This difference refers to the distinctions drawn regarding the interrelatedness between the parts making up the wholes/systems. With Cartesian-Newtonian epistemology, there was the assumption that the real world is constituted by sub-atomic particles in particular dynamic relationships occurring in time and space, and all larger objects and more complex relationships can be reduced to these 'basic building blocks'. Human beings, too, were considered to be reducible to these basic building blocks. Thus, scientists following this epistemology, constructed their world from the *bottom up* by combining the basic building blocks into larger and more inclusive structures and in reverse, by reducing complex structures to the basic building blocks (Shideler, 1985). Of course, this view was regarded as too reductionistic and also too lineal in that it regarded the relationships between the basic building blocks as functioning along a straight-lined, cause to effect way.

Cybernetic epistemology, however, proposed an alternative view. Although it still sometimes referred to the levels of systems as a hierarchy, it made itself clear with regard to the fact that it did not consider the elements on the top of the hierarchy as having more influence or control than those elements at the bottom. In fact, distinguishing between levels of systems in a hierarchy was regarded as merely a 'distinction', not a reality, and making such a distinction was purely for simplicity's sake for understanding. Rather, cybernetics regarded all parts or subsystems in a hierarchy as being equal, in terms of structure (the basic building block was a system of which the smallest and largest elements making up structures/systems/hierarchies were such systems or subsystems) and functioning (all parts/subsystems/systems as having equal and mutual influence on each other).

This *bottom up* and *equal* view differs from religions in general and Christianity, specifically. In general, religions specify their world from the *top down*, the top being the ultimate significance of all that is, what life is all about; and with regard to Christianity, this *top down* view relates to God being the ultimate significance and everything else following from that. There are two ways in which to view this. Firstly, in terms of a hierarchy (pyramid) where God is at the top, or the human ecosystem as Jasnoski (1984) illustrates it with the difference that God is at the centre. These two ways also indicate the recent changes in humankind's thinking about God and religion. In previous centuries God was rigidly regarded as heading the pyramid or hierarchy and was unattainable to the lay person. Only the clergy could have 'direct' access to Him and would then mediate between God and the lay person. Presently, however, with the paradigm shift taking place, this has also had repercussions for religion and especially Christianity, because there is a great new enthusiasm and movement taking place (the charismatic movement), where God is no longer regarded from a 'fire and brimstone' perspective or as unattainable, but is seen as being the centre of the circle or ecosystem, where every individual, no matter who, now has access to Him by means of a personal relationship.

Therefore, taking these recent trends into account with regard to the crucial difference mentioned earlier, it is here that the distinction between the human ecosystem as understood generally by people and the human ecosystem as understood by God can be seen - that it is actually God who is at the core of the ecosystem (or head of the hierarchy). This is because, according to the Bible, God is responsible for pruning the 'branches of the vine'; He is responsible for arranging the parts of the body (whole) as they are; He is at the head of the vast family (system) of God.

Once again, this impression of hierarchy and a lineal top-down relationship is conveyed and this would have profound epistemological implications in terms of the connection between cybernetics and Christianity. However, it is imperative to emphasise that regardless of this top-down relationship, it is still a *relationship* where God emphasises mutual interaction. He does this by giving individuals freedom of choice and with that freedom of choice we either choose to engage in that mutual give and take or choose not to. Either way God gives us the responsibility to choose - He does not force or control us to take that responsibility and only once we have taken that step towards Him, does He then appear to take a lineal top-down position. On closer inspection, however, that position He takes is

meant to free us, not control us and thus, once again, it is a paradoxical situation of hierarchy with mutuality, as well as freedom and control.

Thus, with regard to this difference, perhaps it could be stated thus:

If a cardinal principle of systems thinking, ecology, and cybernetics is that everything is related to everything else, the cardinal principle underlying Christianity and following from this “hierarchy” difference, for individuals who choose this, is that everything (related to everything else) relates around God - Acts 17 vs 28, “For in Him (God), we live and move and have our being”. Of course, this would have profound implications for how we perceive the world (epistemology), how we behave (epistemology and pragmatics) and how we do therapy (epistemology and pragmatics).

Understanding Interrelatedness

The next question then is, where do we turn to learn about this interrelatedness and the understanding of context and wholeness? Due to the understanding of the interrelatedness, balance, harmony, and self-healing inherent in nature and ecology, many propose that we look to nature and ecology for knowledge, guidance and wisdom. Bateson was one of those. In *Mind and Nature* (Bateson, 1979), he explains how totemism is a more appropriate and healthy analogy than that proposed by the Cartesian-Newtonian world-machine. Totemism refers to the world view (religion) where analogies are drawn by people between their social systems of which they are a part and the larger ecological and biological systems of which they and the plants and animals are a part. The analogies are between the social systems and the natural world and such analogies can be extended to include an understanding of many human phenomena. For example, consider the analogy between ants/termites that need to be touched constantly to continue feeling part of the nest and infants who when not touched and cuddled and comforted deteriorated so badly that they died. And the analogy between the rogue elephant who without guidance from its herd becomes unstable, unpredictable, aggressive, and human ‘rogues’ - delinquents and criminals who have lacked guidance, discipline, love from their ‘herds’ (families). Mere analogies, or is there more to it than that?

According to many theologians, the Word of God is the one book that provides the answers for everything. Not that they mean the answers are clear cut, but that the Bible points the way to finding the answers. For example, the Psalmist (Psalm 104) says:

“The heavens are telling the glory of God, and the firmament proclaims God’s handiwork. Day to day pours forth speech, and night to night declares knowledge”.

Hart (1994) explains how, when Helen Keller became blind and deaf when she was two, she had a teacher who persistently tried to teach her about the world around her by signing in her hand, but it was only one day at a water pump, after years of trying, that Helen finally ‘got it’. It was only with the feel of the flow of water over her hand and the teacher signing the letters W-A-T-E-R that she finally made the connection between the signs and what she felt. Hart goes on to say that most of us are also blind and deaf and we have God signing in our hand, speaking to us through all things, wanting us to learn His knowledge that is being declared through His creation, and yet we still don’t get it. We are like the young fish who asks:

“Excuse me”, said a young fish to an older fish.

“Can you direct me to what they call the Ocean? I’ve been searching everywhere”.

“The Ocean”, said the older fish, “is what you are swimming in now. This is it!”

“This?” said the young fish, disappointed. “This is only water. I’m looking for the Ocean”. And he swam away to continue his search.

And so we are the same. This?, we ask as we dump toxins in the waters and soil; This?, we ask as we decimate the rain forests; This?, we ask as we poach elephants, rhinos, tigers; This?, we ask all the while searching for the Truth, for answers to life, for solutions to our social problems, for meaning and all the while missing the Signer in our hand who is the Creator and thus, part of our planet.

Thus, both cybernetics and Christianity emphasise the interrelatedness and wholeness within our ecology of all parts, nature and humans, but there is a further distinction. Where cybernetics regards our ecology, our universe as simply an indivisible and interrelated, beautiful and sacred whole, Christianity goes one step further and regards it as indivisible and interrelated, beautiful and sacred because of God, its Creator. This difference is clear in Bateson’s (Keeney, 1983, p. 91) words,

The cybernetic epistemology which I have offered you would suggest a new approach. The individual mind is immanent but not only in the body. It is immanent also in 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 comparable to God and is perhaps what some people mean by "God", but it is still immanent in the total interconnected social system and planetary ecology.

As a cybernetician, Bateson was very spiritual in terms of how he perceived the world, if one uses Gerald May's (Lapierre, 1994, p.157) idea of spirituality - "spirituality consists of an experienced and interpreted relationship among human beings and the mystery of creation". This definition could surely sum up Bateson's experience of the world, his respect for the wisdom and sacredness inherent in the relationships between all living things. However, although his spirituality was such that it included an understanding of God, it was not specifically Christian with a purely *top down* understanding. His mention of God was often an analogy, while for Christians it is *the only* analogy. However, Christians should be aware of and appreciate Bateson's contributions to cybernetics because he returned the mystery, aesthetics, and sacredness of life and all living things to epistemology and one could say that that is the first step back to humility and back to God that humankind can make. As Bateson (Keeney, 1983, p. 94) said,

We social scientists would do well to hold back our eagerness to control the world which we so imperfectly understand ... Rather, our studies could be inspired by a more ancient, but today less honoured, motive : a curiosity about the world of which we are a part. The rewards of such work are not power but beauty.

Wholeness and Health

What about the epistemological implications underlying the idea of wholeness and health? It was discussed previously how cybernetics regards health as a dynamic balance

and harmony between the interrelated parts of mind, body and environment. This is based on the contribution of ecology because from an ecological perspective, the healthy individual (or system) is characterised by complex sets of diverse behaviours and emotions - "an ecology of emotions that juxtapose many different emotions over time may be said to characterise a balanced emotional life"(Keeney, 1984, p. 26). In ecological terms, this is referred to as 'ecological climax', a vital balance of diverse forms of experience and behaviour. Thus, according to cybernetics, health is related to wholeness because health refers to balance between interrelated parts and wholeness implies interrelatedness.

This is not so far removed from the Christian understanding of health. For example, Jesus promised humankind a 'full' life - "I have come that they may have life and have it to the full" (John 10 vs 10). These are very simple words but the image they convey is fantastic. What does it mean, "life to the full"? It means life in abundance; it means our physical needs satisfied; our emotional, social, and mental lives filled with vitality, intensity, meaning; a rich and full life. It is a life that promises purpose and hope - it is not a life that so many are used to, existing in lethargy, without meaning or purpose, a life futile, hopeless or desperate. However, full also implies balance - a balance of emotions and experiences, of joys and sorrows, pain and pleasure, hurt and happiness, despair and elation. It is only within such a balance of highs and lows that people can grow, learn and become truly human and God understands and know that and even more wonderful, He promises it.

Furthermore, according to the Christian perspective, there is a natural connection between wholesomeness (goodness) and health. McLemore (1987b) explains this. He maintains that God desires us to do right but that God, if He is who we believe He is, also desires we be psychologically healthy and if the cosmos is both orderly and benevolent and 'self-healing', it seems reasonable to conclude that all of the Creator's intentions are interlocking and therefore, that there is an intimate connection between goodness and health. As Christians we assume that God's laws are not arbitrary but are in our best interests and so striving to live morally must have positive psychological consequences and vice versa, that striving for true psychological well-being has to lead us in the direction of a higher morality (McLemore, 1987b). This health-goodness connection, however, is not always obvious because often what promotes our health may seem to be in contradiction to Christian teaching and also, many a time God's will, as we understand it, appears to hurt us psychologically and emotionally. These ambiguities and the wholeness-health-goodness

connection is very evident in the therapeutic context. As McLemore writes, the sorts of questions that bring people to therapy, like “Why am I so discouraged?”, “What does life mean?”, “Why did my child have to die?”, none of them are devoid of theological and hence moral implication. And this brings us to the pragmatic implications of cybernetics and Christianity - the implications for therapy.

Implications for therapy

To begin with, an interesting point needs to be explained. The etymology of ‘therapy’ is the Greek word *therapeuein*, which means ‘to heal’. Thus, therapy is the process of healing and cybernetic epistemology and therapy emphasises wholeness in healing. The etymology of ‘salvation’, religious faith’s, especially Christianity’s promise, is the Greek word *soteria* and the Latin word *salus*, which both mean ‘healing, health, wholeness’. Thus, the idea of therapy and salvation is the same - both mean healing or wholeness, and both therapy and salvation seek to achieve this through inner peace, self-acceptance, fulfilling relationships with others, fulfilment in life. Their etymology and their aim are similar - what about the means?

From a systems perspective, a therapist can be regarded as a relationship and/or context therapist. The goal of the therapy would not be to ‘fix’ the person or problem, but rather, to interface with the context of the person or problem where the problem evolved. It must be remembered that two fundamental assumptions of systems theory are the interrelatedness of people within systems and secondly, that symptomatic or problem behaviour - madness or badness - is logical given its context. In other words, the problem behaviour has become a necessary role/function in the system’s organisation in that it maintains or preserves the system’s organisation.

When doing therapy from a systems perspective, there is one fundamental assumption underlying therapy. Change the context, maintain this change and the (family) system will gradually adapt to this change. A change in context necessitates a change in relationship rules. This is because different interpersonal contexts are governed by different rules of behaviour (Simon et al., 1985) and as mentioned previously, call forth different facets of individuals. As a result, people are always functioning with only a small part of their

ultimate possibilities. There are many possible repertoires of behaviour but only some are elicited by the contextual structure, while others are constrained. Therefore, broadening or expanding contexts can allow for new possibilities to emerge. The therapist, then, is an expander of contexts who creates a context in which exploration of the unfamiliar is possible (Minuchin & Fishman, 1981). This change in relationship rules changes the interactional patterns between (family) members, the way they relate to each other, their context of interaction. Bateson (1979) often maintained that therapy had to provide 'news of difference' or information. News of difference refers to the 'difference that makes a difference' so that information becomes a message about a difference or being different. In systems therapy then, the therapist is the person who is the news of difference and because of this difference provides a change in context that is necessary for the problem behaviour to evolve. However, the therapist's role is a changing one because the therapist must adapt his or her behaviour according to the context and interactional and relationship patterns of the family. The news of difference is unlimited because the differentness is relative to the context and different contexts develop different problems. In fact, differentness here can be seen as bizarre because it does not 'fit' the context. By definition, differentness is doing behaviour (or creating a context) so that (family) members can be different with one another. The most important thing is that the therapist must not attempt to solve the problem by doing what the family is already doing (De Shazer, 1982). Another crucial point is that as previously noted, context refers to those factors or circumstances surrounding an event that provides it with meaning; thus, if the context is changed, the meaning will also change.

The development of family therapy was actually based on an expansion of the traditional therapeutic context. The symptomatology of the individual is not only regarded within a context of biological change (based on the medical model), but also within the context of its meaning for the family and extended environment. Thus, the focus is on the entire system/context in which the individual is embedded. In fact, the assessment of the relevant context from a diagnostic perspective is synonymous with the assessment of the relevant system. The crucial point here is that the therapist must work at the level of the context that is responsible for the logic of the problem behaviour. The problem behaviour, although painful for the family members, is also functional for the members. It is comfortable and predictable because it is familiar, and it makes sense and furthermore, the

circular and recursive interrelatedness between the parts maintains it. It is like the old clothes in our closet that although worn out and 'out of fashion' (don't work anymore), they are comfortable and familiar and have an emotional impact that is very powerful, too powerful to simply throw out without being threatening to our selves. Thus, the feedback loops functioning in the family system work against changes that threaten to upset the system's organisation, and although a change in one member will have an effect on the other members, these feedback loops can be enough to offset this change. Therefore, the therapist cannot only focus on the identified problem or patient (I.P.), but must focus on the relationship and interactional patterns that comprise the context so that a context change can be engendered. With this change, the problem behaviour will no longer make sense for the system's organisation and will no longer be necessary for the maintenance of the system and so slowly, the system will have to adapt and change.

However, it must be remembered that although the system most often seen and treated in therapy is the family, it may not always be only the family context that is problematical or dysfunctional. It may be the interface between the family and other systems, like the school, community, police, etcetera; and thus, a contextual therapist must always be cautious in defining what context or how broad a context is to be focused on in therapy as it is part of every form of therapy to assess clearly what the relevant context is (Simon et al., 1985). Regardless then of what that context is, the same goal applies - to assist the 'context' to evolve so that the problem behaviour is no longer the only necessary or logical role for the system. It is an important point to note here, however, that the defining of the context and the levels of systems within that context are purely a description that the therapist makes - it is how the therapist perceives and describes it, not a fixed entity.

Once the context has been described and defined, it is then important to attempt to understand the interactional and relationship patterns, the feedback loops and boundaries that comprise that context. The therapist needs to consider how the problem works in the family - what function it serves; what processes get activated around it; what structure (relationships), rules or pattern of interaction maintains it in that role as well as other roles. In family diagnostics it has been useful not only to work with the family system but to differentiate between family subsystems (parents and siblings), because within the framework of the subsystems, interactional and relationship rules apply that are not valid for the family system as a whole. Parents interact differently towards one another than they do

toward their children and siblings have a set of interactional rules that do not apply to the parents. Keeney and Ross (1992) phrase this functional understanding of context very nicely - they refer to it as the politics of communication - Who-does-what-to-whom-when? A point to note here is that this politics of communication always involves the idea of 'when', thus bringing in the notion of time and how time is crucial when one tries to make sense of the interactional processes within the relationship or the 'pattern that connects'.

The point is that context is not only the environment or circumstances surrounding an event, but interactional and relationship patterns, feedback loops and so on that make up that environment.

Thus, from a therapeutic perspective, the emphasis is to explore as much as possible the context surrounding the identified problem or patient and furthermore, to attempt to grasp the broadest possible view that would then encompass ecology.

To sum up, the above discussion focused on what the concepts of context and wholeness entailed for therapy from a cybernetic perspective. The role of the therapist was elaborated on in this regard; how the therapist needs to define and describe the context of the problem in order to work with it, how the therapist is an equal part of that context and by changing his or her role or pattern of behaviour within that context, can begin to elicit changes in the old patterns of interaction and relationship rules. This understanding makes sense from a cybernetic perspective because it emphasises the ideas of context, wholeness, interrelatedness. The next question is, what would a Christian perspective entail for therapy?

Firstly, more and more mental health professionals are beginning to recognise and acknowledge the validity and value of individuals' spiritual experiences. Psychotherapists have begun to realise that spirituality cannot be ignored in therapy (Prasinos, 1992) and that the spiritual dimension is an equally valid part of any system (individual, couple or family). This spiritual dimension refers to that part of any system that is involved in meaning-making (interpretive lens) and feeling a *part of* and sense of *belonging* (unitive experience). This is because this spiritual dimension of each individual involves that part of us that defines what we believe, what we value, what we love and live for, and thus, it cannot be denied or ignored.

If it is realised that Christianity is a spirituality and spirituality includes Christianity, then it is possible to understand that Christianity, too, is a 'unitive experience', where a

Christian begins to feel a *part of* and *belonging* to God's family and creation, and Christianity, too, provides an interpretive lens. Thus, a Christian perspective for therapy would begin with two very crucial assumptions: an understanding of and respect for the interrelatedness and being a part of God's universe and secondly, that the only lens that is appropriate for any and every Christian is that of love. These assumptions can be translated into the following: if there is an understanding of and respect for the interrelatedness in God's universe, there must also be an understanding of and respect for the interrelatedness between what individuals do, say, think, feel, how they live, and where they live - in other words, their context because of the *completeness* of God's creation.

Secondly, the lens of love translates into how Christians should perceive, think, act, and do therapy. For a Christian therapist, it can be said to be his or her 'theory', 'diagnosis', and 'intervention'. This is where the 'power' of a therapy will lie - not in power tactics or techniques but through the simple giving of the heart. As 1 Corinthians 13 vs 8 states : "Love never fails", and Prasinios (1992) agrees with this as he maintains that love is always present in all and any effective psychotherapy. Thus professing to be a Christian means a tremendous responsibility to live that love and professing to be a Christian therapist means even greater responsibility because it not only means one needs to live by that ethic of love. It also means that one is in God's service in and through the therapeutic profession and that the primary allegiance is to God which means that one's ultimate accountability is also to God (Benner, 1987).

This ethic of love will be mentioned time and again throughout this dissertation, because for me, this would be one of the defining characteristics of a Christian therapist, regardless of the therapeutic model used. However, the pertinent question is - what is love? Love is not an easily defined entity, but it can be defined as relationship - a relationship which is involved with the process of enhancing the growth, upliftment, and healing of the other. In this sense, it is not a justification for forcing one's ideas, values, beliefs, needs or wants on another; thus implying that the therapy relationship is not the place for conversion. It is a process of letting another simply *be* - be who and what they are and assisting them in growing into their full potential, whatever that may be. This idea of love is discussed more in-depth in the following chapter which focuses on relationship, as well as in the other chapters.

In summary, the aim of cybernetic epistemology and cybernetic therapy is to heal the sufferings of individuals and the world. To heal means to 'make whole' and this is the basis for cybernetics - to see relationship, pattern, organisation, and to understand that the entire world and the individuals within it are a complex, yet interrelated whole, of which the parts are all equally a part, none lesser or greater than the next, for each part assists the other parts to make the universe whole. This is true, too, for Christianity, with one exception. Christianity aims to make whole with, through and in God. Bateson's (Keeney, 1983) words that one can see the universe in a single living cell refers to the profoundness of the interrelatedness in our universe, how everything is united and reflects back to itself because of that interrelatedness. Jesus' words "Whatsoever you do to the least of my brothers, that you do unto me" (Matthew 25 vs 40) imply no less. In fact, they imply that therapy is no less than a meeting with Christ and what is done in therapy- in relationship - will reflect back to impact on the greater universe because it is all connected and it will be something you will have to account for, either to oneself, others or to the core of it all - the Creator.

CHAPTER 4

PATTERN AND RELATIONSHIP

In this chapter, the concepts of pattern and relationship are discussed. The chapter will begin with an elaboration of these two concepts and then move on to related ideas like circularity, feedback, interactional patterns and lastly, communication as relationship. Both the cybernetic and Christian perspectives on all these ideas are discussed, as well as how cybernetics and Christianity converge and diverge in their perspectives. As in the previous chapter, the implications for therapy are also described.

The Cybernetic Perspective

Pattern

The basic principle underlying cybernetics is that of pattern - that it is pattern that organises all physical and mental processes or phenomena (Keeney, 1983). According to Bateson (1979, p.16), pattern is the essence of everything - "Break the pattern which connects ... and you necessarily destroy all quality" and he even maintained that all 'mental processes' were essentially the formation and realisation of patterns (Simon et al., 1985). For Bateson (1979), everything within our world, our universe is connected through pattern and the pattern that connects is a metapattern - a pattern of patterns and it is this metapattern that defines the generalisation that it is indeed pattern that connects. In fact, according to Spencer-Brown (Keeney, 1983, p.53), there is no such thing as no pattern and nothing is random:

The essence of randomness has been taken to be the absence of pattern.

But what has not hitherto been faced is that the absence of one pattern

logically demands the presence of another. It is a mathematical contradiction to say that a series has no pattern; the most we can say is that it has no pattern that anyone is likely to look for. The concept of randomness bears meaning only in relation to the observer; if two observers habitually look for different kinds of pattern they are bound to disagree upon the series which they call random.

But what is pattern? The Pocket Oxford dictionary (Sykes, 1978, p.648) defines it as a “regular form or order”, while Simon et al. (1985) state that pattern implies an ordered sequence or connection of events; but for Bateson (1979), the way to begin to think about pattern and the pattern that connects is to think of it as primarily a dance of interacting parts. The search for pattern is actually the basis for all scientific investigation and where there is pattern, there is significance (Watzlawick et al., 1967).

Relationship

The Pocket Oxford dictionary defines relation as “what one person or thing has to do with another, way in which one stands or is related to another, kind of connection or correspondence or contrast or feeling that prevails between persons or things” (Sykes, 1978, p. 757). According to Bateson (Keeney, 1983), relationship is primordial. Phenomena can only be understood and/or known in relation to other phenomena, events and so on. The distinctions we draw in our daily perceptions and cognitions are all based on the relationship between things, phenomena or people. Relationship is also especially relevant when trying to understand human nature and behaviour and according to Bateson, the only way to truly understand relationship is to look at pattern - the patterns of interaction that comprise the relationship.

When one speaks of relationship as being a connection between two things or people or the way one thing stands or is related to another, it is what Bateson (Keeney, 1983) refers to when he says it is pattern that connects. It is pattern that connects one thing with another or allows one thing to be related to another in some way. It is also interesting to note that the definition of ‘relation’ in the Pocket Oxford dictionary mentioned that things can be related through ‘connection’ or ‘contrast’, thus linking with the idea of drawing distinctions,

as well as that of cybernetic complementarities. However, it makes sense in the face of the understanding that human perception is such that it is based on difference and pattern. In fact, according to Reber (1985, p.523), “it is trivially true that *all* perception involves patterning” and sensory and brain research show that only relationships and patterns of relationships can be perceived and these are the essence of experience (Watzlawick et al., 1967). Hofstadter (Simon et al., 1985, p.260) states that,

the elusive sense for patterns which we humans inherit from our genes involves all the mechanisms of representation of knowledge, including nested contexts, conceptual skeletons and conceptual mapping, slippability, descriptions and metadescriptions and their interactions, fission and fusion of symbols, multiple representations (along different dimensions and different levels of abstractions, default expectations and more.

Thus, pattern underlies our entire beings and existence and it creates relationship.

From the above it is clear that relationship and pattern are very intertwined. Patterns of behaviour, relationship patterns, patterns of interaction all basically refer to the same thing and thus, for the purposes of this chapter, pattern and relationship will not be discussed separately, but will be discussed together under the headings relevant to this chapter.

Circularity in Pattern/Relationship

In chapter 2 it was mentioned that cybernetic epistemology and systems theory adhere to a way of thinking or view of reality that is circular rather than lineal. Lineal thinking subscribes to a belief in causes and effects that function in a straightforward manner - A impacts on B to cause effect C. Circular thinking adopts a completely different frame and implies an awareness of how all the parts in the system or circuit of causality fit and are connected because it is multicausal, multidetermined, and reciprocal (Sauber et al., 1993). Circular causality involves the feedback model of causality in which a circular process is involved. The so-called cause is really an effect of a prior cause and what is defined initially

as an effect becomes the cause of yet a later event. In essence, the concept involves the notion of a vital interrelationship of system members (Sauber et al., 1993).

Circularity is, in fact, a basic property of all living organisms and it describes a temporal sequence of a succession of states connected together by a relationship of causality so that the last state reacts upon the initial state, thus forming a loop (circle). This return to the initial state determines a cycle which is repeated periodically in time. The relative reversibility of the system goes together with the temporal irreversibility of the process (Miermont, 1987), but circularity is incomprehensible within the dimension of time as humans experience it; obviously because time is irreversible and the past cannot be changed, but the past most definitely leaves its mark on personal and social structures and where it does, it is circularity that plays the role (Simon et al., 1985).

Another term used persistently in cybernetic epistemology is recursion, and recursiveness is like circularity in that it refers to the reversibility of causes and effects back to their initial starting point (Simon et al., 1985), but differs in the sense that it conveys the idea of processes repeating themselves and spirally onward through time, instead of circling (first versus second-order cybernetics). Since cybernetics is the science concerned with the regulation of organisms and views elements of systems as reciprocal influences, circular or recursive processes would be a major focus of cybernetics and in fact, circularity is a cybernetic model (Miermont, 1987). And this point must be remembered - that it is a *model*, an approximate metaphor with far more pragmatic and descriptive value than theoretical and explicative; simply because as Miermont (1987, p.61) describes it - "it is the vehicle of those paradoxes which arise because of the irreversible flow of time" and irreversible flow of patterns and relationships.

Thus, circular thinking views all events, phenomena and relationships as an interactional sequence which involves mutual and reciprocal influence. No one element or part in the interaction takes precedence over or controls another (Hoffman, 1981). To add to this, circular epistemology even proposes moving away from the whole idea of causation completely to the idea of 'fit'. Dell (Hoffman, 1981, p.346) explains it thus :

Without making reference to etiology or causation, fit simply posits that the behaviours occurring in the family system have a general complementarity; they fit together. *Causation*, on the other hand, is a specified type of inter-

pretation of fit that considers the observed complementarity to have the form :
A causes B. For instance, bad parents make their children sick.

The whole idea of fit gives symptoms, problems and relationships a logical understanding because in looking at it in such a manner reveals how all the pieces/parts of a system fit together in a balance internal to itself and external to its environment. Thus, it becomes clear how the individual has to fit within the family system; how the family system has to fit with its environment and all have to fit together in the ecology of the whole (Hoffman, 1981).

The Feedback Process

Whether one speaks of circular causality, recursiveness, mutuality or fit, there is a constant process that regulates it that can be described as feedback. Sauber et al. (1993, p.169) defines the feedback loop as the "relation of two objects or events in a circular fashion" while Walrond-Skinner (1986) describes it as a circular process by which an output of a system is subsequently processed as an input, and in this way both new information from the environment can be introduced into a system and stability be maintained. Thus, a feedback loop is a particular interaction between a system and its environment in which information concerning the outcome of an action (output) is fed back as an input into the system in the form of more information. Developed in the 1940's for the use of cybernetics in its approach to regulation and communication in all living or artificial systems, the concept of feedback and feedback loops is at the heart of cybernetic thinking (Miermont, 1987), but it is necessary to mention that it was developed from the machine metaphor and represents first-order cybernetic thinking.

All living systems are open and as such have inputs and outputs. Inputs are the data which the system receives and which are produced by the influence of the environment, while outputs are a result of the action of the system on the environment and inputs and outputs are regulated by feedback processes. There are two types of feedback processes, negative and positive.

Negative feedback functions by counteracting the outputs from inputs that deviate from the tolerated limits. Bateson (Simon et al, 1985, p.155) referred to negative feedback as a “circular chain of causal events...such that the more of something, the less of the next thing in the circuit” and this is exactly how a negative loop works - that any variation towards ‘more’ entails a correction towards ‘less’ and vice versa (Miermont, 1987), as in the French proverb, *the more things change, the more they stay the same*. The aim and purpose of negative feedback, if it can be said that it has such, is to maintain a particular level and stability of functioning within the system, as well as correct disturbances in and counteract threats to the system. Positive feedback, on the other hand, functions in such a way that inputs reintroduced into the system as a result of previous inputs and outputs act to facilitate and amplify the system’s response toward change and away from the set limits. The purpose of this is to promote change, growth and development in a system (Miermont, 1987).

This distinction between negative and positive feedback, however, is not meant to imply that these two processes are separate and function apart from each other. Within living systems (individuals, families, groups, societies), there are multiple feedback loops, positive and negative, all acting in a linked, reciprocal relationship to each other. There is also feedback of feedback where a positive/negative loop can be and almost invariably is part of a higher process of feedback (this idea of feedback of feedback represents second-order cybernetic thinking). In artificial systems, feedback loops may be more clearly delineated because certain variables are influenced or controlled by a regulator, but in living systems, where there is a reciprocal relationship between all the elements, it cannot be said which is the regulator or which is the regulated because each part influences all the other parts in a constantly cycling feedback process. Maruyama (Simon et al., 1985, p.156) refers to it as “mutual causal relationships” in such complex feedback loops. In fact, from the perspective of cybernetics, such a system, like a family, can be regarded as a system of linked or overlapping feedback structures (Simon et al., 1985) and it is these feedback structures which are the building blocks of interaction.

Interactional Patterns

An interaction is a dynamic sequence of exchanges of several messages between at least two persons (Miermont, 1987); an interpersonal activity in which one individual acts upon another and as such two or more individuals are balanced against each other in a mutual interconnection over time (Sauber et al., 1993). Interactions have their own unique nature that is not reducible to the personalities of the actors in a similar way that relationships are greater than the relationship members: $1 + 1 = 3$ (Miermont, 1987).

Sauber et al. (1983) describe interactional sequences as patterns of behaviour within a (family) system that reflect the roles and hierarchical positions assigned to each system (family) member and refer to patterns of interactions as those redundant sequences of behaviour or interaction patterns in the family that define who talks to whom, when, about what, and in what manner - the "who-does-what-to-whom-when-where-and-how" politics of Keeney and Ross (1992, p.6). From the above, however, it is clear that patterns of interaction refer to the *relationship* between people.

Bateson (Keeney, 1983) was very concerned that individuals understand and perceive the 'primacy and priority' of relationships and he proposed a way in which to hold on to that. He called it double description and explained it thus (Keeney, 1983, p.37):

It is correct (and a great improvement) to begin to think of the two parties to the interaction as two eyes, each giving a monocular view of what goes on and, together, giving a binocular view in depth. This double view is the relationship.

It is only when we use double description that we can begin to grasp an understanding of relationship. How does this work? When two people interact, each party punctuates the interaction differently, from their own perspective/epistemology. However, a sense of the relationship will only begin to emerge when these two punctuations are combined in a sequential fashion in some kind of pattern that connects them over time. According to Bateson (Keeney, 1983), all and any descriptions of personality characteristics or traits are only extracted halves of larger relationship patterns. Bateson believed that all feelings,

thoughts, and emotions are only ideas that specify the patterns of relationships between people and that individual feeling states like love, hate, anger, and so on only derive meaning within an interpersonal relationships, as do cognitive attributes. Thus, Bateson's idea of pattern as 'a dance of interacting parts' also applies to relationship.

However, one must not forget that Bateson (Keeney, 1983) was an ecological thinker, who firmly believed that patterns only had meaning within a context and hence, he did not stop at combining two punctuations of an interaction. Bateson developed a method of observation and inquiry that later came to be referred to as the Dialectic between Form and Process (Figure 3.1). This dialectic combines classification of form, description of process and orders of recursion in a zigzag ladder that reveals different orders of epistemological analysis and it has been invaluable in the family therapy field in attempting to understand patterns of interaction within a relationship system (couple, family, group) in everwidening contexts. It will be used now to illustrate the concepts of pattern and relationship. This model is described here to attempt to show how patterns of interaction within relationships and relationships themselves have different levels and only by trying to understand the processes going on at these different levels, can one begin to understand the idea and primacy and priority of relationship.

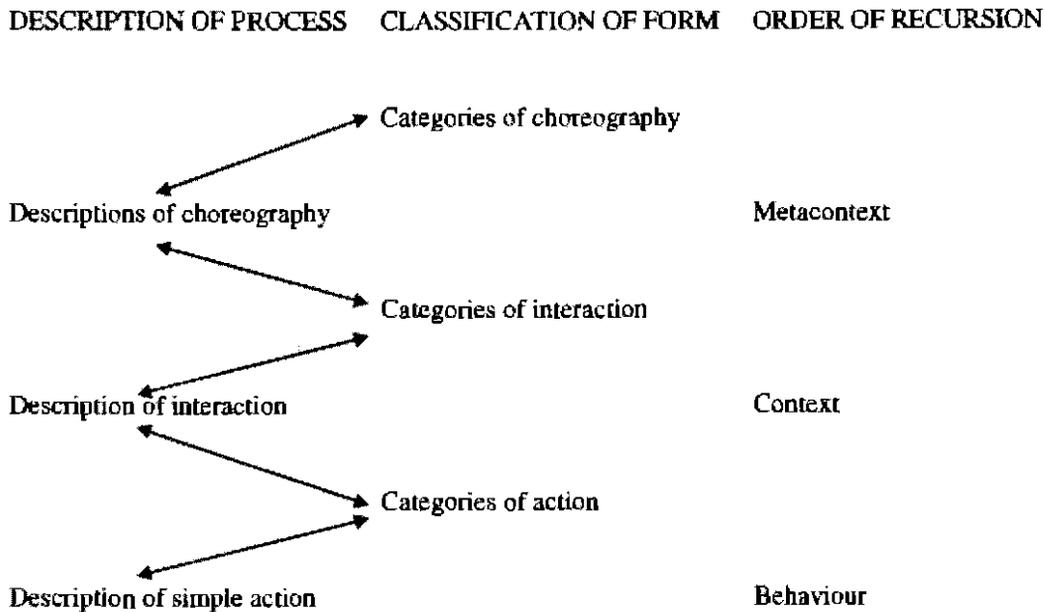


FIGURE 3.1 Dialectic of form and process (Keeney, 1983, p.41)

The first column, Description of Process, refers to what is being observed and follows from an observer punctuating a stream of events, but it generally involves observation based on 'sensory experience', that is, what is *physically* observed. Classification of Form, the middle column, refers to the names given to the patterns that organised simple action, interaction, and choreography, like 'dance', 'fight' or 'play'. A classification of form is an abstraction that 'organises' the descriptions by connecting the elements together in a meaningful way or pattern (Keeney, 1983). The final column, Order of Recursion, simply emphasises the understanding that without context, words and action (behaviour) have no meaning and furthermore, that relationship contexts are included in a metacontext - the ecology of the whole, the human ecosystem.

To understand relationship, one begins at the most basic level, that of simple actions. This may sound simplistic and reductionistic, but simple actions are always linked in social organisation. As Bateson (Keeney, 1983, p.39) said, "no action is an island" and thus, all actions are part of organised interaction. But to begin with, descriptions of *simple action* involve observations of singular, isolated units of action - facial expressions; body movements; voice tonality and volume; uttered words, phrases and sentences, and so on. These simple actions are all *behaviours* and can be classified into particular *categories of action*, like 'dance', 'play' or 'fight'. Categories of action are simply names we ascribe to the way simple actions are patterned over time, but certain simple actions can be found across a range of different categories and so naming the category places the simple actions in a particular context and thereby gives it meaning (Keeney, 1983).

Since all actions are part of organised interaction, the next step is to focus on chains or sequences of actions within a relationship. Thus, *descriptions of interaction* reveal how the simple actions of participants in a relationship are connected over time and so any description of a simple action by one person must then be accompanied by a description of the actions of another person that preceded and followed it. Here, the ordering of the interaction sequence is more important than the actions themselves, but at least three bits of simple action are required. Such interactional sequences occur in a *context* and also belong in categories. These categories, however, consist of naming patterns of relationship and so *categories of interaction* refer to patterns that characterise the relationship of different participants' actions - patterns of interaction (Keeney, 1983). Bateson (Keeney, 1983) identified two major categories of interaction which have been useful in analysing

relationships - complementary and symmetrical. He defined them as follows (Keeney, 1983, p.39):

I applied the term *symmetric* to all those forms of interaction that could be described in terms of competition, mutual emulation and so on (i.e., those in which A's action of a given kind would stimulate B to action of the same kind, which, in turn would stimulate A to further similar actions). In contrast, I applied the term *complementary* to interactional sequences in which the actions of A and B were different but mutually fitted each other (e.g. dominance-submission, exhibition-spectatorship, dependence-nurturance).

The final step is to realise that a particular pattern of interaction does not nor cannot exist alone. Interactional patterns are themselves patterned, connected or sequenced in a metapattern or choreography. This is because patterns of interaction must change over time for the participants of a relationship system to survive. Thus, *descriptions of choreography* involve patterning the various interactional patterns within a relationship, for example, how the pattern of 'closeness' is followed by a pattern of 'withdrawal', followed by a pattern of 'fighting' to return to 'closeness' for the metapattern to begin again, thus all taking place over time. Thus patterns exist in *metacontexts*, which refer to how interactions are patterned as parts of a whole system of choreography and choreographies, too, are classified into categories.

To put flesh on this skeletal frame, a brief, simple example will be utilised. The example is that of a case where a husband and wife constantly complain and the wife's nagging and husband's withdrawing respectively. In this flow of interaction, the wife punctuate it in either/or terms and in a lineal fashion the wife says "you withdraw" and the husband "you nag" and each defines it as "I withdraw because you nag" and "I nag because you withdraw". They do not see how these simple actions are connection in a larger pattern of interaction over time or how the wife's nagging precedes and follows the husband's withdrawal and vice versa. This husband and wife also have a narrowed view of their interaction, because, although this nagging-withdrawal pattern is all they can see, it is not the only pattern of interaction within the relationship, else the relationship could not continue to survive. There are also other interactional sequences and patterns that are

interspersed between the nagging-withdrawal sequence that makes up the choreography of the relationship. In addition, the husband and wife may also 'paradoxically' accuse the other of being different in other relationships, the "why do you withdraw with me but not your friend?" and "why are always on at me, nagging me when the children do this and that and you don't nag them?", which confirms the primacy and priority of interaction, that evoke such characteristics like 'nagging' and 'withdrawal'. This example is very simplistic and brief but it provides some idea how this analysis, provided by Bateson (Keeney, 1983), can be applied to individuals interacting in a relationship to reveal the 'pattern that connects' over time, and this is regardless of whether it be two individuals or ten - the analysis is the same but will be enormously complexified.

Communication as Relationship

Communication is a *conditio sine qua non* of human life and social order. In fact, communication is at the heart of relationship, communication is relationship. This is because, firstly, communication is an *interactional* process and interaction is, as defined earlier, "a dynamic sequence of exchange of several messages" (Miermont, 1987, p.216). Secondly, communication is the observable manifestations of relationships because it is behaviour and has behavioural consequences in relationships (Watzlawick et al., 1967). The Palo Alto School actually defines all behaviour as communication (Lau, 1981) and since behaviour is always done in relationship, it is assumed that communication is an integral part of relationship.

Watzlawick et al. (1967) provide five basic, although tentative, axioms of communication which all indicate clearly how relationship, patterns of interaction, behaviour and communication are all virtually synonymous.

Axiom 1: One cannot not communicate. This is based on the idea that all behaviour in any interaction sequence has message value - is communication and thus, behaviour is communication and since behaviour has no opposite in that there is never no behaviour, one can never not communicate since one can never not behave. Even complete inactivity and silence has message value and communicates something (Watzlawick et al., 1967).

Axiom 2: Every communication has a content and relationship aspect such that the latter classifies the former and is - a meta communication. This refers to the idea that any communication implies a commitment and thereby defines the relationship, so that communication not only conveys information but also imposes behaviour. The conveying of information is the content aspect of communication, while the relationship aspect refers to how the message should be understood and taken and how the relationship is to be defined (Watzlawick et al., 1967). As Haley (Simon et al., 1985, p.295) states:

When one person communicates a message to another, he is manoeuvring to define the relationship. The other person is thereby posed the problem of accepting/reflecting the relationship offered. He can let the message stand, thereby accepting the other person's definition, or counter with a manoeuvre but qualify his acceptance with a message indicating that he is letting the other person get by with the manoeuvre .

Axiom 3: The nature of a relationship is contingent upon the punctuation of the communicational sequences between the communicants. To any outside observer, a series of communications can be viewed as an uninterrupted sequence of interchange, as is any interactional sequence. However, the individuals involved in the interchange/interaction introduce what Bateson and Jackson termed the punctuation of the sequence of events in time (Watzlawick et al., 1967). In a long interactional sequence, the participants will punctuate the sequence of events in time in such a way that there will be a cause and response/effect, certain character traits and so on. This punctuation organises behavioural events and is vital to ongoing interactions, but disagreement about how to punctuate the sequence of events (whose behaviour/message was the cause and whose the response because of such and such traits) is at the root of countless relationship struggles.

Axiom 4: Human beings communicate both digitally and analogically. Digital language has a highly complex and powerful logical syntax but lacks adequate semantics in the field of relationship while analogical language possesses the semantics, but has not adequate syntax for the unambiguous definition of the nature of relationships. Digital communication refers to language, verbal communication, while analogical communication is virtually all non-verbal all non-verbal communication - posture, gesture, facial expression, voice tone and the context of the communication (Watzlawick et al., 1967). Digital and analogical communication can either be congruent or incongruent, where the digital and analogical communication convey the same message or convey contradictory message. A

description of any interactional/relationship pattern must include whether communication is generally congruent or incongruent.

Axiom 5: All communicational interchanges are either symmetrical or complementary, depending on whether they are based on equality or difference (Watzlawick et al., 1967).

To sum up, pattern, relationship, circularity, feedback, interaction, and communication all refer to the same process. All refer to the process of individuals engaging in a relationship or interaction in which they mutually influence each other and in which redundant and repetitive sequences of communications or interaction becomes established into a 'pattern that connects' them. Such patterns of relationships (systems) reflect the symmetry and unity of nature (Allman, 1982) which circles us back to the idea of wholeness and context and only then do we begin to comprehend Bateson - "In a recursive universe, the whole world can be seen in a single living cell" (Keeney, 1983, p.92).

The following discussion will now focus on the Christian perspective relating to these self-same ideas. It will attempt to show how the Christian perspective, through the Bible, often reflects these ideas of pattern, relationship, circularity or recursivity and communication.

The Christian Perspective

Pattern

The general understanding of pattern refers to its meaning of design, model, and example, to mention but a few. The cybernetic understanding includes this and more. As mentioned earlier, it refers to a regular form or order or ordered sequence or connection of events or parts. Specifically, the cybernetic use of pattern refers to a redundant, repetitive sequence (pattern) of behaviour, communication, interaction or relationship that develops over time. The Bible understands and mentions both these understandings.

For example Exodus 25 vs 9 and 40, the use of the word pattern refers to its meaning as a 'design' or 'model' from which something is to be made: "Make this tabernacle and all

its furnishings exactly like the *pattern* I will show you” and “See that you make them according to the *pattern* shown you on the mountain”.

However, the Bible also understands pattern in terms of behaviour, communication, interaction, and relationship. In Titus 2 vs 7 and 1 Timothy 1 vs 16, the word ‘example’ is used instead of pattern, but it clearly refers to ‘pattern’ in terms of behaviour, communication, interaction, and relationship.

Titus 2:7 “in everything set them an *example* by doing what is good” and 1 Timothy 1:16, “But for that very reason I was shown mercy so that in me,....., Christ Jesus might display his unlimited patience as an *example* for those who would believe in Him and receive eternal life”. Here, the word ‘example’ is meant to convey the idea that we should ‘pattern’ ourselves and our lives after that example, and in Romans 12:2, “Do not conform any longer to the pattern of this world, but be transformed by the renewing of your mind”, it is clear what St Paul is referring to - specific patterns of behaviour and relationships with others that the world adheres to.

Two crucial points need to be mentioned here. Firstly, this understanding of pattern might not quite convey the idea of pattern that cybernetics has. Cybernetics understands pattern to be repetitive behaviour over time punctuated as a pattern of interaction connecting the behaviours of people in a relationship in such a way as to be mutually influencing and reciprocal. One would need to dig a little to see if the Bible’s use of pattern in Titus, Timothy, and Romans conveys this. Of course, it is imperative to note that the Bible is an ancient book that has been translated into English. It is generally understood that translations do often miss the nuances of the original language and thus may not convey the same meaning as the original. Furthermore, all languages develop and change over time, such that some words become redundant and slip out of use, new words develop and the meanings and connotations of words change to include or exclude much more than previously. Pattern is an example of one such word that has changed in terms of its meaning or connotation. It is now used by scholars and lay people alike to imply much more than its accepted dictionary meaning. This is perhaps one reason why the reference to pattern in Titus, Timothy, and Romans, on initial inspection, may not seem to link with the cybernetic understanding of pattern.

However, digging a little further and attempting to read between the lines, it can be regarded that to pattern oneself after an example, here set by Christ, implies repetitive

behaviour over time within a relationship where the members are connected through a pattern of mutually influencing and reciprocal interactions. To explain, the idea of patterning oneself after an example and using this example to learn from and emulate, implies practice and practice implies repetitive behaviour over time. Furthermore, if, as Christians, we choose to emulate Christ and use his example, we are in a relationship with Him and this relationship is one where there is a reciprocal, mutually influencing pattern of interaction. As we attempt to emulate Christ or the Father, we will, in turn be pruned by Him, and with this pruning, we will grow and it will become easier and to emulate and pattern ourselves after Him and the more and more we will be pruned, thus implying an ongoing spiral. Of course, there is a further hidden implication in all of this that cannot be ignored and this brings us to the second point that needs to be mentioned.

This second point relates to the hierarchy issue. Once again, there is an implication of an unequal, hierarchical, and lineal relationship. The cybernetic understanding of pattern is quite clear in its assumption of *equal* parts in the pattern of interaction connecting the members of the relationship. In the Bible's understanding of pattern, if we are called to emulate Christ, it implies a relationship where there are not equal parts - Christ is greater than us, perfect, and this is what we must try to be. Thus, once again, this hierarchy issue cannot be ignored. To continue with the discussion, however, we now turn to relationship and the Bible's understanding of this.

Relationship

From the previous discussions, it has become clear that pattern refers to patterns of behaviour, communication, interaction, and relationship; and all of these are synonymous. Behaviour is communication and communication behaviour and communication/behaviour is a multi-directional process between people in relationship and interaction where interaction makes up and is the relationship and relationship is made up of interaction. The essence of all of this is the simple fact that one can never get away from these four crucial processes. To simplify matters, the word 'relationship' will be used generally to refer to all four. From a Christian perspective, however, this may be difficult because the word relationship is never used in the Bible. For that matter, neither is interaction, behaviour or

communication. Of course, one cannot assume that simply because these words were not used, that the Bible lacks understanding of these concepts. One can only assume that these are relatively new words/descriptions of ancient processes. For example, the Bible is replete with admonitions and exhortations on what to do (behaviour), how to be and act (behaviour), how one should speak and what one should say (communication) to fellow human beings (relationship) and how one should react or respond to others (interaction). Thus it is clear that although the Bible may not use the catch words of the day, it has always been aware of the processes, implications and consequences of behaviour, communication, interaction, and relationship. This, of course, would be in concordance with the Christian understanding of God having all knowledge, and thus having knowledge of these things cybernetics and psychology now describe. So what does the Bible tell us about relationship - how should we behave, communicate, and interact in relationship. How should we pattern our life?

In the Bible, the one word that is used consistently and with great emphasis to convey relationship is 'love'. Everybody knows what love means, but God's idea of love and humankind's idea is vastly different. For God, love is not a sentiment, a feeling or passionate words; rather, love is a doing, an action, a way to be in relationship to everyone, and a way to pattern our life.

In fact, the Bible is quite clear that all else becomes irrelevant in the face of love, because love sums up all the previous laws and commandments. In Matthew 22 vs 37, Jesus says "Love the Lord your God with all your heart and with all your soul and with all your mind. This is the first and greatest commandment. And the second is like it: Love your neighbour as yourself. All the Law and the prophets hang on these two commandments". In John 13 vs 34, 15 vs 12 and 15 vs 17, Jesus repeats himself three times to emphasise the importance of the commandment of love. He says, "A new commandment I give you: Love one another. As I have loved you, so you must love one another" (John 13 vs 34). Again He says, "My command is this: Love each other as I have loved you" (John 15 vs 12). And again He says, "This is my command: Love each other" (John 15 vs 17). And in Romans 13 vs 8 to 10, St Paul writes to indicate how love sums up the laws, "Let no debt remain outstanding, except the continuing debt to love one another, for he who loves his fellowman has fulfilled the law. The commandments, 'Do not commit adultery', 'Do not murder', 'Do not steal', 'Do not covet' and whatever other commandments there may be, are

summed up in this one rule: 'Love your neighbour as yourself'. Love does no harm to its neighbour. Therefore, love is the fulfilment of the law".

It is interesting to note here that God and Jesus *commands* us to love. This has two implications. Firstly, when someone commands us to do something, they are commanding an action or behaviour. This applies here. For God, love is an action or behaviour and thus we are commanded to act or behave in such a way. At no point in these commandments are we are commanded to feel, think or say love - it is quite clear that we are meant to love in action. The second implication is in the fact that we are *commanded* at all. This once again implies a hierarchy in the relationship between God and humankind - that God is in the position to prescribe what we should do and how we should be and that He will judge us accordingly, thus implying this unequal, hierarchical relationship.

However, the next question is how do so many individuals get hurt and harmed in the name of love? Why do wife batterers say "I'm sorry, I did not mean it, I love you"? Why do so many individuals in relationships with 'loved' ones come out with scarred, battered, bruised bodies, hearts, minds, and souls?

Love is a popular word and has tremendous power. Individuals wield its power to fulfil their own needs and wants, to manipulate and destroy. Even therapists can do harm in the name of love. What love means and entails for humans is vastly different from what love means and entails for God as indicated in the Bible.

According to the Bible, love is not a weapon or power to be used for our own use or gain. It is something that we do with and for others. And these are two crucial points - that it is something we *do* - behaviour, and exists in relationship for the benefit of others to ultimately benefit ourselves. But what does this doing/behaviour entail that is there to benefit others?

Throughout the Bible, there are many verses that indicate the answer to that question. It is not possible to mention all, but the following are adequate to paint the picture. Before going on to this, however, it is necessary to make explicit that these verses apply to those individuals who choose to pattern their lives after Jesus' example and to obey God's word. Although, for such individuals it is regarded as the only way to live and find meaning in living, it can be argued by others that this is not their way. They have the right to choose this and if the following verses upset them, I must apologise. However, this is my choice

and the pattern by which I wish to live, as a Christian and a therapist. My belief is that through this pattern, one can truly 'move mountains'. The verses are the following :

- Romans 12 vs 9a: Love must be sincere.

- Romans 12 vs 16a and 18: Live in harmony with one another ... If it is possible, as far as it depends on you, live at peace with everyone.

- Ephesians 4 vs 2: Be completely humble and gentle; be patient, bearing with one another in love.

- Ephesians 4 vs 31: Get rid of all bitterness, rage and anger, brawling and slander, along with every form of malice. Be kind and compassionate to one another, forgiving each other, just as in Christ God forgave you.

- Philippians 2 vs 14: Do everything without complaining or arguing.

- Colossians 3 vs 12 to 14: Clothe yourselves with compassion, kindness, humility, gentleness and patience. Bear with each other and forgive whatever grievances you may have against one another. Forgive as the Lord forgave you. And over all these virtues put on love, which binds them all together in perfect unity.

- 1 Thessalonians 5 vs 11: Therefore encourage one another and build each other up.

- 1 Thessalonians 5 vs 13 to 15: Live in peace with each other ... encourage the timid, help the weak, be patient with everyone. Make sure nobody pays back wrong for wrong, but always try to be kind to each other and to everyone else.

- 1 Peter 3 vs 8a: Finally, all of you, live in harmony with one another; be sympathetic, love as brothers, be compassionate and humble.

- And the most well known of them all, 1 Corinthians 13 vs 4 to 7: Love is patient, love is kind. It does not envy, it does not boast, it is not proud. It is not rude, it is not self-seeking, it is not easily angered, it keeps no record of wrongs. Love does not delight in evil but rejoices with the truth. It always protects, always trusts, always hopes, always perseveres.

This is just a few examples of what kind of behaviour, interactions, and relationships is expected from a Christian perspective. The next discussion will focus on the idea of communication from the Christian perspective.

Communication

What about communication as behaviour? Even the Bible understands the importance and impact of words, language, communication?

In Matthew 12 vs 36 to 37, Jesus was quite strict in his admonition regarding communication as He said, “But I tell you that men will have to give account on the day of judgement for every careless word they have spoken. For by your words you will be acquitted, and by your words you will be condemned”. Ephesians 4 vs 29 states, “Do not let any unwholesome talk come out of your mouths, but only what is helpful for building others up according to their needs, that it may benefit those who listen” and Colossians 4 vs 5, “Let your conversation be always full of grace, seasoned with salt, so that you may know how to answer everyone”. And Proverbs 21 vs 23 wisely advises, “He who guards his mouth and his tongue keeps himself from calamity”. This does not mean we should never speak up or speak out, but “if anyone speaks, he should do it as one speaking the very words of God” (1 Peter 4 vs 11). Once again, these verses are commandments by God, thereby implying the hierarchy issue.

Discussion

Of course, from the above two discussions on relationship and communication, one can imagine all sorts of objections to those commandments and admonitions given by God and they are commonly made, by Christian and non-Christian alike. For example, one can imagine “Yeah, but what about *my* rights, *my* needs?”, “All fine and well to do that when people are nice to you, but what about when people are horrible and mean?”, “Maybe I can try it with my family and friends, but why should I with strangers, people I don’t know and don’t need to be nice to?”, “It’s a lot easier to do all that with people you don’t know, but what about the family, when you’ve got to live with them and they’re absolutely impossible!?” The Bible provides answers for every possible objection.

Firstly, the Bible states, “with the measure you use, it will be measured to you” (Matt 7 vs 2) which implies the commonsense idiom, “What goes around, comes around”. If

people understood the implications of recursion and circularity, then they would understand all too well how accurate both the Bible quotation and the idiom are. The kind of attitude and behaviour that we apply in our interactions and relationships with others will influence what kind of attitude and behaviour we receive in turn. It will then affect our consequent attitude and behaviour, leading to a vicious cycle out of which we may not be able to escape.

Secondly, the Bible is quite clear in expressing the idea that such behaviour be applied continuously and consistently, regardless of the situation and regardless of how we are treated. This refers to gentleness and patience in the face of love or hate; equanimity or anger; goodwill or abuse; humility in the face of king or beast, highborn or lowly; peacefulness so far as it depends on us. The Bible states, Proverbs 12 vs 16 - "A fool shows his annoyance at once, but a prudent man overlooks an insult"; Proverbs 24 vs 29, "Do not say, 'I'll do to him as he has done to me; I'll pay that man back for what he did'; 1 Peter 3 vs 8b, "Do not repay evil with evil or insult with insult, but with blessing" and Luke 6 vs 27 to 29a, "But I tell you who hear me : Love your enemies, do good to those who hate you, bless those who curse you, pray for those who ill-treat you. If someone strikes you on one cheek, turn to him the other also".

Thirdly, the Bible is explicit in that such behaviour is not conditional on acquaintance - reserved only for friends, family, and loved ones, but that it should be extended to 'everyone', to all who we meet and all who we interact with, if even for a minute or for 50 years, irrespective of race, gender, age, culture or creed. The 'neighbour' referred to in the Bible is not the family who lives next door or in the house opposite, but refers to all of humanity. As Jesus considered each and every individual His brother, 'what we do to and for the least of my brothers', then we should do no less.

And finally, the Bible even has specific verses for family members, thus revealing its understanding of the intimacy and impact the family group has and how difficult family living can be. Ephesians 5 vs 22, 25, 28, 33 and 6 vs 1 to 4 has this to say:

Wives, submit to your husbands as to the Lord. Husbands, love your wives, just as Christ loved the church ... In this same way, husbands ought to love their wives as their own bodies. He who loves his wife loves himself. However, each one of you also must love his wife as he loves himself, and the wife must respect her husband. Children, obey your parents in the Lord, for this is right. "Honour your

father and mother” - which is the first commandment with a promise “that it may go well with you and that you may enjoy long life on the earth”. Fathers, do not exasperate your children; instead, bring them up in the training and instruction of the Lord.

and Colossians 3 vs 18 to 21,

Wives, submit to your husbands, as is fitting with the Lord. Husband, love your wives and do not be harsh with them. Children, obey your parents in everything for this pleases the Lord. Fathers, do not embitter your children or they will become discouraged.

Then there is the paradox that many of us live with and rage against - “I don’t want to be a doormat, but I can’t leave him or her because I love them” and this is an especially difficult paradox for therapists who see clients who are in destructive relationships, torn between wanting to leave and wanting to stay and as a result, caught in paralysis. The Bible even has an answer for this too. The Bible does not advocate ‘doormat’ behaviour or allowing ourselves to be taken for granted because it realises that this is disadvantageous and destructive to all parties. Thus, in the age of individualism, independence, and assertiveness, the Bible does allow assertiveness - never individualism or total independence for these are myths anyway because of the understanding of interrelatedness and wholeness. The problem is that many people confuse assertiveness and aggression. Assertiveness refers to individuals asserting their rights, needs, desires, beliefs, values, and ideas without harming others or forcing it on others, while aggression entails asserting these things in a harmful, forceful, manipulative way. Thus, we do have the right to assert ourselves as individuals but it is in the way that this is done that makes the difference. In fact, the Bible even encourages ‘rebuking’ others if they are harmful or forceful, but only to a point. This is because the Bible understands the limits of endurance and tolerance and the difficulties and often futility in ‘talking’ and persuading and so, admonishes us to attempt it but then to let it go when it is clear it does not work. For example, in Titus 3 vs 10, it says, “Warn a divisive person once, and then warn him a second time. After that, have nothing to do with him. You may be sure that such a man is warped and sinful, he is self-condemned”

and Proverbs 23 vs 9, states even, “Do not speak to a fool, for he will scorn the wisdom of your words”.

The rationale underlying this, I believe, is that in such situations, the attempts and pleadings to resolve the problems in the relationship begin to predominate within the relationship and bring about stuckness, thereby limiting the interactions of the members of the relationship . It also limits growth and the Bible understands our need for growth because it actually encourages us to stay away from those who do not ‘build us up’.

This is the Christian perspective on pattern and relationship and all that these two terms entail. It includes an understanding of behaviour, communication and interaction, and much more which has many implications for cybernetics. A discussion of these implications will now follow.

Cybernetics and Christianity

Epistemological Implications - Similarities and Differences

Relational Significance

If a cardinal principle of systems thinking is everything is related to everything else, then the purest system position is to relate everything to a relational significance. This sentence can be said to sum up both cybernetics and Christianity. This is because what both cybernetics and Christianity are concerned with only has significance, relationally (with both meanings implied - being relative to and in relationship). To be specific, cybernetics is concerned with pattern and organisation since its underlying principle is that it is pattern that organises all physical and mental processes or phenomena. But pattern and organisation is only meaningful in context and can only be ‘known’ relative to and in relationship, since, as mentioned previously, it is only by distinguishing one thing from or relative to another that humans can come to know their world. Thus, the epistemological

foundations of cybernetics is based on 'relational significance', as well as its pragmatic implications. The pragmatic implications in terms of understanding human behaviour and interaction is based on the primacy and priority of relationship. This is true for all behaviour because behaviour is communication and has message value, and so, always has relational significance in terms of what behaviours precede and follow it and always has relational impact - impact on the relationship in which it occurs. Regardless of whether this behaviour is regarded as 'mad', 'bad or 'normal', it always entails other people having to live with it and so it always has importance relationally.

With regard to Christianity, the essence of Christian living and behaviour is about relationship and therefore has relational significance. Christianity is concerned with the Christian's relationship to God and by direct implication, the Christian's relationship to others. The relationship to God determines how the Christian perceives and experiences the world, life and other human beings because all such perceptions, cognitions, and experiences will be relative to the Christian's understanding and belief in and relationship to God. And, in turn, that relationship to God will (or should) directly influence one's relationship to fellow human beings because the very idea of Christianity, as patterned by Jesus Christ, is about our behaviour in relationship to others. Thus, both the epistemological foundations and pragmatic implications of Christianity, too, are based on 'relational significance'. However, this is not the only place where cybernetics and Christianity meet with similar epistemological foundations and pragmatic implications. In fact, it is somewhat surprising and reassuring to find how often they do meet. It is reassuring for me because it allows me to apply the cybernetic model in many ways without experiencing too much of a discrepancy between what I believe and how I live those beliefs through my work as a therapist.

There are three additional issues where they are similar and where integration of these two conceptual frameworks becomes possible. These three issues refer to circularity or recursiveness; the idea of opposite behaviour and lastly, the dilemma of control in relationship. These will now be discussed.

Recursion

Firstly, the idea of circularity or more accurately recursion. In *Aesthetics of Change*, Keeney (1983) mentions it is wiser to speak of recursion than circularity because the idea of circularity implies a static loop or circle where things always circle around to the initial starting point, but recursion does not work that way. Recursion means the recycling of the same pattern, interaction, and behaviour, but it is never the exact same starting point because time is irreversible and particulars change. Thus, it simply means the replaying of the same pattern of organisation. Here we begin to note the differences between first- and second-order cybernetics, where circularity was a first-order concept and recursion, a second-order perspective, an extension of circularity but with different implications. Here, too, is the mention of time as an integral part of any cybernetic concept and playing an important role. Regardless of semantics, circularity or recursion, the idea is that it can be described in all living or non-living systems and this has implications for cybernetics and Christianity.

The implications for cybernetics have been discussed extensively previously under the headings *Circularity in Pattern/Relationship* and the *Feedback Process*, and thus it is not necessary to go into it here, but in a nutshell, it simply means that in all systems, be they large (ecosystems) or small (the individual), actions and interactions will always be circled back through the recursive loop. For example, what the individual does in or to the ecosystem is intimately connected to the influence that ecosystem will have on the individual and this will further influence what more the individual does in or to the ecosystem and round and round it will go. Whether it starts at the level of the individual or the ecosystem is debatable and a matter of description, but as Keeney (1983, p.141) puts it, whatever we do to “parts we assume to be within ourselves will be re-enacted in that which is outside ourselves. Similarly, our action or what we assume is outside ourselves will be reflected within”.

This idea of circularity or recursion also has implications for Christianity. Three quotations confirm this - “Do unto others as you would have them do unto you” (Matthew 7 vs 12); “with the measure you use, it will be measured to you (Matthew 7 vs 2) and “As you sow, so shall you reap” (Galatians 6 vs 7). These simply imply that how one lives will ultimately affect one’s own life and there are two points to this. Firstly, how one lives will

have an influence on the relationships one has with other people because what one does will influence what is done to you. This may not seem true for some who know people who do what they like with no apparent consequences, but all actions have consequences, whether it take a day or a lifetime for these consequences to appear, there are consequences. Furthermore, in terms of the implications of recursion, these consequences will then influence our actions in response to those consequences, reaping further consequences and actions in response to those consequences, ad infinitum. Take, for example, what has been happening to our planet. For decades and decades, people made the most of technology, using and enjoying the earth's resources, all in the name of development, and now, humankind has suddenly been hit with the realisation that we have been exploiting the earth, destroying vital elements of the ecosystems in days what it take years to restore, and now the earth is in major ecological crisis - air, land, and water pollution; diminished rain forests; endangered species. The consequences of our exploitative actions have taken years to become obvious, but these consequences were always there and in any system actions will always circle back as effects. Fortunately, the recursive loop has now brought about 'positive' feedback, where the effects of our actions towards our planet have circled back as effects that we now regard as disastrous and it has brought about a conscientiousness towards environmental processes which has influenced our actions towards our planet in a way that we are attempting to conserve it and no longer exploit it. Of course, this feedback process which brought about this change took a long time, but it does circle back nonetheless. It often works the same way in human behaviour and relationships, actions taking years to reap result, but circle back it does.

The second point is that, within the Christian perspective, the consequences of our actions and behaviours to our fellow human beings has an ultimate consequence, which differs from the cybernetic perspective of ongoing recursion. This is because of the hierarchy inherent in the Christian belief that God is the Almighty and He will do the judging when the time is right and it is then when people will 'reap what they sow'. The largest system in the Christian perception is the one that includes the deity - God - and recursion occurs when it reflects back from Him when He decides our status for eternity, but there it stops. Thus, the implication of circularity and recursion occurring in human affairs and in our interconnected planet, but God is exempt from this and is responsible for the ultimate recursive loop when life ends. Patte (1987) explains how the verse 7 vs 2 in

Matthew (with the measure you use, it will be measured to you) emphasises the direct relation between what people do and their fate at the end of time.

Opposite Behaviour

The second issue is the idea of opposite behaviour, where one is supposed to overlook an insult and do good to those who hurt/hate you. This is Biblically based as discussed previously and many object to such behaviour, but the wisdom underlying this is even encouraged by systemic thinking. If behaviours within a relationship are mutually influential and reciprocal, then it can be suggested that no behaviour can be maintained for long on its own energy. It needs a complementary behaviour to maintain it and so criticism will logically beget and maintain criticism and shouting will logically beget and maintain shouting. On the other hand, an understanding and respectful response, in the face of shouting, if maintained, will surely bring the shouting down. And this sounds suspiciously like the Proverb, “A gentle answer turns away wrath, but a harsh word stirs up anger” (Proverbs 15 vs 1). The rationale behind this is that it is harder to respond negatively in response to a positive behaviour than it is to a negative behaviour.

This kind of turn-the-other-cheek behaviour is seen frequently in the animal kingdom and is known as the ‘surrender tactic’ (Haley, 1969). For example, when two wolves are in a fight and one is about to be killed, the defeated wolf will suddenly lift his head and bare his throat to his opponent. The opponent becomes incapacitated and cannot kill the defeated as long as he is faced with this response from the defeated wolf. Although then he is the victor, the defeated is controlling his behaviour merely by standing still and offering his vulnerable jugular. Lorenz (Haley, 1969, p.40) explained his new understanding of the Gospel - “If someone strikes you on one cheek, turn to him the other also”, thus, “A wolf has enlightened me; not so that your enemy may strike you again do you turn the other cheek toward him, but to make him unable to do it”. In other words, it is harder to respond negatively to a positive behaviour. Surrender rather than attack is often far more successful and many people do not realise this. This surrender and gentleness in the face of human suffering and living was exemplified by Jesus Christ who never attacked individuals who

came to him blocked by pain and suffering and who surrendered gracefully to his own death, which had ultimately greater meaning than if he had fought and kept his life.

Control in Relationship

The third issue is the entire dilemma of control of relationship. Individuals cannot seem to get away from the attraction or illusion of power and control in relationship and it is their very behaviour and nature that places them in that position. People are meant to be in relationship and whatever they do, they do in relationship to other people. With all relationships there are rules, be they explicit or implicit but over time, and through various interactions, the members of the relationship develop parameters that guide their behaviours and interactions so that certain patterns of interaction become encouraged, accepted, and tolerated, while others are discouraged, rejected, and prohibited. The problem with the rules, however, is that often there is not only disagreement over the rules, but more seriously, disagreement over who should set the rules, in other words, who should have the power and control in the relationship. Since all behaviour is communication and has message value, many behaviours have or imply the message that "I do/will/should/want to control this relationship" and the response to this can vary from accepting the control or attempting a *coup de tat*. The point is that all individuals at some time or another, have to deal with this dilemma of how to be in relationship without relinquishing his or her control of it.

For both cybernetics and Christianity, this is, as Bateson (Keeney, 1983) would put it, an epistemological error, because for both cybernetics and Christianity, control of a relationship is both impossible and an illusion. The cybernetic rationale for this is based on the understanding that relationships are reciprocal and one cannot gain unilateral control over something that is bilateral by nature. Relationships, by definition, imply more than one member and more than one input and thus, believing that one can control the relationship is a conceptual fallacy and brings about endless power struggles in a relationship.

In Christian terms, attempts at 'controlling' a relationship is both morally and conceptually wrong; morally wrong because Christians are admonished to be humble and selfless in relationships with others, which is opposite to controlling; and conceptually

wrong because it is not us who have control but only God who has actual control of our lives and deaths. This understanding, from a Christian perspective, of God having ultimate control relates, once again to the entire hierarchy issue mentioned throughout the previous discussions and makes sense in the light of the Christian belief of God as the Creator of all life.

A point to be made here that many feminists object to are the passages in the Bible, commanding women to 'submit' to their husbands. This is a very contentious and interesting idea because it implies husbands having the control in the relationship, but when one reads those passages in their entirety, one sees that women are told only to submit to their husbands, nothing else - not to love them. On the other hand, husbands are told to 'love' their wives as Jesus loved his church and as they love their bodies, and love is the greatest and hardest command. When husbands do love their wives in this manner, it is very easy for their wives to submit to them. However, these passages are not about 'control', God does not command us to take control. On the contrary, He expects us to relinquish it, in relationship to Him and others, because of the Christian belief that God is in control and the command to love - selflessly.

Rather, these passages on wives, husbands, children, and parents reveal how the relationships are reciprocal and that what one gives to the relationship is inevitably and intimately related to what one gets from the relationship. This links to the first axiom of communication mentioned previously, that one cannot not communicate. Similarly, one cannot not contribute or give something to the relationship and what one gives (how one is in the relationship) will influence what one gets. This emphasises once again that everything exists in relationship. People are not independent agents. The actions of each affect the other, thus each person shares responsibility for the actions of the other, and since people share responsibility for the interaction between them, they can then choose their own behaviour in response to others' and by doing so will also be choosing the others' behaviour. This is the only control we could ever hope to achieve, but it is not anything like control - it can only be described as mutual influence.

It appears from the previous discussions that cybernetics and Christianity have many similarities, both epistemological and pragmatic. Both have an understanding of pattern as a model or example, as well as a connection of events; relationship as comprised of behaviours, interactions, and communications; circularity and recursion in living; as well as

the illusion of control in relationship. Of course, there are also differences in emphasis. For example, in cybernetics, control is completely illusional because no one elements or part in any system has control over the other elements or parts because of reciprocity, but in Christianity, control is only illusional in terms of humanity and human relationships, but not for God. To reiterate, the Christian belief is that God does have and is in control over the earth and its inhabitants.

The next question, then, is what implications all of this has for therapy. But before going onto that aspect of therapy, where cybernetics and Christianity especially agree and which they both emphasise are the principles of relatedness and growth through relatedness, and the following would be an appropriate epitaph for both (Lapierre, 1994, p.156):

Whatever the individual's life, one must grow with others if one is to grow spiritually. It was Harry Stack Sullivan's insight that we learn to be and remain functioning individuals only in relation to others; this is an important concept in the spiritual life *and the cybernetic world*.

Implications for Therapy

If one understands the principle that everything exists in relationship and one holds onto the 'primacy and priority' of relationship, it could then be said that symptoms inhere in relationships and not simply in someone's body. This is true when one considers that for there to be a problem, there always has to be a noticer of the problem (Selvini-Palazzoli, Boscolo, Cecchin & Prata, 1978), which reflects the idea that symptoms and problems occur *between* people, in relationship. Also, symptoms and problems never just affect the I.P., but also the people in significant relationship to the I.P. Thus, besides occurring in relationships, symptoms and problems also affect relationships. This relates to the idea of 'relational significance', in terms of symptoms and problems being relative to non-symptoms and having an impact relationally (on relationships).

In addition, considering that symptoms and problems are behaviour and behaviour is communication, symptoms and problems are also communications. They are communicating something about the relationship in which they occur. As Keeney and

Sprenkle (1982) maintain, symptoms, as well as health, are simply relationship metaphors - communications or indicators of the ecology of relationship systems.

From a systems perspective, behaviour is only meaningful in the way that it is linked to other behaviour - 'no action is an island' (Keeney, 1983), and thus, any behaviour that is regarded as a symptom or problem is linked to the behaviour of other individuals in the system where the problem exists. Furthermore, as mentioned previously, members in relationship systems develop certain patterns of behaviour and interaction that stabilise over time and these interaction patterns are maintained by the recursive feedback loops inherent in all interaction. If any of these behaviours in the interaction patterns are regarded as 'problematic', they will be maintained by the ongoing interactional patterns and this is why problems are often so persistent and resistant. What happens is that the interactional patterns become set and stuck and the problem is then a part of a set of self-perpetuating loops of patterned behaviour (Sluzki, 1981). This persistence of patterns is understood in terms of the idea that these problem-maintaining patterns are organising principles for the system - they ensure family rituals and routines, introduce and maintain order, become cherished markers of collective identity (Sluzki, 1981).

Even when interactional patterns are not problematic at first, they easily can become so. This is because in our present stressful society that is constantly changing and because of developmental tasks faced by individuals and families as they grow and change, the set ways of behaving and interacting are confronted with the necessity of changing with the other changes. If the set ways of interacting cannot adapt according to the changing needs, ideas, values, and beliefs of individuals, families and society, the discrepancy between the new and the old patterns may become problematic - they may not fit any more. Even if the set patterns do change, the change may not always be adaptive but be maladaptive. Thus, individuals are constantly confronted with the possibility that their 'way of doing things' may lead to symptoms and problems and eventually, perhaps, therapy.

The guiding question then in therapy, when a system does present with a problem, is not *why* the problem came about (the cause), but *how* the interpersonal matrix, composed of the behaviours of all the participants, support the symptom and maintains its presence (Sluzki, 1981). From the perspective of interaction, the therapist's view of the problem will be different to the client's view. Specifically, clients see their problem from the level of simple action (e.g., presence of problem behaviour or symptom versus absence of problem

behaviour or symptom), whereas the therapist sees the problem as an interactional pattern. The goal of the therapy would be to construct a more adaptive and useful form of calibrating the client's interaction so that the problematic behaviour would no longer be a necessary part (Keeney, 1987).

A basic assumption, from the systems perspective, is that as long as the family system keeps interacting around the problem, they will maintain the problem. They cannot talk about it unless they 'have' it. Change via systems theory is geared to changing the pattern of the family system. The way in which to do this is for the therapist to utilise a description and understanding of the patterns that connect the members of the system to one another and through the therapist's membership in the family (system) to increase the flexibility of patterns of connectedness while respecting the integrity of the whole system. It must be emphasised here that it is only a description, not the way things really are. The therapist can show the family, through his or her pattern of interaction within the system, that contextual meetings are infinite, and just as a family may be stuck in one pattern of being in the world, they can learn to rearrange their patterns of connections in such a way as to create new meanings (Allman, 1982). Individuals need to learn that they share the responsibility for the interactions and relationships in which they engage and patterns change when one begins to think relatively, thus seeing, directly or indirectly, the self and relationship defeating patterns in which individuals are engaged. Thinking relatively or relationally will lead to describing thus - "when you do, I do and I feel and then you do and you seem to feel, etc.", rather than "you make me mad" or "if only you would". This is fundamental to learning to meta-communicate, which people do anyway, or learning to talk about how one interacts.

The understanding of relationship in daily living is similar for cybernetics and Christianity and since therapy is only a moment in and different context for daily living, the implications for therapy would not differ so dramatically for cybernetics and Christianity. In fact, the majority of reasons why individuals go to therapy is what Christianity, too, is concerned with - the hassles and problems of everyday living. What then would Christianity offer for therapy in terms of pattern and relationship?

To begin with, both therapy and Christianity are meant to be healing contexts, both of which are based on caring and love. However, the idea of healing is different from curing. The cybernetic epistemology has realised that the promise or guarantee of 'cure' is an impossible one. Firstly, because it is based on the medical model of psychology and

psychopathology which has been accused of being simplistic, reductionistic, lineal, and dehumanising, as well as proving to be fruitless. Secondly, because it is based on the idea that the therapist is the expert, apart from the client, who can objectively 'fix'. Systems thinking maintains that the idea of cure from purely a medical model and from an objective perspective is as illusional as the idea of control and as real as the unicorn.

However, becoming part of the system and the system's process of healing, based on the ecological principle that systems have the capacity to heal themselves, is different from objectively 'fixing' and this healing has a basis in respect for the interconnectedness of our planet. This respect lends to us humility, because we realise that we too are a part of that interconnected planet, and as such we have influence over what kind of part we play in that process. We can either act on this humility and try to make our part and influence a positive one and always reflect on what we are doing, or we can go on believing that we are not related to the great cosmic process of life, that we can stand outside of it and comment on it because of our objective position and thus do what we like. If we act on this respect and humility, we show that we care. Christianity, too, maintains this distinction between curing and caring as exemplified by the parable of the Good Samaritan (Luke 10:33-37), where the Good Samaritan was the agent of caring, not curing, letting the ultimate outcome rest with the Creator (White, 1987). Moore (Hart, 1994) adds to this. He maintains that what people need today is care of the soul, not cure and states that psychotherapy is too often taken up with curing - fixing, changing, adjusting, making healthy, and trying to achieve a trouble-free existence. He suggests a 're-imaging' of psychotherapy so that it can include spirituality and attend more to care than cure, because people today complain of emptiness, meaninglessness, vague depression, loss of values, and yearning for personal fulfilment and such symptoms are indicative of loss of soul.

In addition, both therapy and Christianity have love as their backbone. For Christianity, it is the greatest commandment and for therapy, according to Prasinis (1992), if not for love, the field would not exist. Of course, this is debatable; many enter the field for money, status, power or for their own personal needs, but wherever there is a situation where one helps or tries to help another, there is love. The intention is there, even though the means or motives may be distorted and I believe that is what Prasinis means. Furthermore, many of the issues that individuals have to deal with in life that drives them to

seek the answers from religion or therapy boils down to that crucial issue of 'love'. As Hart (1994, p. 40) says,

Every therapeutic issue comes down to love in some way. How should I deal with my husband or wife? How should we deal with this child? This parent? Should I stay in this relationship or leave it? Why do I have no friends? Do I have any value, any rights? These are all questions about love, I remind people, and love is at bottom a spiritual issue, the most important issue of your life, the very purpose of it.

Thus, Christianity does have something to offer therapy. This is because it offers something that each and every individual is yearning for - a meaning to their life, a structure by which to make sense of life, and a desperate need for love. Christianity can offer this through the person of the therapist who can model this sense of fulfilment and peace and begin to quench the client's need for love through unconditional love and acceptance.

CHAPTER 5

THE SELF AND OBSERVING SYSTEM

Chapter 5 will focus on the concepts of the self and the observing system. These two concepts are intimately related and have evolved out of the constructivist and social constructionist movements and especially epitomise the shift from first-order to second-order cybernetics. The cybernetic perspective will focus on this understanding of the self and observing system by beginning with an elaboration of the concept of epistemology. It will move onto a discussion of constructivism, the shift from first- to second-order cybernetics and end with a description of the concepts of self and the observing system. The focus will then shift to the Christian perspective of these self-same concepts and then the integration of the two perspectives. But first a story.

The Cybernetic Perspective

The biologist John Lilly (Keeney & Ross, 1992) once devised an interesting experiment to show how people participate in constructing their experience. He recorded the word 'cogitate' on a tape so that it is repeated over and over again: cogitate, cogitate, cogitate, cogitate, and so on. When people listen to this tape, something strange happens. After a few moments, they begin to hear other words. At a conference of the American Society of Linguistics, Lilly played the tape and the group heard some 2,361 words, imaginary and real: *agitate; arbitrate; artistry; back and forth; candidate; can't you stay; catch a tape; conscious state; count to ten; Cape Cod, you say; cut a steak; got a date; got to take; gurgitate; marmalade* ... For some neurophysiologists, the most commonly perceived word is 'computate', whereas for therapists working in mental hospitals, Lilly

found it to be 'tragedy'. Lilly also adds that when he presents the tape to a group with which he has not achieved a good rapport, he himself hears, 'stop the tape'.

This story reveals something of what the new paradigm - cybernetics - is all about. It reveals that what one perceives and experiences of the world is a result of how one participates in perceiving and experiencing. This idea that emphasises an observer's participation in constructing what is observed comes from the perspective of constructivism. The constructivist perspective maintains that descriptions of phenomena, processes or people are information about the observer or describer and this has become to be known as the shift from observed systems to the observing system - a shift from first-order to second-order cybernetics (Keeney & Ross, 1992). However, a more in-depth explanation of all these ideas is required.

Epistemology

To begin with, the change in paradigm and thus towards constructivism and observing systems is all based on a simple idea called epistemology. Epistemology is the study of the manufacture of knowledge, not of how the world 'really' is, but rather of how we come to know it and aims at understanding our understanding (Pare`, 1995). Epistemology, by definition, attempts to specify "how particular organisms or aggregates of organisms know, think and decide" (Keeney, 1983, p.13), and it is the basis of our very existence because it refers to those rules of operation that govern our thinking, knowing, perceiving, and living. All individuals begin with epistemological assumptions because all individuals begin with epistemological operations and these operations stem from the most basic and primary act of drawing distinctions and making punctuations, which every individual, every observer does. For individuals to 'know' their world, they have to draw distinctions - they have to distinguish 'its' from 'backgrounds', distinguish things from other things in order to know (Keeney, 1983). This necessity of drawing distinctions is biologically based because human perception is such that it only detects (perceives) difference. Bateson (1979) explains that in the case of vision, we think that when we see, we see a static image. But the truth of the matter is that we continuously 'outline' the images we see with our eyes. This is because the eyeball has a continual tremor called *micronystagmus*, which makes the eyeball vibrate

through a few seconds of arc and causes the optical image on the retina to move relative to the rods and cones which are the sensitive end organs. The end organs are thus in continual receipt of events that correspond to outlines in the visible world and thus we automatically and naturally *draw* distinctions. We pull them out and those distinctions that remain undrawn are *not*.

Based on this detection of and necessity for difference and drawing distinctions, individuals then go on to punctuate these distinctions and language is the tool used to punctuate. These punctuations form our knowledge of our world - what we know. But because what we know is based on the epistemological operation of distinctions, what we know is inseparable from how we know (Keeney, 1983). In fact, "we literally create the world we distinguish (know) by distinguishing it" (Keeney, 1983, p.51).

Thus, every individual is an epistemologist, but those not on the epistemological bandwagon may well ask, "So what? What difference does epistemology make for me, for my life?" and this is the crucial issue because the processes of epistemology (i.e., cognition and knowing) are the same as the processes of living (Keeney, 1982). It seems that the epistemology that we adhere to, what distinctions we draw, what punctuations we make, how we chop up our world into bits and pieces called 'fact' and 'fiction', influences how we live and what we do, because what we know and how we know is inseparable from how we behave (Keeney, 1983). This is based on the understanding that how and what we know determines how and what we perceive and it is our perceptions of the things and people around us that influence how we behave towards them. Thus, any act of epistemology refers to how one behaves as well as perceives - the two are linked as a recursive process (Keeney, 1982).

When one begins to comprehend the significance of epistemology in living, one begins to understand that as an active epistemological operator, one is always participating in the construction of a world of experience, a *construction*, not a discovery, and this brings us back to John Lilly's experiment and what it implies.

Constructivism

Constructivism is the perspective that maintains that human beings, in perceiving and experiencing the world, participate in their perceptions and experiences of the world. According to Von Glasersfeld (1984), the fundamental trait of constructivist epistemology is that the world perceived by us is an experientially constructed world that does not make any claim about 'truth' in the sense of correspondence with an ontological reality. Watzlawick (Simon, 1985, p.34) maintains that

any so-called reality is - in the most immediate and concrete sense - the construction of those who believe they have discovered and investigated it. In other words, that which is supposedly found is an invention whose inventor is unaware of his act of invention.

The point is that it is the observer community that decides what reality is.

Constructivist thinking can be traced back to the 18th century to the ideas of Vico, Kant and Copernicus (Von Glasersfeld, 1984), which offered constructivism a beginning. Since then, various individuals have thought along similar lines - questioning the 'realness' of reality as individuals perceive it and now it is considered a major contribution to the emerging new paradigm.

Von Glasersfeld (1984) presents two basic presuppositions underlying radical constructivism. Firstly, that all cognitive activity takes place within the realm of the experiential world of a goal-directed consciousness and such goal-directedness is derived from the observation one evaluates experiences and tends to repeat certain experiences and avoid others; and secondly, which follows from the first, that goal-directedness and purposiveness presupposes that regularities can be established in the experiential world. The implication of this is that "intelligence organises the world by organising itself" (Von Glasersfeld, 1984, p.24).

Since consciousness is goal-directed, for goals to be accomplished, comparisons need to be made between objects and experiences. This process of comparison, built up in the first two years of life, can lead to two different outcomes, that of **sameness** or **differentness**; meaning that the characteristics of the objects or experiences are either regarded as from the

same object or experience or similar object or experience, or from different objects or experiences or a changed object or experience. There are two interesting points to be made here. Firstly, this idea of comparison in the search for **sameness** or **differentness** links up with the understanding that individuals need to draw distinctions according to categories, especially polarities, in order to know their world. Secondly, this is exactly the way in which this dissertation is being written - the similarities or differences, connection or distinction, sameness or differentness between cybernetics and Christianity are being explored.

But to continue with the discussion on constructivism, this is a very brief explanation here, but the point that Von Glasersfeld's (1984) proposition makes is that **sameness** or **differentness**, upon which goal-directedness is based, is established by means of the **idiosyncratic** criteria which the observer creates and chooses in the moment of experience and not related in any way to a 'reality' independent and outside of the experiencer. In addition, the *regularities* that goal-directedness follows from are also constructed on the criteria of the observer because regularity and constancy are premised on the phenomena of repeated experience and repetition of experience is based on the process of comparison with a **sameness** outcome. Thus, both the presuppositions of radical constructivism point to the construction of experience in the flow of an experiencing consciousness. Von Glasersfeld (1984, p.37) explains further:

Given that the raw material of the experiential world is sufficiently rich, an assimilating consciousness can construct regularities and order even in a chaotic world. The extent to which this will succeed depends far more on the goals and the already constructed starting points than on what might be given in a so-called 'reality'. But in our experience, which is always determined by the goals we have chosen, we always tend to ascribe the obstacles we meet to a mythical reality rather than to the way in which we operate.

The implication is that the experientially created regularities are the structure that we experience as reality and that our reality is created without the experiencer even being aware of his or her creative activity and so it appears to be from an independently existing world.

A question many individuals may ask following from the above discussion is, how can it be possible that so many constructions seem to be so *real*, and how come there is correspondence between my constructions and yours? Von Glasersfeld (1984) answers this question with the viewpoint that the most we can ever achieve to discover or truly know is what the world *is not*. He uses the concept of *fit* to explain it - that our constructions may fit with reality in the way that a key may fit a lock. Our constructions can never “reflect” or “match” an independently existing world, nor can we discover an ideal correspondence between our constructions and such a reality. The way a key fits with a lock is based on its effectiveness in opening the lock and so an object/experience is compared as to whether it behaves in the way expected of it - whether it fits or not. However, fitting is a description of the key’s capacity and does not refer to the lock and so the construction is the description of its capacity and does not refer to its “reality”, because as many different keys may fit a lock, many constructions may fit reality. And the second part of the question can be answered with a comparison of fit and natural selection in biological species and their environment. Our cognitive structures are shaped by the constraints of the ‘real’ world that emerges in the realm of experience when the experiencer tries to attain his/her goals, and so, in the same sense that “natural selection ... does not select ... the fittest, but simply lets die whatever does not pass the test, do we have to ‘select’ or fit our constructions in the face of the constraints of the real world that enters through our experiences” (Von Glasersfeld, 1984, p.22). This is how many individuals may come to correspond in their constructions - through natural selection. Remember constructivism does not say that there is no independently existing world, merely that we cannot have direct access to it, but that this world does impinge on our consciousness.

The next question is how is it possible that our constructions do not ‘reflect’ or ‘match’ an independently existing world such that there is an ideal correspondence? The answer to this is in the nature of human perception and its biological basis. Both Von Foerster (1984) and Maturana (Simon, 1985) have contributed to this understanding.

Firstly, Von Foerster (1984) uses the example of the blind spot and explains that the localised blindness of the blind spot is a direct consequence of the absence of rods and cones at a point in the retina where the optic nerve, formed by the convergence of fibres from the eye’s light-sensitive surface, enters into the brain. However, this localised blindness is not perceived at all as either something present or absent, because we never see

the 'nothing' that the blind spot would mean to our vision. Instead, the images we see are always complete and filled in which implies that there are instances in which we see what is not 'there', or fail to see what is there. Johnson (1993, p. 65) states that "one tends to see what you believe, or perceive what you think is real, rather than to believe what you see, or think that which you see is real".

Secondly, it was Maturana (Simon, 1985) who showed that human perception was not as people had previously conceived or believed it to be. It was not a matter of a picture of the real outside world coming in and being recorded on the brain like a camera, which was the current model of perception. Experimenting on the neurophysiology of frogs, Maturana came to the conclusion that the brain had no access to the reality of the world, but only to reality as filtered through its sensory apparatus. The experiments showed that there was actually no correlation between perceived objects and what the retinal cells received. Accordingly, objective reality cannot be described since there is no transfer of images from the outside world to the brain (Johnson, 1993). These results led to neurophysiologists regarding organisms as 'informationally closed systems' which never 'take in' information from outside in any direct way. Rather, what they perceive is always determined by the nature of their own structure and so "the world as we perceive it, is our own invention" (Von Foerster, 1984, p.42).

By turning attention from the observed system to the observing system, constructivism had a tremendous impact on cybernetics because it introduced a new level of complexity, and thus was born second-order cybernetics or cybernetics of cybernetics.

From First-order to Second-order and the "Objectivity" Myth

First-order cybernetics is often referred to as 'black box' cybernetics, since cybernetics was concerned with examining what goes into the box/system (input) and what comes out of it (output). However, this black box view placed the observer outside the

system and implied that the outside observer could objectively observe the system or if need be, unilaterally manipulate or control the observed system, as in therapy (Keeney, 1983). Thus, this first-order view implied that observation could take place objectively and that an observer can study the interactions between members of the system without influencing it. And from this perspective, the observer also acts as if that which has been observed is real (Fourie, 1995).

However, because of the experiments in perception, it was slowly realised that objective observation is impossible, since each observation is coloured by the observer's way of observing and also that the very act of observation influences that which is being observed:

- 1/ Observations are not absolute but relative to an observer's point of view (i.e., his co-ordinated system: Einstein);
- 2/ Observations affect the observed so as to obliterate the observer's hope for prediction (i.e., his uncertainty is absolute: Heisenberg). (Keeney, 1983, p.82)

Following this realisation, the observer was conceptualised as being part of that which was observed, which implied a higher order of observation; namely, observation of the observation and this came to be known as cybernetics of cybernetics (Fourie, 1995). Von Foerster (Keeney, 1983, p.76) says of this, "It is at this point that we mature from cybernetics (where the observer enters the system only by stipulating its purpose) to cybernetics of cybernetics (where the observer enters the system by stipulating his/her own purpose)".

Cybernetics of cybernetics is therefore a way of pointing to the observer's inclusion and participation in the system of observing. This is based on the rationale that any system is comprised of sequences of interaction between members and an observer, through his or her observing, is automatically interacting with the system he or she is observing and thus a part of it; which brings about a jump in the level of system where a new system now exists - observer-plus-observed system. Heisenberg referred to it as the 'Uncertainty Principle', which means that the observer always alters what he observes by the obtrusive act of observation. Thus, cybernetics of cybernetics jumps an order of recursion and places the observer as part of the observed system (Keeney, 1983).

Second-order cybernetics has had a tremendous impact on our understanding of our world because it has debunked the myth of 'objectivity' and as such puts doubt on the validity and reliability of 'objective' scientific endeavours. Why is this? Since second-order cybernetics places the observer in all that which is observed, all description becomes self-referential. The epistemological implication of this is that it increasingly points to the error of objectivity and objectivity's assumption of a separation of the observer and observed. Both Von Foerster (Keeney, 1983) and Bateson (Keeney, 1983) emphasise the mythical and ludicrous nature of objectivity. Von Foerster (p.78) asks the question: "How would it be possible to make a description in the first place if the observer were not to have properties that allow him to generate such descriptions?", thus underlining the relation between describer and described, observer and observed. To explain just how ludicrous this objectivity ideal is, Von Foerster (p.79) says:

It is syntactically and semantically correct to say that subjective statements are made by subjects. Thus, correspondingly, we may say that objective statements are made by objects. It is only too bad that these damned things don't make any statements.

Furthermore, Bateson (Keeney, 1983, p.79) provides the following illustration of the foolishness that may occur when it is forgotten how intertwined the observer and observed are:

Somebody was saying to Picasso that he ought to make pictures of things the way they are - objective pictures. He mumbled he wasn't quite sure what that would be. The person who was bullying him produced a photograph of his wife from his wallet and said, "There, you see, that is a picture of how she really is". Picasso looked at it and said, "She is rather small, isn't she? And flat?"

Newtonian-Cartesian science will have an enormous objection to debunking the myth of objectivity, of course, because science is proposed to be completely without any

preconceived assumption, values, ideas, and anything else that stands in the way of objectivity. However, the assumption that science is assumption- or value-free is itself a false one. Firstly, science itself has an inherent set of values and assumptions. It is believed to be good as an end in itself because it brings forth more truth, beauty, order, lawfulness, goodness, perfection, unity, and so on. It is also believed to be good as a means because it lengthens life, reduces pain and disease, makes life richer and fuller, spreads information, permits mobility, reduces back-breaking labour, and could make better human beings (this is debatable, of course). As Bronowski (Reason & Rowan, 1981) demonstrated - science as a human enterprise and as a social institution has goals, ends, ethics, morals, purposes - in other words, assumptions and values. Thus, regardless of the emphasis on a belief in objectivity, the ideal of science itself is not even completely objective.

What then is the answer? Von Foerster (Keeney, 1983) suggests moving away from both objectivity and subjectivity, since if objectivity is erroneous, so too is subjectivity; and moving away from these would lead to what cybernetics of cybernetics proposes as the alternative - ethics of observing. From this perspective, the observer will recognise the necessary connection of the observer with the observed and lead to examining *how* the observer participates in the observed, which follows from the fundamentals of epistemology. In order to 'know', one must first draw a distinction and the act of drawing a distinction itself suggests a choice or preference. This choice or preference has consequences and by examining how the observer participates in the observed, the implications of this ethical perspective will be that of responsibility. Since all individuals prescribe certain ways of distinguishing and punctuating the world, it is important to examine the intentions that underlie and effects that result from those punctuative habits.

Maturana (Johnson, 1993) also proposes an alternative to objectivity with his objectivity-in-parentheses. He explains it thus (p. 78):

Objectivity-in-parentheses entails accepting that existence is brought forth by the distinctions of the observer and that there are as many domains of existence as kinds of distinctions the observer performs : Objectivity- in- parentheses entails the multiverse, entails that existence is constitutively dependent on the observer and that there are as many domains of truth as domains of existence she or he brings forth in her or his distinctions.

The implication of objectivity-in-parenthesis is that the observer takes full responsibility for the 'reality' and 'truth' he or she brings forth and because there is a multiverse of realities and truths, observers no longer need to change, convince, force or negate others and their realities and truth.

What this all suggests is that the observer is responsible for what he or she observes and what he or she observes says more about the observer than the observed and thus, it is no longer prudent to focus on the observed, but it is necessary to focus on self and the observing system.

The Self and the Observing System

Since persons are always in relation, one cannot study persons without studying the relations they make with others ... And the method used to observe must be one that allows us to study the personal form of relating ... And so, the observer must be aware of his or her own pattern of response if he or she is to evaluate the behaviour and experience of the person he or she is studying ... the observer, with the co-operation of the other, constitutes himself or herself as part of the field of study, while studying the field he or she and the other constitute. (Reason & Rowan, 1981, p.167)

This brings in the notion of self-reference, which originates from second-order cybernetics. Second-order cybernetics implies that it is the observing system that is crucial in any observation because all such observations are self-referential.

Self-reference is described as seeing that which we do as a reflection of what we are (Reason & Rowan, 1981), and implies that the observer is in the observed, the describer is in the described, the explainer is in the explained, the reader in what is read, and the therapist is in the therapy. Thus, any observation, description, explanation says as much or more about the observer/describer/explainer as it says about what is being observed/described/explained.

How is it that observations and descriptions are self-referential? The answer is based on the conclusions reached by Maturana and Varela (Simon, 1985) in their experimentation

on the neurophysiology of frogs. Based on the experiments, they reached the conclusion that systems are “organisationally and informationally closed” (p.34). There is no direct correlation between a perception and the ‘thing’ being perceived. The perception is a result of the system’s own constructions, determined by the system’s own structure, and a “vague bump on the head by the outside world” (Simon, 1985, p.34). What this means is that a system is viewed with no reference to its outside environment, but only with reference to itself and because the system is thus, self-referential, so are any observations or descriptions it then makes. Maturana and Varela (Keeney, 1983, p.83) state, “we speak of a closed system, or more radically still, one which from the ‘point of view’ of the system itself, is entirely self-referential and has no ‘outside’”. An important implication of this understanding of descriptions and observations being self-referential is that because of this self-referentiality, one should become more and more self-aware and self-reflective and question what we think, do and say by looking at the ‘unquestioned’ assumptions behind our cognitions and behaviours.

Speaking of such a ‘closed system’, however, does not mean that the system is totally closed off from its external environment. It means that the system is open to energy but closed to ‘information’ from the outside. According to this perspective, the information is actually in the ‘inside’ and points to why the same ‘thing’, ‘event’ or ‘experience’ has definite different meanings for different individuals (systems) and how two individuals (systems) can describe and explain an apparently ‘same event’ so differently.

Shideler (1985) explains this very nicely. She explains how in observing the ‘real’ world, each of us sees it differently because each of us has different personal characteristics, histories, experiences, and viewpoints, and it is this relation between view and viewpoint that she uses to elucidate self-referentiality. She uses the example of an ordinary kitchen chair with “ourselves as sitting in a circle” (Shideler, 1985, p. 57) around the chair, each with “a camera to record what he/she sees” (Shideler, 1985, p.57). She goes on to say that no two of the resulting photographs will be alike but we all know that what was photographed was the same thing and all of us know it was a ‘chair’ because chair is one of our shared concepts. The photographs are different because each person around the chair saw it from a different viewpoint, hence the different view each had of it and having experience of observing three-dimensional objects from different viewpoints, this is not strange to us. What would be strange is if all the photographs were identical - from front,

behind, above, below, and so on. Thus, equally, we should realise that it is strange if people with different characteristics, histories, and experiences all gave identical descriptions of the chair, or anything else for that matter. Shideler (1985, p.57) says, “An artist, a cabinet-maker, and a second-hand furniture dealer will describe it differently. So will a blind person, one who is colour blind, and one who has normal sight”. She states further that people can walk around the chair to co-ordinate viewpoint with view, but few of us have comparable experience in the daily and hourly practice of observing the real world from a variety of different viewpoints to co-ordinated viewpoint and view. Instead, we simply observe and describe from the “angle of our knowledge and values, attitudes and interests and embodiments and our own place in the world as old or young, man or woman, psychologist or sculptor” (Shideler, 1985, p.57). The point is that our viewpoint makes a difference to what our view is and every view is an observation from a particular viewpoint that is culturally, personally, and historically determined. We cannot get away from it, but we see the world from where we are, with our own eyes and our own mind. Even though books, travel, study, and perceptive and receptive meetings with others who see the world from other viewpoints may help us to see more than we would with unaided eyes or uneducated minds, we still see the world from where we are. Even if we sit in the chair in the centre or in someone else’s chair, we see with our own eyes - our own viewpoints.

Furthermore, view and viewpoint is only one part of it. We also have to deal with the ‘recalcitrance’ of the chair. Its being a chair places a constraint on our possible behaviours in relation to it, including how we view it. We can successfully or unsuccessfully treat it as something to sit on, stand on, lean against or attempt to eat, drink or talk to it, but there are most definitely limits on what we will succeed in doing with it. This point links with Von Glasersfeld’s (1984) idea of fit and natural selection.

However, what all of this implies is the wholeness and autonomy of systems. Bateson (Keeney, 1983) refers to the cybernetic characteristics of a system as “inherent or immanent in the ensemble as a *whole*” (p.85). In fact, a system’s highest order of recursion or feedback process defines, generates, and maintains the autonomy of a system and this is why individuals, couples, families (systems) seem so *resistant* to change because the feedback processes within all and any systems function to maintain that autonomy. Due to this autonomy, nothing can change the system, but merely perturb it.

This idea of autonomy is often difficult to grasp but Keeney's (1983, p. 103) example is excellent. Keeney takes the example of a balloon as an autonomous system:

If you squeeze it, your action can be seen as a perturbation. You do not get inside the closed boundaries of the system, or the balloon would burst. Your perturbations on the system, if not too severe, will be compensated for by a change in the system's structure. The balloon's ability to alter its shape allows it to endure.

Individuals often come up against this autonomy when they feel as if they are 'banging their head against a brick wall' for all the impact they are making. This happens when individuals attempt to 'change' other individuals (systems) according to their preconceived ideas and nothing happens, and yet a seemingly innocuous action or statement can make metre high waves, and this points to how individuals (systems) can be perturbed, but it cannot be predicted because the information/perturbation is inside the system.

The above discussions on epistemology, constructivism, second-order cybernetics, and the observing system points to one crucial principle - all we have is self. Whenever and however we interact with other individuals in relationship, the only thing we have in relationship is self, because it is only the self that we can ever truly *know, observe, describe or change*. To attempt to know, observe, describe or influence anyone else is to do it with them-in-relation-to-self. And thus we are left with the eternal paradox - we can never escape self; as Kuan Tsu (Keeney, 1983, p. 201) once said, "What a human desires to know is *that* (i.e. the external world). But his or her means of knowing is *this* (i.e. himself or herself). How can he or she know *that*? Only by perfecting *this*?"

The above discussion focused on the cybernetic perspective of the concepts of self and the observing system. The following discussion will be from the Christian perspective and elaborate on the main implication of these two concepts - that of self-reference.

The Christian Perspective

Self - Reference

One of the most crucial ideas underlying that of the self and the observing system and to which epistemology and constructivism point is that of self-reference - the idea that what is described is in the describer, what is observed is in the observer, what is explained is in the explainer and the described, observed, and explained says more of the describer, observer, and explainer than it does about what is being described, observed, or explained. This idea of self-reference is also reflected be in the Bible to some extent.

Firstly, where the idea of self-reference comes from is Maturana and Varela's (Simon, 1985) understanding of organisms, individuals as being 'closed systems' - being 'informationally closed' such that other individuals cannot 'know' what is inside that closed system. All individuals can know is self-in-relation-to-something or someone else. There is a verse in Proverbs that may very well point to this 'closedness' of individuals - Proverbs 14 vs 10: "Each heart knows its own bitterness and no one else can share its joy". This points to the understanding that we can never get 'inside' what people think or feel and thus we can never predict what they will think or feel. All we can 'know' is that only the individual will know its bitterness or joy or whatever else.

Due to this closedness, all descriptions, observations, explanations become self-referential. As mentioned earlier, self-reference was described as seeing that which we do as a reflection of what we are and this understanding can be found in a crucial verse found in two of the gospels - Matthew 7 vs 1 to 5 and Luke 6 vs 37 to 42:

Do not judge, or you too will be judged. For in the same way as you judge others ... it will be measured to you. Why do you look at the speck of sawdust in your brother's eye and pay no attention to the plank in your own eye? How can you say to your brother, 'Let me take the speck out of your eye' when all the time there is a plank in your own eye? You hypocrite, first take the plank out of your own eye, and then you will see clearly to remove the speck from your brother's eye (Matt 7 vs 1 to 5).

Do not judge, and you will not be judged ... He also told them this parable : “Can a blind man lead a blind man? Will they not both fall into a pit? ... Why do you look at the speck of sawdust in your brother’s eye and pay attention to the plank in your own eye? How can you say to your brother ... You hypocrite, first take the plank out of your eye, and then you will see clearly to remove the speck from your brother’s eye (Luke 6 vs 37 to 42).

These verses contain a wealth of information regarding self-reference. If self-reference means seeing what we do as a reflection of what we are, the accusation in these verses of our being hypocrites when we judge refers to this. The analogy of the ‘speck of sawdust’ and the ‘plank’ is interesting, since both refer to wood and what these verses are saying is that when we judge and condemn, we are describing more of that same ‘judgement’ in ourselves (the plank) than in what we are judging (the speck); thus, the describer is in the described, observer is in the observed and the description or observation says more about the describer or observer than it says about the described or observed.

The use of the word ‘eye’ is also very interesting. Why not simply -“why do you look at what your brother is doing?”. Generally, when one looks into another’s eye we can see a reflection of ourselves because of the light - eyes are like mirrors. Thus the use of the word eye may reflect the idea that when we see, we see a reflection of ourselves - hence the idea of self-reference in these verses. Then when the authors continue with “first take the plank out of your eye, and then you will see clearly to remove the speck from your brother’s eye”, this points to the admonition to be continuously self-reflexive, to be aware of how we participate in what we see and do and live. Thus, according to Patte (1987), the fundamental precondition is taking notice, being aware and seeing what is wrong in oneself. Furthermore, with this understanding of self-referentiality, comes the further understanding that when we describe or observe, we need to be cautious about what we describe because it points back at us. From a Christian perspective, this can be translated into the understanding that self-referentiality, especially as conveyed in these verses, precludes judgement - we have to continuously examine ourselves before judging others and by doing so, we will find that we will not be able to ‘cast a stone’.

Also, Luke's addition of "Can a blind man lead a blind man?" is powerful. We are all in a sense blind, as Johnson (1993, p. 65) says, "one tends to see what you believe, or perceive what you think is real, rather than to believe what you see, or think that which you see is real". This distinction that neurophysiologists have discovered between what we 'see' and what we 'perceive' is even repeated twice in the Bible in the Old and New Testaments:

"Be ever hearing, but never understanding;
be ever seeing, but never perceiving" (Isaiah 6 vs 9); and

"You will be ever hearing, but never understanding,
You will be ever seeing, but never perceiving" (Matthew 13 vs 14).

There is a difference here, however. Neurophysiologists maintain that what we perceive (by the brain) is different from what we see (through the eyes), while these verses maintain that what we see (through the eyes and brain) we do not understand (perceive). But the realisation that there is a distinction between seeing and perceiving is clear.

There is another verse where the 'eye' is used, and where the idea of perception and behaviour is linked, thus bringing in the idea of self-reference again. This verse is Matthew 6 vs 22 to 23: "The eye is the lamp of the body. If your eyes are good, your whole body will be full of light. But if your eyes are bad, your whole body will be full of darkness". Here the reference to eye is all about 'perception'. Patte (1987) explains it in terms of how and what one perceives or does not perceive can influence whether or not one will be able to implement one's vocation, but this verse can have a far broader meaning, implying the link between how and what one perceives and how one lives in general. In other words, what one says, does, and so on. The implication of self-reference is in the use of the words 'lamp' and 'eye'. If one thinks of a lamp, one realises that a lamp is to give light to or illuminate a room, revealing what is in the room. Thus, if the eye is a lamp for the body and the eye determines how we perceive and behave, it also illuminates, reveals, and reflects what we are. Through our perceptions (our eyes), we reflect our beliefs and assumptions about our world, which will influence how we behave in that world, thus illuminating who and what we are.

These are only a few verses to indicate how the Bible reflects an understanding of self-reference. Throughout the Bible there are also other verses showing how God realises that humankind has limitations to its sight, understanding, and knowledge, which He hopes to make complete if only we would realise all we have is self and self-in-relation-to-others-and-God; and when we truly comprehend this, we may reach the point that Maturana (Simon, 1985) speaks of where we lose the passion to convict, convince, force, and negate others and we come to God like “little children” (Matt 18 vs 3) with the humility and awe that we still have so much more to learn and understand. This realisation that we do still have so much more to learn and understand comes from both cybernetics and Christianity then, and this brings us to a point where further similarities and differences between the two perspectives can be discussed.

Cybernetics and Christianity

Epistemological Implications - Similarities and Differences

Reality

Second-order cybernetics, under the influence of experimental epistemology and constructivism, has presented the idea that ‘reality’ and ‘truth’ are not static and irrefutable things. Instead, reality and truth are based on the distinctions the perceiver draws and the drawing of these distinctions are also arbitrary and inventive. Thus, the fine line between ‘fact’ and ‘fiction’ begins to blur as more and more revelations are made about individuals participating, to a very large extent, in the ‘construction’ of their world. Both Bateson (Keeney, 1983) and Maturana (Johnson, 1993) considered the distinctions observers drew as crucial in the construction of the observer’s experienced world or perceived reality.

Bateson (Keeney, 1983) referred to it as punctuation - the way an individual chopped up his or her world into bits and pieces of information to recognise that world and what was real and true. Maturana (Johnson, 1993) referred to it as objectivity-in-parenthesis and proposed that all individuals realise this fundamental basis for our living. According to

Maturana, in objectivity-in-parenthesis, the observer is the source of all reality through his or her 'bringing forth' of reality - his or her operations of distinction, and that the observer can 'bring forth' as many different but equally valid domains of reality as there are different kinds of operations of distinctions. The point is, and this is one of the most crucial differences between the old Cartesian-Newtonian paradigm and the new cybernetic epistemology, that the reality individuals live with, the truth they espouse, is simply their way of punctuating and bringing forth their world. It is simply their way of making meaning and does not point to an unchangeable, irrefutable R-E-A-L-I-T-Y. Thus, the idea to be objective when it comes to describing the reality or truth of things is erroneous, because according to the new epistemology, there is not ONE reality or ONE truth, but MANY realities, MANY truths, as MANY as there are individuals.

The next question is what is real anyway? What is true? The Pocket Oxford dictionary (Sykes, 1978, p. 744) defines real as "actually existing as thing or occurring in fact, genuine, rightly so called, not artificial", and true as "in accordance with fact or reality" (p. 980); while fact and reality are defined as follows, respectively, "Thing that is (known to be) true" (p. 304) and "being real, resemblance to original, real existence, what is real or existent or underlies appearance" (p. 745). However, where does one draw the line? In defining each of the four concepts, the definitions repeatedly refer to the other of the four concepts and it appears as a vicious circle - what is real is fact and fact is true and true is what is reality and reality is real, and we return to the original question, what is real anyway? Illusions and hallucinations appear real enough at the time, it is only after the fact that they are considered not real; ideas and emotions are real to the person who has them but they are not tangible so perhaps they are not true?; what is true for one person may not be true for another and even facts change over time as scientists discover more about reality and what is real. And so, it is very easy to become trapped in a minefield (or mindfield) of words that point to reality and truth, but are meaningless. It is then that we realise that the meaning individuals give to their world is what gives it a reality and truth and then we comprehend what the constructivists and second-order cyberneticians mean when they say we construct our world and there are as many realities as there are individuals.

Of course, with any major change in anything, there are advantages and disadvantages. The advantages to this multiverse of realities and truths is that individuals will no longer be susceptible to propaganda and indoctrination and that it could lead to more

tolerance for what other people say, do, **think**, and **believe**, although it has not yet. If anything, we most probably will not have another single Third Reich, but multiple third reichs!

However, a major disadvantage is that this can result in a tremendous amount of confusion. People have been led by the old way of thinking for so long that they still continue to look for what is real and true. Also, with so many different versions of reality and truth, people can get bogged down and immobilised - too many valid views to take any action, or have a direction in which to go; how to make meaning out of so many different perspectives? One can well wish for the days of the cut-and-dried-answers!

It is at this point where there is a major divergence with cybernetics and Christianity. Although, Christianity has an appreciation for the self-referential nature of human beings, and the understanding that all individuals have their own ideas, views, beliefs; it does not purport that all realities or truths are equally valid. Rather, Christianity claims that there is ONE Reality, ONE Truth that encompasses and surpasses all other views because it is The Reality, The Truth that comes from God: **“I, the Lord, speak the truth; I declare what is right”** (Isaiah 45 vs 19c).

Jesus himself declared He was “the Way, the Truth and the Life” (John 14 vs 6), and in the Gospel of Matthew, Matthew records how when Jesus taught his disciples and told his parables, he often used the words - “I tell you the truth”. In fact, in Matthew alone it is recorded over 25 times. Thus, according to the Christian perspective God is the Ultimate Reality and Truth. He knows all there is to know: “Whatever exists has already been named and what man is has been known” (Ecclesiastes 6 vs 10).

Of course, this is directly related to the hierarchy issue mentioned in previous chapters. One of the reasons why God is considered to be the head of the hierarchy is because of who He is - the Almighty Creator of the earth and everything in it. Following from this, is the idea that as the Creator, He is omnipotent and must have all knowledge and as such, is responsible for and is the essence of Reality and Truth.

Limited Understanding

However, there is a comforting aspect to this, from a Christian perspective. We understand that humankind's understanding and knowledge of things is limited ("now I know in part" - 1 Cor 13 vs 12), but God intended it this way for He intended to provide us with His knowledge and wisdom - "But it is the spirit in a man, the breath of the Almighty, that gives him understanding" (Job 32 vs 8) and, "He will be the sure foundation for your times, a rich store of salvation and wisdom and knowledge" (Isaiah 33 vs 6).

Considering that God is omnipotent (Christian perspective), this generosity is very comforting indeed: "I will instruct you and teach you in the way you should go; I will counsel you and watch over you" (Psalm 32 vs 8). Even Jesus offered the same. The truth that He knew and embodied was available also to his followers: "Then you will know the truth and the truth will set you free" (John 8 vs 32).

Thus, although both cybernetics and Christianity agree that humankind's understanding of reality and truth is limited and self-referential by nature, Christianity makes a further claim. It claims that there is a Truth and Reality that is The Truth and Reality that can be found, but only in relation to God. Furthermore, the Word of God goes on to say that our 'knowing in part' will be replaced by a complete understanding, - "Now I know in part, then I shall know fully" (1 Cor 13 vs 12).

Of course, from this understanding of 'limited' knowledge by both cybernetics and Christianity, there are important implications for how we act towards others. If we do not have access to the Reality or Truth, but only have our understanding of reality and truth and if we only 'know in part', we can no longer force our views and values on others, by assuming that we know better. From this understanding, we need to learn that their understanding of reality and truth is equally valid, not greater nor lesser and when we grasp this, our worlds can then begin to meet.

Obviously, a consequence of this realisation of the multiverse of reality and truth is the understanding of the limitation of the 'objectivity' ideal. In fact, second-order cybernetics claims that there is no objectivity - simply ethics of observing. Maturana (Johnson, 1993) does not go so far as to debunk the word objectivity - he merely places it in parentheses. In other words, every individual is objective but their objectivity is in 'limbo', by being in brackets or quotation marks and hence their objectivity does not point to the real

or true, but to their operations of distinctions on the real and true. Although many disciplines are being influenced by the new epistemology, society still has not moved far enough away from the idea of objectivity. The word still circulates and is even used as an argument to show up the differences between men and women. Men, it is said, are more objective, while women are more subjective because they are more (or too?) emotional (and/or hysterical?). Perhaps the term should not even be debunked but rather generated a new meaning or connotation. In fact, this is what McClintock, a geneticist, does. Adams (1995, p. 205) in citing Matthews on McClintock states how McClintock exemplifies a way of knowing that

in eschewing detachment, achieves greater insight into the nature of things - and hence greater objectivity - than the way of knowing prescribed by classical science ... It is love which opens our eyes to the reality of objects ... love for the object motivates us to try to understand it for its own sake, thereby enabling us to overcome the self-interested promptings of the ego.

And this is very similar to Biblical scripture.

There are many verses in the Bible which express that love and truth, understanding, knowledge and insight are related, just as McClintock's words express it. For example, Ephesians 4 vs 15 states, "Instead, speaking the truth in love"; Philippians 1 vs 9 to 10 reads, "And this is my prayer: that your love may abound more and more in knowledge and depth of insight" and Colossians 2 vs 2, "My purposes is that they may be encouraged in heart and united in love, so that they may have the full riches of complete understanding..."

It is now realised that science is no longer the only approach to reality and truth and it has even lost its authority. Now it is appreciated that there are mysteries that science cannot account for. This has led to an understanding that science can no longer "deny that other approaches to knowledge are valid and other truths true" (Adams, 1995, p. 205).

Cybernetics is one such approach to knowledge and truth, and Christianity another. Both cybernetics and Christianity realise that human knowledge is only a 'part' of a 'whole' we can never full grasp or comprehend; both appreciate that individuals' knowledge is self-referential; both propose an alternative understanding of the 'objectivity' ideal. Although these similarities are important, it cannot be forgotten that there is also a crucial difference -

the difference between the reality multiverse of cybernetics and the Truth of the Almighty that sets us free.

Obviously, this crucial difference will have very different implications for therapy. What are these implications, which follow from this, as well as the similarities of limited understanding, self-reference, and the objectivity question?

Implications for Therapy

“Therapy is a deeply intimate and vulnerable experience, requiring sensitivity to one’s own state of being as well as to that of the other. It is the meeting of the deepest self of the therapist with the deepest self of the patient or client” (Satir, 1987, p. 17). This chapter has been about the simple yet profound realisation that all we have is self and all we can ever know is self. And this is true also for therapy, as seen from the above quotation, and it is this ‘self’ of the therapist that is the most crucial element in therapy. But what is this self? There are four crucial aspects to this self in therapy - epistemology; second-order cybernetics; self-reference; and lastly, the self and the use of that self.

It was mentioned previously how every individual begins with epistemology through the basic operation of drawing distinctions. This epistemology has a direct bearing on how an individual perceives and experiences his or her world, as well as a direct bearing on how an individual behaves in and acts upon that world - how we know is inseparable from how we behave. Therapists, too, begin with epistemology and thus, the therapist’s epistemology is also inseparable from what the therapist does in therapy. Why is this? The epistemology a therapist adheres to, in other words what distinctions he or she draws, forms a conceptual framework from which and within which the therapist operates. This frame of reference determines such crucial factors as who is seen in therapy, how the problem is viewed and formulated, and what interventions are made. This frame of reference is also an interpretive lens through which the behaviours and communications of clients are filtered and then interpreted. Keeney and Sprenkle (1982, p. 5) refer to this link between a therapist’s ‘way of knowing’ or epistemology and the therapist’s behaviour as the therapist’s theory -

“Theory, here defined as a description of the *relation* between one’s epistemology and habits of action”. They go on to say that theory is always part and parcel of one’s behaviour in the sense that all strategies of perception and action presume underlying ideas, theories, and epistemologies that in part generate the strategies. These theories or epistemologies, then, play a major role in the therapy since they influence what and how the therapist perceives and experiences what is going on in the therapy session and based on these perceptions and experiences, the therapist then acts. The problem is, however, that many individuals, including therapists, go through life not comprehending this recursive link between what we know, how we know, and how we behave. Thus, many therapists may be acting simply on the basis of ‘unquestioned assumptions’, without regard to how they are participating in the construction of their experiences. Enlightened therapists then are those who realise that

what is real, whether it be problem or cure is always a consequence of a constructed world of experience and since he or she joins clients in the social construction of a therapeutic reality, he or she is also responsible for the universe of experience that is created (Keeney, 1982, p. 165).

Thus, according to Keeney and Sprenkle (1982), an important distinction to make is whether therapists consciously know the relation between their epistemological base and habitual patterns of clinical action because a clinician who fails to explicitly recognise the premises underlying his or her work may be less effective because of his or her deficiency in understanding (Keeney, 1982). And this is the distinction between a cybernetic therapist and one who is not. This distinction takes us to the next crucial aspect - that of second-order cybernetics.

Lineal epistemology and first-order cybernetics viewed the client and therapist systems as two separate entities, where the therapist system acts and impacts upon the client system with the purpose to help resolve the client’s problem and client system acts and impacts on therapist system with the purpose of giving the therapist information. Second-order cybernetics, on the other hand, views the therapeutic system as organised by the recursive patterns of interaction that CONNECT the client and therapist systems. In simpler

terms, the therapist is viewed as becoming a crucial part of the client system, thereby forming an entirely new system - therapist-plus-client. Therapists affect the systems they are treating whether they intend to or not and vice versa, the systems being treated always affect the therapist. This is because of the Heisenberg-like hook between the observer and observed. This Heisenberg-like hook refers to Heisenberg's 'Uncertainty Principle' which proposes that the observer constantly alters what he observes by the obtrusive act of observation (Keeney, 1984), thus creating a new system that includes both the observed and observing systems and so, in dealing with clients, the therapist is always a part of the field being observed and described. The implication of this is that firstly, therapists are not then observing clients but observing their relationship with clients and secondly, it changes the way a therapist intervenes.

From this perspective, the most a therapist can do is to vary his or her behaviour, observe and recognise the subsequent behaviour of the other parts in the system, and based on that observation, modify his or her behaviour again. This is based on the nature of systems - any change in one part will affect the other parts of the system (the client). Note, it is a recursive process, where the intervention (varying of behaviour) is linked continuously to diagnosis (observation of others' behaviour). It is important to remember how this kind of therapy is automatically linked to the therapist's epistemology because it is the therapist's epistemology that determines his or her relationship to the system he or she treats. Thus, having a cybernetic epistemology, the therapist will realise he or she automatically becomes a crucial part in the therapeutic system subject to all the constraints and influences of the particular part-whole relationship in which he or she exists, and furthermore, the therapist will act in the system so as to establish recursive feedback that will enable the system to reorganise itself so that the problematic behaviour will no longer be necessary. But the therapist will continuously recognise it is not his or her unilateral control that enables this, but the nature of cybernetic systems with their recursive patterns of organisation.

Of course, one of the reasons for this change in intervention - instead of the therapist 'changing' the client or 'controlling' the change but changes himself or herself, is because of the implication second-order cybernetics had on the idea of observation - that second-order cybernetics was a step up to one's observation of one's observation, which now leads to the third crucial issue of self-reference.

Self-reference basically refers to the idea that the therapist's self is included in the description the therapist makes of any system he or she observes and it is a description of the description. The observer's acts of observing are not considered external to that which is being observed and so the observer is in the observed and the observation says as much, if not more, about the observer than the observed. And so it is with therapy - the therapist is in the therapy and the therapy says as much, if not more, about the therapist than the client. This realisation of the self-referentiality in all observations, descriptions, and actions then points to the need for therapists to constantly be reflexive in their dealings with others. This will lead to the therapist examining why he has certain thoughts or feelings about a particular client or problem - what do those thoughts say about him or her as a therapist or individual; why he or she is following a particular way of treating clients; why he or she works more effectively with some problems/clients than others. This reflexivity will enable the therapist to examine how and why he or she acts and reacts and consequently, this examination will point to the self-in-relation-to-the-client and that is all therapists can know and work with. How does the therapist then use that self-in-relation-to? This is the final aspect to be dealt with.

The instrument that is common to every therapeutic model and every therapeutic encounter is the person of the therapist. The histories, experiences, beliefs, and personality of the therapist all influence the way the therapist acts and so obviously, they will have an influence on the client. White (1987) suggests that clients' changes in therapy are often more attributable to the personal characteristics of the therapist than to any possible techniques, and Wolberg (1977) maintains that regardless of models or techniques, one of the most common factors in effective therapies is warmth and empathy on the part of the therapist. The point is that *who* the therapist is always a part of the therapy and therapeutic relationship regardless of what kind of problem or patient there is.

Since the therapist always has self in therapy, the most powerful tool in the process of helping clients is the use of self. Duhl (1987) maintains that the therapist, in the use of self, 'do something different'. She explains that when one person changes their side of a known script or pattern and sustains that change, the other person must change too in order to maintain any kind of connection. People respond to contextual and relational constraints in a way that their behavioural repertoires are limited. People have many selves, many ways of being, other options but because of the limits imposed by set patterns of interaction in the

relationship contexts in which they live, these other selves and ways of being are not expressed. The therapist has a tremendous leverage to enable clients to express these other selves and ways of being through the therapist's use of self. Of course, it must be remembered that there are also limitations to the therapist's use of self because of the personal characteristics of the therapist, the characteristics of the client and the relationship context, but by utilising the understanding and implications of self-referentiality, the therapist can learn to utilise a much broader range of self and thus unlock the potentialities for others.

How does Christianity impact on this self in therapy? Firstly, it is important to realise that therapy is moving more and more towards including the spiritual side of individuals and this includes the spiritual side of the therapist. Duffy (Adams, 1995, 206) states:

Family therapy needs to model the integration (and wholeness) of intellect and emotion. Then we need to add the spiritual side ...
It's how we are with people that really counts; that's our teaching ... No matter what the technique is, if I'm in touch with my own goodness, then the goodness will provide the power of the techniques. The goodness would be that the person would have the chance of being confirmed.

This points to the fact that therapists need to be aware of their own religiosity and spirituality - their way of making meaning, the purpose of their life. Each individual has this dimension and so too do therapists, regardless of what form it may take. Peck (Adams, 1995) agrees with this. He maintains that although it is often not overtly acknowledged, spiritual ideas do inform therapists' practices. He explains how many therapists who may regard themselves as atheists, still believe in notions such as truth and social justice as part of an unseen order and they dedicate themselves to such goals. This is their spiritual dimension, their religiosity and Adams (1995) states that he considers it very important to be aware of one's religious/spiritual background (or lack of it) and consequent attitudes. It is often this background and consequent attitudes that informs our stance towards people; our beliefs about life, death, problems and suffering and how, and if, one should alleviate it. Thus, this need for our spiritual awareness points to the need for self-reflexivity and our

self-referential nature, as well as how the spiritual dimension forms part of our epistemology and drawing of distinctions.

Furthermore, as part of our epistemology, this spiritual dimension will then also influence our actions and how we behave. Consequently, it will influence our clients. Research by Beutler (White, 1987) revealed that clients tend to appropriate the attitudes, values and beliefs of their therapists and thus, therapists need to be careful of how they express their spiritual dimensions. It must be realised that therapy is never value-free and that therapists will communicate, either implicitly or explicitly, their values and personal religion or spirituality. So it is not a question of whether the therapist has these spiritual values or goals but how they will influence the therapy process.

This applies equally to and especially for Christian therapists since their first accountability is to God. The question many Christian therapists may have, though, is what is their first goal or priority in therapy - is it to convert first, heal second; or heal first and convert if the opportunity arises? Ward (Benner, 1987) states that obviously the ultimate goal for Christian therapists would be to assist clients in becoming more and more Christlike, but clearly, to force one's beliefs on clients is unprofessional. The answer, as always, comes from Jesus' own example. He clearly had the goal of bringing people into relationship with the Father, but He never coerced people; He was always willing to allow people their own right of self-determination. Also, Jesus often healed people without ever expressing an explicit proclamation of the gospel, thus revealing that His concern was to meet people at their point of need first. His ministry was not always in ultimate dimensions but He never lost sight of them and so, too, Christian therapists must be willing to work with the clients' point of need, to grant them their right to self-determination, to love regardless, without ever losing sight of the Higher Power at work.

It once again boils down to the person of the therapist and if, as Wolberg (1977) maintains, it is true that the most effective therapies are generally those with the common and crucial factor of warmth and empathy, Christian therapy would have no need to justify itself because it is upon these things that Christianity, Christian living, and Christian therapy is based - love, warmth, empathy, in other words, the giving of the self.

CHAPTER 6

MEANING AND LANGUAGE

This chapter focuses on the last two concepts to be discussed from the cybernetic and Christian perspectives - the concepts of meaning and language. The discussion from the cybernetic perspective will elaborate on the concept of meaning and its relation to reality and language. It will then focus on the form our descriptions of our reality and meaning takes, that of stories and then describes a related way of making meaning, through myths. These crucial ideas of meaning, language, stories, and myths will then be discussed from a Christian perspective and the integration of cybernetics and Christianity will then follow to conclude the chapter.

The Cybernetic Perspective

Meaning

There is a story told of a man who was condemned to solitary confinement in a pitch-black cell. The only thing he had to occupy his mind was a marble, which he threw repeatedly against the walls. He spent his hours listening to the marble as it bounced and rolled around the room. Then he would grope in the darkness until he found his precious toy again. One day the man threw the marble upward and it failed to come down. Only silence echoed through the dark room. He was deeply disturbed by the sudden “evaporation” of his marble and because of his inability to explain its disappearance he went berserk, pulled out all his hair, and died. When the prison officials came to remove his body, a guard noticed something caught in a huge spider’s web in the upper corner of the room. *Strange, he thought, I wonder how a marble got up there!* (Dobson, 1993).

What this story points to is Nietzsche's wise words - that people can live with almost any *how* if they have a *why* - that is, **meaning**. It is this need for meaning that makes us human. This sounds simplistic but consider this - it is this quest for meaning that makes us ask questions; allows for imagination; leads to discoveries; enables us to be self-reflexive; gives to life that it is savoured, revered and cherished or 'signifying nothing'. The meanings people live with is that which defines what their life is; what they call reality; how they sequence and organise daily and yearly living into a meaningful coherence; how they explain themselves, other people and all that goes on in their world.

Two points are to be noted here. Firstly, that meaning is much more likely to be the product of creation than of discovery (Baird, 1985), and secondly, meanings are shared. Although all individuals have subjective meanings, meanings do not exist in isolation. They are created and maintained through social interaction and thus are products of a shared group or culture and a shared language. And these two points lead us to the relations between meaning and reality and meaning and language.

Reality

Minuchin and Fishman (1981, p.209) define reality as "the meaning we give to the aggregate of facts that we recognise as facts", and Michello (1988, p. 63) writes, "it is how we interpret reality that is important". Even as early as the first century A.D., this was understood to some extent, as expressed by Epictetus (Watzlawick, Weakland & Fisch, 1974, p.95), "It is not the things themselves which trouble us, but the opinions that we have about these things". Hence, the realisation that understanding 'reality' is largely influenced by the way we perceive, interpret, and semantically construct it. But before going on to explain how meaning and reality are related, it is necessary to briefly mention two points - that of epistemology and that of context.

It was mentioned in previous chapters that epistemology is fundamental to all and any action, decision, perception, thought, description or theory. This is because epistemology begins with people drawing distinctions in order to know their world and the way in which they draw distinctions determines what that world will look like for them. Epistemology, then, refers to how one experiences the world and from these experiences, individuals build

up meanings - beliefs, descriptions, theories. Thus, epistemology points to both reality and meaning. Reality is the world that is experienced and the meaning is how the world is experienced. Furthermore, it was mentioned how the deepest order of change an individual can undergo is that of epistemological change because it entails a completely different way of experiencing the world (reality). It has also been said that by changing our meanings, we also change our worlds (Pare', 1995).

Secondly, with regard to context, it was explained how context and meaning are irrevocably linked - "nothing has meaning except it be seen in some context and without context ... no meaning at all" (Bateson, 1979, p.24). This idea can be related back to the story of the prisoner and the marble, and how because of the lack of context (pitch-black cell and therefore, he could not see or perceive the context of the evaporation of the marble), he could not derive meaning. Reality, too, has contextual constraints. All that we generally regard as real or true exists in some context and this context imposes restrictions on the realness and trueness of things and hence, our we experience and interpret things, meaning reality.

How then are meaning and reality related? The way in which they are related has to do with parameters. Each sets parameters for the other and thus constrains the experiencing of the other. To explain, the reality individuals experience through the distinctions they draw, or their epistemology, will set parameters for what kind of meanings can be made within that reality, thus allowing for some meanings but limiting others. In turn, the meanings individuals make or live with will set parameters for what kind of reality or world they experience. Which comes first is debatable and a matter of description, but they are mutually influencing. Furthermore, these parameters imposed an individual's meaning and reality will also constrain and limit the individual's behaviour in their experienced world and meaning-system.

The next point is that although reality and meaning are mutually influencing, reality must also be shared with and validated by others, which brings us to the question of meaning and language - how reality and meaning are experienced and described through language and this is why reality and meanings are shared.

Meaning and Language

A new understanding has emerged that has, at its core, the belief that reality is a social construction constructed through language where we live and take action in a world that we define through our descriptive language in social intercourse with others (Anderson & Goolishian, 1988). However, language here does not refer to the sounds people make with their mouths or the marks they make with their pens, but the role of language in influencing meaning (Anderson & Goolishian, 1987). To a large extent, people underestimate the importance and impact of language. Many consider it simply as a means of communicating or transmitting knowledge or information. They do not realise that language is a *sine qua non* of reality and meaning. The implication here is twofold. Firstly, because individuals underestimate the importance and impact of language in their lives, they can fall into many traps in regard to language, and secondly, because language is a way of describing reality and making meaning, it is also a way of being - the language becomes us and we become our language. These implications will now be discussed in more detail.

Firstly, one of the most common traps people fall into is that they unthinkingly and unquestioningly, come to believe that their language and the structure of that language actually mirrors the structure of the world and the way it 'really' is. But language does not mirror nature, it merely creates the natures we know (Anderson & Goolishian, 1988). This is because words have the power to confer objective status on our perceptions and experiences (Simon, 1985), and they have this power because words and language, by nature, are 'distinctive'. In other words, they draw out the distinctions that bring the world into being. Keeney and Sprenkle (1982, p.7) quote Watts as saying "... language is dualistic and relational ... Every statement, every definition, sets up a boundary or limit; it classifies something" and because words and language are distinctive and dualistic, people are swayed to believe that that is how things really are and hence, the language people use is the reality they live with. For example, living with 'depression' is a function of languaging about it as depression - being diagnosed and/or medicated; the symptoms - loss of appetite, fatigue, sleeping problems, despair, and the interacting (communicating) around the depression. Efran and Heffner (1991) explain that how people divide the world up and what they decide to call things have a tremendous influence because different words and symbols can have very different outcomes.

Secondly, the essence of language, of words, is derived from the added dimension of meaningfulness. By this it is meant that through the meanings we give to words and language, do we use language accordingly and thus shape the meanings and interpretations of our lives and since meaning is the way of making sense of our experienced reality, so language influences our reality. The importance of language is that it forms the fabric of people's lives and existence - it allows us to differentiate and label objects, to know and define who and what we are, to generate and exchange meanings (Efran & Heffner, 1991), and through the reality and meanings it constructs, language influences the quality of our lives.

A crucial aspect to this is the fact that language is shared and co-constructed between people. Thus, it is a social phenomenon, a manner of coexistence and living together. This shared language also generates shared meanings and a shared reality and this is one of the crucial determinants of culture and how different cultures have different values, ideas, views of reality and meanings. This sharing of languaging and hence a shared reality and meaning can also be described in families who share a common language and consequently a shared family reality and meaning.

To sum up, human systems are language-generating and simultaneously meaning-generating systems. Through the generation of language, people generate meanings which they attribute to their experience and it is these meanings that constitute their lives. This activity of meaning making takes place in a context of narration or storytelling, as Pare' (1995, p. 7) explains:

When our experience is more closely equated with constructions than with reality, "story" becomes a useful way of describing the package in which it is delivered. Stories incorporate the flow of time, capturing the temporal dimensions of experience and our expressions of that experience.

Stories and Storytelling

The idea that it is the meaning which people attribute to their experience and how they describe that experience that constitutes their lives has led to an exploration of the form in which this interpretation and description of experiences takes place. The consequent understanding is that it is the *narrative* that provides the primary form for this activity of meaning-making where people are seen as organising their experiences in the form of stories and this is described as the narrative metaphor. As White (1991) explains, it is through the stories and descriptions that people have about their lives and the lives of others that make sense of their experience. These not only influence the meaning people give to experience, but also which aspects of experience will be selected for expression.

Before going on to describe this story-making and story-telling process, it is necessary to give a brief explanation of what stories are. Stories are semantic systems that contain a plot (what), characters (who) and setting (where and when). These components are held together, regulated by and in turn, regulate the moral order (meaning or overall theme) of the story, effectively sealing off alternative interpretations. In addition, each story is embedded in a complex network of reciprocally influencing narratives. Individuals, families and larger collectives inhabit this system of multiple stories and organise their lives around and in accordance with the dominant narratives (Sluzki, 1992).

Sluzki (1992) explains how our social world is constituted in and through a network of multiple stories or narratives (the 'story' that our social world is so constructed being one of them), and that this ecology of stories with different degrees of dominance at different times and in different contexts, establishes the parameters within which we become aware of ourselves and others; within which we establish priorities, claim or disclaim duties and privileges; set the norms for appropriate and inappropriate behaviour; attribute meanings and order events in time. And from this perspective, what we call 'reality' resides and is expressed in the descriptions and stories of events, people, experiences and ideas. But how do people construct these stories?

To begin with, all of us have the primary life obligation of bringing conceptual order to our world. This requires a continual process of invention, editing and self-negotiation where we all engage in lengthy conversations with ourselves and others about where we stand in life (Efran & Heffner, 1991). Bruner (1986) maintains that the principal function of

the human mind is 'world making', understood as 'meaning-making', and stories are the context in which this takes place. Accordingly, stories do not 'happen' in the real world but are constructed in people's heads through continuing interpretation and re-interpretation of experience. As a result, the ways of telling and conceptualising these stories become so habitual that they eventually serve as recipes for structuring experience itself. Clearly, any one story cannot capture the range of people's experience and so there are always experiences that lie outside, do not fit or make sense in any given story, and thus not selected for expression (Zimmerman & Dickerson, 1994). As such, stories then become a context in which some experiences fit and others do not and this context incorporates the 'reality' of people's lives. Through this continuous editing and negotiation of our story, which is done according to the dominant theme experienced in one's life, and because of the need for stability and consistency, individuals then begin to experience their life story as if it was the *only* story, reality, meaning and possibility for their lives. This experience of stability and consistency in one's story also may bring about an experience of stuckness.

Baird (1985) reminds us that there is a variety of stories in terms of which we may define ourselves and the challenge is to choose that story or stories which place life in a valuable context for us. Our way of being in the world will be influenced by the story or stories in terms of which we interpret our life. Our consciousness of the past (our understanding of our roots), our consciousness of the present (our understanding of who we are now), and our consciousness of the future (our understanding of who we can become) - all of these are influenced by the story or stories in terms of which we define ourselves, in terms of which we create meaning for our lives. Another way in which individuals create meaning for their lives and is intimately related to stories is through myths, and this will now be discussed.

Myths

Myths are a way of making sense in a senseless world. They are the self-interpretations of our inner selves in relation to the outside world; the narrations by which our society is unified and the narrative patterns that give significance to our existence.

Myths are essential to the process of keeping our souls alive and bringing new meaning in a difficult and often meaningless world.

But what is myth? Malinowski (May, 1991, p. 30) defines it as such:

Myth ...expresses, enhances and codifies belief; it safeguards and enforces morality; it vouches for the efficiency of ritual and contains practical rules for the guidance of man. Myth is thus a vital ingredient of human civilisation; it is not an idle tale, but a hard-working active force.

Myth is a drama which begins as a historical event and takes on its special character as a way of orienting people to reality. It carries the values of the society and assists the individual to find a sense of identity. Myth unites the antinomies of life: conscious and unconscious, historical and present, individual and social. These are formed into a narration which is passed down from age to age and transmitted from generation to generation. This is because, firstly, myth has been a means of communication throughout human history and secondly, the same old issues and crises have to be dealt with time and again and so each succeeding generation reinterprets the great myths to fit the new ideas and needs of the present culture - from ancient Greece's Orestes to modern day movies. As Highet (May, 1991, p.39) wrote:

The central answer is that myths are permanent. They deal with the greatest of all problems, the problems which do not change because men and women do not change. They deal with love; with war; with sin; with tyranny; with courage; with fate; and all in some way or other deal with the relation of men to those divine powers which are sometimes to be cruel and sometimes, alas, to be just.

But the next question is, why is myth so important? And the answer is simple - myths are important because each and every individual is a 'meaning-maker' and myth-making is a crucial part of meaning-making. Each and every individual has a basic need to bring order, coherence, and meaning into the stream of sensations, emotions, and ideas entering his or

her consciousness. From this stream develops stories, narratives, and myths that provide structure and meaning to events and experiences and by which further events and experiences can be understood. Every individual has some story and some myth around which they pattern their lives - this story and myth holds people together and provides a bridge between the past, present, and future. Of course, because every individual is unique, every story and myth will be unique but they will have basic themes and issues in common, as mentioned previously, because every individual, at some time or another, encounters these basic themes and issues. They are the basic existential crises in all persons' lives.

Two basic themes around which myths and stories revolve entail the following: they provide a *sense of personal identity* and a *sense of community*. These sound very basic but they should not be underestimated because there are too many individuals who are desperately searching for these. Questions and comments such as, "Who am I?"; "I don't know who I really am or what I want from life"; "I'm so lonely"; "I don't feel like I belong anywhere", and "I don't know what the right thing to do is in this situation" all underlie the basic need for every individual to resolve these basic existential crises of identity, belonging, and ethics. This need for identity and belonging do go hand in hand - one develops a sense of identity through a sense of community. And this need for community, for a home where one can feel one belongs, for family, and friends that one can call one's own and where one can feel protected, cared for and loved is a necessity, not only for physical survival but psychological and spiritual survival as well. As May (1991, p. 53) says, "we all cry for a collective myth which gives us a fixed spot in an otherwise chaotic universe". And the myths sustain us.

Myth, Memory and Meaning-making

The most important point about myths is that they form a vital part of the stories we tell about our lives. This is because our life-stories or narratives depend on our memories and memory depends mainly on myth. As May (1991) explains, some event occurs in our minds, in actuality or fantasy and becomes formed and forged in memory, day after day being moulded and remoulded until it has become a myth. That myth is then kept in mind in memory as a guide to the future and the person then refers to this guiding fiction

throughout life as the secret myth of oneself. The actual event is not so important - be the event real or imagined, but it is the memory, the narration and the creation of the myth around the event that is the significant issue. It reveals much information about the person and his or her attitude to life.

The myth is created out of the need to make sense of experience and the myth organises the experience, shaping it, adding colour here and details there, and through the creative processes of memory and the need of the human mind for unity, the myth is born. Often the myth is the only thing an individual can hold on to because it is often less painful than the actual event as Musgrave (May, 1991, p.6) wrote, "You are locked in a life you have chosen to remember".

And so, memory, myth and the stories we tell are all parts of the process of meaning-making and languaging about our world. It is not about the real or the true but about finding meaning in a complex and dangerous world, which takes us to the Christian perspective because that is what the Christian perspective provides.

The Christian Perspective

The Bible Story

The first thing that can be said from a Christian perspective is that the Bible itself is one long story, one long narrative that provides both meaning and myth to many individuals. As explained earlier in the section on *Stories and Storytelling*, stories are semantic structures involving a plot (what), characters (who), setting (where and when), and a moral order (meaning or overall theme). The Bible includes all of this and more.

In fact, the Bible is actually comprised of a "string of stories" (Hart, 1994, p.37), all combining to form the Biblical narrative. The plot is God's salvation of humankind; the characters, although referring to specific individuals like Noah, Abraham, David, and Solomon as God's chosen prophets and kings, also includes all of humankind; the setting, literally, was the area generally known today as the Middle East in the years B.C. but of course, metaphorically, the setting is timeless and placeless; and the moral order is life fulfilment through fulfilment of the Law.

But this is why stories, including the Bible story, are so effective in and impact so on people's lives, because regardless of the specific plot, characters or setting, the meaning of and in the story always strikes a chord within us. The thoughts, emotions, ideas, values, and themes that run throughout such stories reverberate within each and every individual and can be applicable anywhere, anytime, anyhow, and with anyone. Consider for example, how we identify so easily with the joys and sorrows, smiles and tears, hopes and disappointments, love and hate of the characters in the great classics - *War and Peace*; *David Copperfield*; *Jane Eyre*; *Wuthering Heights*; *Great Expectations*. This is because all the great stories and even those less known revolve around the issues and themes of myths and meaning. It is then of no great surprise that God's revelation of Himself to us would take on this self-same form with which we could then identify with easily - the oppression of the Israelites in Egypt; the jealousy between Esau and Jacob as well as Joseph's brothers towards him; the loyalty of Ruth; the trials and tribulations of Job, and the greatness, but equal humanness of David and Solomon.

In further support of this idea that God reveals Himself through the Biblical narrative, through storytelling, He sent Jesus Christ, the Son of God who was Himself a storyteller. As Matthew 13 vs 3 states, "Then he told them many things in parables", and throughout the Gospels, the authors write of the parables Jesus told. And according to the Pocket Oxford dictionary (Sykes, 1978, p. 638), a parable is a "narrative of imagined events used to typify moral or spiritual relations": in other words, a story. Thus, as parents teach and relate to their children through stories, so did Jesus teach and relate to humankind through parables; and it could be claimed that the Bible is the oldest storybook in the world.

It is, of course, also a controversial one. This is because, for many, there is still a great controversy about whether the Biblical stories are true or not, literal or merely metaphorical. The point, of course, is not whether they are true or not because regardless of their factual basis or not, Christians and non-Christians alike can and do identify with the wonders and miracles written about, the anguish and suffering described and all the hopes and dreams of the Biblical characters and stories that revolve around a paradise or Promised Land and a Loving and Just Father. Human beings are at heart eternal dreamers and they dream their stories into being.

These stories then help them to make sense of their lives and this brings us to the point of meaning.

Meaning-making

It is quite clear that God understands humankind's need for meaning and understanding because in the Gospels, Jesus speaks of it on numerous occasions. For example, in Matthew 13 vs 18 He says, "Listen then to what the parable of the sower means..."; Matthew 16 vs 9, "Do you still not understand?", and in Luke 8 vs 11, He claims, "This is the *meaning* of the parable". Throughout the Gospels, Jesus showed incredible patience in teaching and explaining things to the disciples and the crowds following Him. He understood that people have an innate need to make sense of things and to explain things for themselves. However, there is an interesting aspect to this. Jesus did most of His teaching in the form of parables, leaving it open for listeners to try and make sense of it themselves and find their own meaning. And yet when asked to explain it, He would tell them what the parable meant, and its meaning was always limited to one specific meaning revolving around the Kingdom of God. This seems strange considering that He knew people do interpret things for themselves and that they could easily have interpreted the parables in some way or another, or more aptly, misinterpreted, as in Luke 9 vs 45, "But they did not understand what he meant". In Luke 12 vs 56, Jesus says, "... You know how to interpret ...", thus revealing His understanding of people's meaning-making make-up and their possibility of misunderstanding, but yet He would tell them parables of sower, weeds, harvesters, and yeast, instead of exactly what He meant. Why is this?

This could be due to the power of stories and the fact that the meanings people make, they make in the form of stories. Stories have an emotional impact more than an intellectual one and the meaning-making process individuals desperately engage in, more often than not, is related to and is itself an emotional experience. For example, when the car breaks down, we puzzle over what could be wrong and we fiddle and rationalise until we get it right or we take it to a mechanic who will get it right. Although we may tell a humorous story about it afterwards, this incident does not make up a major part of our life dramas and the only emotional impact that it has may be annoyance and frustration at the inconvenience and financial cost. On the other hand, we lose a loved one - parent, child, spouse, or sibling and

the whole picture changes. It involves a far more agonising process of meaning-making; it becomes a major theme and issue in our life story and the emotional impact is far vaster. (Of course, the car breakdown can become more crucial in certain circumstances, like if it was associated with a loved one's death or if it was a part of an entire life history of "mishappenings".)

Thus, the parables Jesus told were related to a crucial issue - the ultimate meaning of life and just as life experience reveals that individuals agonise over this meaning and often seek the answers from others, especially experts like ministers, doctors, and psychologists, so did Jesus understand that and so He explained it to and for us. This links with the idea of hierarchy and God being the Ultimate Reality and having Ultimate Truth in the way that Jesus, the Son of God, would teach us the indisputable meaning of the parables.

Furthermore, it can be stated that the entire aim of Christianity *per se* is such that it provides a way of making sense in an often senseless world. It provides the answers to the question of the meaning of life; it provides a lens through which to perceive and interpret the world and what goes on in it; it is a meaning-generating system because it provides answers, explanations, solutions, and the words for them.

And this brings us to the next aspect - that of meaning and its relation to language. It was explained previously how language, with its words, has the power to confer reality on the things people language about. And even the Bible acknowledges the importance and impact of language and words.

Language

Consider firstly, for example, how the Bible is regarded as the *Word* of God and that through God's word, life came into being and since we were made in the image of God, words are equally powerful in our lives. Secondly, how Jesus responded to Satan when he was in the desert and said, "It is written: 'Man does not live on bread alone, but on every word that comes from the mouth of God'" (Matt 4 vs 5); and if this can be extended to the idea that humankind may survive through having their physical needs met ("bread alone") but they only *live* (and there is a difference) when they have access to *words*.

And lastly, the idea that the language and words we use can make a vast difference in our lives and the verse Matthew 12 vs 36 : “But I tell you ... for by your words you will be acquitted and by your words you will be condemned” also confirms this.

Myths

One final point to be noted from the Christian perspective has to do with myths which is very much related to meaning. Although many Christians may be offended at the idea, the Christian religion itself is based on a wealth of mythology - the myth of the creation, the myth of Christmas and Easter. One may question, why are these considered myths? Take, for example, the myth of Christmas. It is a prototype of the birth of the hero describing the baby Jesus in a crib in a stable with the Wise Men following the star in the east and bringing gifts. The myth implies that we are also wise if we participate in the spirit of giving. All the Biblical stories are actually mythical in their content and import (May, 1991).

In addition, as religious beliefs become doctrine and tradition, often including rituals, myths also involve rituals. In fact, rituals are the physical expressions of the myths, especially in the case of the sacraments of religion. The myth is the narrative and the ritual - as in gift-giving in Christmas, expresses the myth in bodily action. Together both the rituals and myths supply fixed points in a world of bewildering change and disappointment (May, 1991).

Thus, be it meaning, myth, language, or rituals, the Christian perspective has something to say about it which leads us to the next point of discussion - the similarities and differences between cybernetics and Christianity.

Cybernetics and Christianity

From the above discussion, it is quite clear how both cybernetics and Christianity place an emphasis on meaning and language and the forms meaning and language take - stories and myths. The next question is, what are the epistemological and pragmatic implications of this common emphasis?

Epistemological Implications - Similarities and Differences

One of the most profound epistemological implications here is based on the understanding that the process of meaning-making occurs through the processes of epistemology. Since epistemology is the process of drawing distinctions and making punctuations that mark certain events and so on as primary, thereby opening certain experiences of the world and not others, it sets parameters for what kind of meanings can be experienced. This is because we have to derive meaning from and make sense of what we experience and our experience is based on our epistemology. Therefore, it can be described that our epistemology leads to our meaning and our meaning leads back to our epistemology.

Furthermore, as elucidated in chapter 2, both cybernetics and Christianity can be regarded as a system of meaning. Cybernetic epistemology proposes a holistic way of experiencing the world and seeing pattern and relationship in order to make sense (meaning) of things, while Christianity offers a way of experiencing the world and making sense (meaning) of that world in terms of Christian principles and beliefs. A further implication of these parameters set by reality and meaning, which was mentioned previously, is the implication for behaviour and how these parameters will also constrain an individual's behaviour. For example, the Christian faith, as an 'epistemology', will constrain the Christian's experience of reality and way of making meaning of that reality, especially with regards to making meaning of suffering, as well as constrain the Christian's behaviour in the way that he or she should not do what the Bible commands him or her not to do.

However, once again, there is a crucial point where cybernetics and Christianity diverge. This has also been discussed before (in chapter 5), but it is necessary to mention it again here as it is related to this idea of meaning and epistemology. The idea of meaning and epistemology and that each individual has his or her own epistemology and way of making meaning, points to the new understanding that there is no such thing as ONE MEANING, ONE REALITY, ONE TRUTH. The whole epistemology of cybernetics actually allows for this existence of MULTIPLE meanings and MULTIPLE realities. Of course, this is not so for Christianity. Christianity does not propose MULTIPLE meanings

or MULTIPLE realities because it is based on the SINGLE reality of God and His Kingdom. Furthermore, God has a specific purpose for humankind, which is to honour and obey Him, and this implies that there is a specific way of experiencing and making sense of the world in order to fit with this. In other words, there is ONE truth and ONE meaning which is God's, although He does reveal it to different individuals in different ways. But, revealing it differently to different individuals does not detract from its UNITY, but allows the differing revelations to complement each other and to be shared, since all Christians share (or should share) the basic tenets of Christianity. And this brings us to the next point - that of meaning and language.

The process of meaning-making (and epistemology) comes about through language which thus allows people to share meanings and share realities. That is why when constructivists talk about many realities, they do not mean to suggest that we are all on our own planets, and this is because we do share a basic reality and meaning which stems from our shared language. Once again, this reference to language does not merely refer to the alphabets, words, and grammar individuals use and share, but to the meanings they share. And this is where language has the greater impact - on the meanings it engenders for specific groups. This can be highly complicated but a simple example is that of jargon. Jargon refers to the specific use of technical terms and technical language in a specific field, for example, we refer to lawyers' jargon, doctors' jargon, scientists' jargon, where those in the profession have a shared language that the average lay person does not really understand or share. Related to this is the idea that people who share the same epistemology or meanings also share the same language, thus cyberneticians share a language that is different from what Cartesian-Newtonian thinkers share because they have different meanings of and for their world which then results in a different reality. This is also true for Christians - they share a language, and hence a meaning and reality, that non-Christians do not have access to.

The epistemological implication here is that languaging can be a slippery process because it leads to reification and 'unquestioned assumptions', where we become the language and the language becomes us and we become stuck in a fixed pattern, fixed meaning, fixed story. This is because one of the most common shortcomings in most peoples' meaning systems (or epistemology) is a lack of flexibility and such a lack can be dangerous because it allows for the meaning system (or epistemology) to only account for

some things but not others. Of course, this shortcoming is itself based on the process of meaning-making or epistemology and is a necessary part in the stabilisation of our experienced world.

To explain, our experience of the world is based on the categorisation of the objects we perceive and experience into classes, which is further based on our basic tendency to draw distinctions. These classes are mental constructs, however, and are of a totally different order of reality than the objects themselves and in fact, the classes formed are not only to do with the physical properties of the objects but on the strength of their meaning and value for us. And this meaning and value can be and is arbitrary and infinite.

Once an object is conceptualised and categorised into a certain class, it is extremely difficult to see it as belonging to any other class and this class membership of the object is so fixed that it becomes its 'reality'. To see it in any other way is wrong, mad or bad. Thus, although having a meaning system with prematurely hardened categories is limiting, individuals are predisposed to it because it plays a vital role in experiencing a stable, coherent world (Watzlawick et al., 1974). Of course, any individual who becomes part of a group who think in a specific way and believe specific things may be vulnerable to falling into the trap of seeing that as the *only* way. This is true for Cartesian-Newtonian proponents, cybernetic thinkers, and Christians alike.

However, due to this lack of flexibility in our meaning systems, our meaning systems can then become our 'death' because individuals can become trapped in their various meaning systems and begin to feel 'deadened' (Allman, 1982), as if life is actually quite meaningless. Furthermore, our limiting meaning systems can become problematic for us when we encounter something, an event or experience, that our meaning system cannot account for or make sense of; and not having the language to make sense of it or to generate new meaning, all we can do is language about it as a 'problem' and so we become stuck. And this is where therapy comes into play because therapy is the process of undoing stuckness and opening up choices for more patterns, broader meanings, different stories.

Implications for Therapy

Anderson and Goolishian (1988) write that they believe therapy is actually the process of expanding and saying the 'unsaid' - the development, through dialogue, of new themes and narratives and the creation of new histories. This is based on the understanding that no communication account, no word, is ever complete, clear and univocal but, rather, that they all carry unspoken meanings and other interpretations that require expression and articulation. Thus, therapy is the linguistic activity in which people in conversation about a problem are also in the process of developing new meanings and understandings. The goal is to participate in a conversation that continually loosens and opens up possibilities and meanings, rather than constricts and closes down. Through therapeutic conversation, fixed meaning and behaviours (the sense people make of things and their actions) are given room, broadened, shifted, and changed and so change in therapy is no more than changing meaning derived through dialogue and conversation (Anderson & Goolishian, 1988).

One of the ways in which this is done is through the use of the reframe. Watzlawick et al. (1974, p. 95) refer to reframing as changing

the conceptual and/or emotional setting or viewpoint in relation to which a situation is experienced and to place it in another frame which fits the 'facts' of the same concrete situation equally well or even better, and thereby changes its entire meaning.

Thus, although the situation or 'problem' does not change and may indeed be unchangeable, there is still a change, and this is because what turns out to be changed as a result of the reframing is the meaning attributed to the situation and therefore, its consequences.

This relates to the previous discussion about the classes and categories individuals place objects into. Reframing, basically, takes the object (event, experience, problem) from one class and allows it to be conceptualised and categorised into other classes. Especially relevant here is the point that reframing should lift the 'symptom'/'problem' frame or class into another frame or class that does not carry the implication of unchangeability or uncontrollability.

A further point to add, which is crucial to the success of the reframe, is that the reframe used must be one that the client understands and accepts - it must be one that is congruent with the client's way of experiencing reality and making meaning (epistemology). In other words, reframing presupposes that the therapist learn the client's language and use the client's language in broadening the client's meaning. One of Erickson's most basic rules for the resolution of human problems was '*Take what the patient is bringing you*' and so the therapist needs to learn and take into account the client's own epistemology because that is the key to opening up meaning (Watzlawick et al., 1974).

How is it possible that so simple a concept, that of reframing, can be so effective, even with intractable problems? Penn and Frankfurt (1994) maintain that reframing 'works' because a person's inner monologue, or single voice, is invited into conversation with another, more positive voice of one's self. (Here they refer to 'voice' as meaning different views of one's self in relation to others.) How does this happen?

Penn and Frankfurt (1994) explain how when we construct what we have all learned to call 'problems', we construct, as well, an internal monologue that is often experienced as a negative, self-accusing voice: "You're hopeless, you've failed, you're incompetent, you're worthless", and so on. However, since an inherent potential of language (voice / communication) is to generate a reply, we also have the ability to reply to ourselves and so we can create a balance of power through the discovery or invention of other more positive, more constructive voices that can converse with our negative monologue. This internal dialogical experience can then produce a change in our conversation with others and it works this way. If, then, our many voices can co-exist simultaneously, all of them are representative of who we are - they are our many selves, and this co-existence of many selves for many contexts *adds* stories and voices to the single story and voice we had with our monologue. Following from this, the creation of these many voices and many stories within the dialogue allows for a change in our fundamental question of identity, so that it is no longer a question of "Who am I?", but of "How do I want to be with others?" and "How do I want them to be with me?" It is from such a change in our questioning that there is then a change in our discourse with others. This is because the stories we tell ourselves about ourselves are the way we also invent ourselves with others and when we expand and broaden those stories, our relating to others is also expanded and broadened. This is related to what was explained previously in chapter 2 about how different relationship contexts

elicit different parts of our selves and so it is indeed the case that we do have and invent more than one self to accommodate for the many contexts of our lives. Although most people realise they live different facets and 'traits', most do not comprehend those facets as 'selves' elicited in specific relationship contexts and furthermore, most people do not realise that they have the ability to choose which selves they wish to express. In fact, clients often enter therapy with fixed and constricting narratives about themselves and their lives where they tell their stories as if they were monologues - single-voiced, absolute, and closed. They do not realise that the conversations that they engage in, as they struggle to live in agreement with others, are like fairy tales and stories - open to infinite revision and re-interpretation. Thus, the stories people live are also open to revision and re-interpretation and there are two ways in which to do this (Penn & Frankfurt, 1994).

Firstly, many therapists use deconstruction whereby they deconstruct the stories people live by, by externalising them and making the individual more aware of his or her participation in the story-telling and meaning-making process. Secondly, many therapists use the medium of writing as a means for people to broaden and expand their meanings. Penn and Frankfurt (1994) state that they have observed repeatedly that in the act of writing, meanings that have been ignored or have remained unsaid are invited into the relational field by way of the text. They explain that "words cross or bump up against one another when captured in writing, cracking open, revealing other words that may evoke experiences of self with others, through visual memories, sounds of distant voices, or reawakened feelings" (Penn & Frankfurt, 1994, p.220). From this medium, meanings often become richer and more complex, expanding the stories we tell and live by and the consequent conversations around those stories.

What would this mean from a Christian perspective? To begin with, the therapeutic conversation is basically no different from any other. It is, at its core, the basic process of people trying to understand each other. This is no less than what is expected of a Christian, be they therapist or not. Secondly, in such a therapeutic conversation, the therapist is expected to be a respectful listener with respect for and about people and their ideas; to be respectful in what he or she says by using co-operative language and not confrontational language and to learn, understand, and converse in the client's particular language because that language is the metaphor for the client's experiences. The client's words, language, and meaning are what is going on in the client's life and the therapist is expected to learn

and understand that before he or she can hope to understand the client. And furthermore, just as the therapist expects clients to let go of old meanings, so must the therapist also be able to do so as this will allow for the openness to many selves, both for the client and the therapist. Once again, this is no different from what a Christian should be - respectful, cooperative, understanding. Jesus himself worked in this way. He allowed individuals the space for their own stories and always responded respectfully and with understanding to them, but He also offered them more - He offered them a key to a deeper, richer, more meaningful life, one whose story would end in a Promised Land.

To conclude this chapter, it should be repeated once again that meaning should not be underestimated. It is synonymous with epistemology (the distinctions we draw will influence what meanings we make); it is our interpretive lens through which we interpret and explain what we perceive and experience and do; it constructs our reality; it is so intertwined with language such that the words and language we use confers specific meanings and our meanings determine what words and language we use; and it is the stories and myths by which we live. And both cybernetics and Christianity recognise that - that humans are simply story-tellers, myth-makers, and framers of reality who in their simple attempts to express their lives in language, can become fixed and stuck and desperate for a deeper meaning that can enable them to grow.

CHAPTER 7

THE PATTERN THAT CONNECTS

This is the concluding chapter that connects all the previous chapters into some meaningful pattern. It will begin with a personal commentary on how this dissertation came about. It will then reconnect all the arguments from the previous chapters on the similarities and differences between cybernetics and Christianity and make sense of them in terms of a 'pattern that connects'.

A Commentary

To begin with, I would like to comment on the process of my writing this dissertation. When I first began writing it and finding verses in the Bible which I felt conveyed many of the ideas of cybernetics, I was very enthusiastic because I felt that cybernetics and Christianity had much in common and that they could be integrated in a meaningful way. But over time, in the discussions I had with my supervisor after he had been through my first draft, he made me realise that, all along, I had been looking at cybernetics through a Christian lens and because of that, I was trying to fit the two perspectives together completely without realising that in some ways they could never fit. And this is how the hierarchy issue grew.

Initially, I had commented on this hierarchy difference in chapter 3, as well as the difference in chapter 5 between cybernetics' multiple realities and Christianity's one reality, but I think, at that stage, I underestimated its significance, and only through my supervisor's questioning and provoking, did I begin to realise just how significant this difference was. As I began to make the changes my supervisors had suggested, this difference began to grow out of all proportion to my initial understanding of it. I found that it was evident throughout my document and just could not be ignored. Thus, I realised that this issue could actually be

the crux of the whole matter, where all the other little differences I had explored were actually related to it in the sense that they were offshoots of this bigger issue.

My supervisor recently joked with me, to my dismay and horror, that the Christian perspective is more comparable to the Cartesian-Newtonian paradigm than cybernetic epistemology. I was very uncomfortable with this thought, because through my Masters' training, I had truly begun to believe in cybernetic epistemology and internalised it as part of my therapy. All along, however, I had wondered just how much I could fit my long-standing Christian beliefs with this new understanding and this is how this dissertation began. My first draft was completed with enthusiasm and I enjoyed the writing of it, and, perhaps, that was my downfall, I was too comfortable. I was not provoking a shift in myself because at that stage, working on my own, I was not aware that my hope to integrate the two perspectives was blinding me to the crucial discrepancies between the two.

That changed after I began to meet with my supervisor and he made me aware that I was using a Christian lens, first and foremost, but also ignoring its implications. And so the awareness came and the little differences I had explored began to grow into one main issue. Unfortunately, at this point I am limited in exploring it to its end in this document. I think this is just the beginning exploration of it and a lot more work can be done. My initial aim had been to bridge the two and I had assumed this would be easy; now I realise it was just the tip of the iceberg that I breached, but glad I am that I did.

I still am not convinced that Christianity is more comparable to the Newtonian-Cartesian paradigm than cybernetic epistemology, but I do realise that my initial surface similarities between Christianity and cybernetics were hiding much larger cracks. Initially, after my meetings with my supervisor and when I looked at it again, I was dismayed and I had to think about where I stood in regard to this. Now, once again, I am excited because I feel that some resolution has been achieved in my own thinking, although it is not complete, nor can it ever be, but the purpose behind this work was to achieve some resolution for myself, and with that I am happy. If it provokes some kind of shift in the people who may read it, I will be happier still.

As for this resolution I have achieved, I must begin by explaining that, in the beginning, I was looking for God in cybernetics. In that I failed and succeeded. I failed in the sense that I did not find Him in cybernetics in the way that I was hoping to find Him; but I succeeded in the way that writing this dissertation made me look at what I believe. I

believe because God is omnipotent and omnipresent, He is in everything. He is in every thought and understanding, including that of cybernetics, and I believe further, that He is leading us to think in that way of cybernetics, the way that is more holistic, respectful, and emphasises relationship and relatedness. I, if not any other Christian, do thank Gregory Bateson for his contribution to that. But when I say I did not find God in cybernetics in the way that I was hoping to find Him, it is because I was looking to equalise the two - Christianity and cybernetics. That was my mistake. My understanding of it now, and this I must emphasise - that it is simply my personal understanding of it which might not apply for anyone else, but my understanding of it, which links with the hierarchy issue, is that there is a hierarchy for me - Christianity comes first, and cybernetics comes after.

By this I mean, that my Christian lens is still first and foremost, but I have seen that I can apply the concepts of cybernetics in many ways without discrediting this lens. I have realised that having this Christian lens does not stand in my way of applying these concepts, as a Christian and therapist, in trying to understand and help individuals in their daily living, in their relationships, and in their suffering. On the contrary, it helps me.

Thus, this was something of the process of me writing this dissertation and arriving at the point at which I stand now, where I acknowledge the hierarchy. This issue, which I will refer to as the hierarchy discrepancy, needs to be explored in greater depth and this is what I turn to now. The following discussion will now focus on this hierarchy discrepancy between cybernetics and Christianity. Included in the discussion will be a review of the other differences which are offshoots of this discrepancy and are all interrelated and how all of these stem from the basic tenets of Christianity. It will also include a final discussion of time as the essence that weaves all these threads together.

The Hierarchy Discrepancy

Throughout the preceding chapters, it can be noted that each chapter focused on two specific concepts and went on to explore these and related ideas, from both a cybernetic and Christian perspective. Following this, the similarities and differences between cybernetics and Christianity were explored in terms of these key ideas, including the implications for therapy. A review of all these key ideas is necessary.

In chapter 2, the basic assumptions of cybernetic epistemology and Christianity were discussed. In the integration, the understanding that cybernetics and Christianity could both be regarded as paradigms or world views was explained; as well as that they both employ epistemological distinctions but connect these distinctions through the idea of 'cybernetic complementarities'; and lastly, that both can bring about a change that involves experiencing the world in a completely different way. As this was an introductory chapter to both cybernetics and Christianity, no major discrepancies were explored.

In chapter 3, the concepts of context and wholeness were emphasised, as well as the related ideas of ecology, the ecosystem, wholeness, and its relation to health. Another concept that was also heavily emphasised in this chapter was interrelatedness, which is considered to play an integral role in context, wholeness, ecology, the ecosystem, and health. The hierarchy discrepancy first appears in this chapter in the discussions on the Christian perspective and the integration. Although the Christian perspective reflects these ideas of interrelatedness, context and wholeness, ecology and the ecosystem, three important points come up. Firstly, that according to the Christian perspective, that this ecosystem is one where God is at the centre or is at the top of a hierarchy, because, as its Creator, He is responsible for the earth and everything in it. Secondly, being at the top of the hierarchy and being responsible for everything, it implies a lineal, top-down, controlling relationship from God; and the third point, is that because of this hierarchy, it implies that although the parts of God's creation are all equal and all mutually influencing, these parts are not equal to God. That was the essence of the differences explored in chapter 3.

Pattern and relationship are the next two concepts discussed in chapter 4. The other key ideas discussed in this chapter are circularity or recursion, feedback, interactional patterns, and communication as relationship. From a Christian perspective, the main ideas explored were pattern, relationship, and communication, while in the integration, the key issues were that of relational significance, recursion, and control in relationship. Once again, the hierarchy discrepancy was evident, especially with regard to the idea that through this hierarchical relationship, we are exhorted to 'pattern' ourselves after Christ and commanded to act in relationships in a certain way (commanded to love). Secondly, through the Christian understanding of God as omnipotent, He is regarded as being in ultimate control of everything, our lives and deaths, as well as the ultimate spiral of recursion that decides our fate for eternity.

Chapter 5 focuses on the ideas of self and the observing system. The concepts of epistemology and constructivism were elaborated on, as well as the shift from the observed system (first-order cybernetics) to the observing system (second-order cybernetics) and the implication of this shift on the 'objectivity' ideal. The crucial idea in this chapter is that of self-reference which was described and was actually the focus of the entire discussion from the Christian perspective. In the integrating discussion, the implications of constructivism and second-order cybernetics are discussed as the cybernetic understanding of multiple realities and multiple truths. The discrepancy here is that Christianity claims one reality and one truth which comes from God and this is related to the hierarchy discrepancy because of the omnipotence of God.

The final chapter, that on meaning and language has the same structure as the preceding chapters, discussing these and related concepts like reality, stories, and storytelling and myths from a cybernetic perspective. The Christian perspective reflects these self-same ideas, but once again, in the integration of the two perspectives, the idea of one reality and one truth that comes from God is emphasised and extended to the idea of God also providing us His Word, or language.

The above was just a brief review of the basic issues that cropped up in the discussions on cybernetics and Christianity and the integration of the two. My understanding of this is that everything related around the crucial discrepancy between cybernetics and Christianity, where cybernetics through its emphasis on interrelatedness, wholeness, and circular causality, emphasises an equalness between all parts of every and any system within our ecology. Christianity, on the other hand, through its basic tenets invokes an immediate hierarchy, where God is the head of this and because of this difference, there are many ramifications. This will now be explained, especially in the light of the tenets of Christianity.

The very first tenet of the Christian religion is at the heart of the matter and invokes this hierarchy. To reiterate, this first tenet maintains that belief in the reality of God, is the alpha and omega of the Christian religion (Whale, 1941). This belief in God is the belief of God as the Creator, who created our world. In accordance with this belief in God as the Creator, is the consequent belief that God is all-powerful, all-knowing, all-perfect, and all-being. This is the crux of the hierarchy discrepancy and all its offshoots.

To begin with, by acknowledging God as God, the Almighty Creator, we acknowledge His greatness and the fact that He is greater than us. The moment there is an acknowledgement of something being greater or better than another, it invokes a hierarchy and so it happens here.

The first implication of this is that the moment a hierarchy is invoked, we dispel the idea of equalness between parts. There may be equalness between parts of the Creation and this is something which the Christian religion does adhere to, but there is a clear distinction that we are not equal to God. He is perfect and this is something we 'always fall short of' and need to aspire to.

The next implication follows from the belief that God is all-powerful. Being all-powerful, He can do anything and thus could create our world. The understanding of power goes hand in hand with control, thus through His power, God also has unlimited and unilateral control. He was in control of His creation when He created it and still is in control of it now. Of course, this idea of God having unilateral and ultimate control totally disputes the cybernetic idea of circular causality and its implications of mutual, bilateral influence. Hence, the idea of a lineal, top-down relationship that is conveyed in many of the Biblical verses, for example, God as the gardener who is responsible for the 'pruning' of the vine or as the Shepherd taking care of His flock. This is clearly unilateral. Some of the most beautiful verses in the Bible also convey this, for example in Job (38 vs 8 to 12), God tells him:

Who shut up the sea behind doors when it burst forth from the womb,
 when I made the clouds its garment and wrapped it in thick darkness,
 when I fixed limits for it and set its doors and bars in place,
 when I said, This far you may come and no farther;
 here is where your proud waves halt?
 Have you ever given orders to the morning,
 or shown the dawn its place that it might take the earth by the edges
 and shake the wicked out of it?

Of course, there is a paradoxical aspect to this. Although God is in control of His creation, which would automatically include humankind, to a large extent He relinquishes a

lot of it. By making us in His own image, He also created in us the ability to be self-determining and furthermore, He gave us that right. He gave us a tremendous gift - the gift of freedom of choice. Through this, we have the right to choose how we wish to live and this is a gift that nobody is without. Many may argue with this statement and point to people who are oppressed and without rights, or poverty-stricken and without opportunities. However, regardless of the circumstances in which individuals find themselves, they still have the choice about how they wish to live their life. Their life circumstances may be restricted, but their attitude and meaning is something no one can take away from them and this will influence the 'how' of their life. Jesus Christ gave us the perfect example. During His trial and crucifixion, He exemplified the perfect attitude of peace, forgiveness, and love. There is a mythical aspect to this that conveys that if we bear suffering with grace and courage, we will also triumph.

Of course, the paradoxical aspect to this is, how can God give us freedom of choice, yet still be in control? The paradox can be explained in the following way. By making us in His own image and giving us freedom of choice, God wanted us to choose Him. He wants to be clear about that He is our choice, just as we are His choice. When we make that choice, He becomes very involved in our lives. Perhaps it is in a unilateral way, where He 'prunes' us, but it is also mutual because we have to make the choice. But consider, when God does become involved, how He becomes involved. He promises a 'full life', all our needs met, all our tears comforted, all our burdens carried. Considering these promises and that God is all-powerful, I would say we are much better off with Him at the helm!

However, when we do not make God our choice, He allows us that right. His aim, of course, is to save all of humankind and that was the purpose of the Incarnation, but when He is not our choice, He does not take 'control' in the sense of determining our lives. We are still self-determining and what happens in our lives is a result of the choices we make in them. My understanding of God being in control in this respect and in terms of what is happening on our planet is linked to the belief that He is all-knowing. God is in control of His creation and all life because He knows everything that has happened, is happening, and will happen. He 'controls' because He has all knowledge of things and this takes us to the final implication.

This final implication relates to the difference between cybernetics and Christianity regarding reality and truth. Cybernetics maintains that there is not ONE reality or ONE

truth, but MULTIPLE realities and MULTIPLE truths, which are all equally valid. Of course, Christianity disputes this and maintains there is only ONE reality and ONE truth, which stems from God, and other realities and truths are not equal to this, invoking the hierarchy again. Of course, this is based on the understanding of God as all-knowing. If He is all-knowing, then He will have access to REALITY and TRUTH and furthermore, He is REALITY and TRUTH. An important implication of this, however, is that this does not mean that Christians have access to this REALITY and TRUTH. Jesus is the Way to this and God promises to reveal His knowledge to us and give us wisdom, but it is also clear that we only 'know in part'. Based on this limitation in our understanding and knowledge, we are commanded not to judge, because we do not have all the necessary understanding and knowledge to do so, and furthermore, we must remain like 'little children' who are humble and always wanting and needing to learn from Him who is KNOWLEDGE.

One additional point to note here is that this view that there is one REALITY and one TRUTH that comes from God does not necessarily dispute constructivism's idea that individuals experience different realities and truths. Rather, since individuals do differ and have different experiences, they will also have differing understandings and interpretations and this can translate to different realities. The crucial thing is that because of these differing understandings and interpretations of life and all it entails, individuals need to learn that they cannot claim that their understanding or interpretation is THE understanding or interpretation, for the simple reason that it is limited. And this links to the understanding that God's knowledge is THE REALITY and THE TRUTH because of the belief that His knowledge is complete, unlimited.

It is necessary to link these ideas to a few other ideas mentioned in the dissertation. Firstly, that being an all-powerful and all-knowing God, He is in a position to command, and He does so by commanding us to live in a certain way that is beneficial to ourselves and others. Living in this way and following these commandments will reflect on us when God judges us and decides our status for eternity and this is where God forms the ultimate recursive loop. These commandments that God gives us, as well as His promises, He gives in a form that is meaningful for us, through the use of words. But as it comes from God, it is the Word, the ultimate Meaning that can ever be made. And lastly, as the Creator of our earth, He is also the essence that weaves everything together or as Bateson would express it, the ultimate Pattern that connects.

The Pattern that Connects

I believe that an integral aspect to this understanding of God as a Creator, as all-powerful and all-knowing is in the idea that God is also Time and this is the pattern that connects it all. Firstly, in the act of creation, God created the different elements in a specific order and at different times. In His very first act of creation, He actually created time by creating day and night, which we understand as the passing of time.

Secondly, being all-powerful and all-knowing, He understands and uses time to reveal Himself to us in our daily lives. He made a time for everything and gave a time for everything. Our understanding of time is finite because our knowledge is finite and this is why we actually experience time as finite. There is a time limit for everything for us. And there comes a time when our lives as we know it come to an end and then we do not 'know' anything more. God, however, is timeless because He existed before time, as we know it, and He exists after time, as we know, it because He exists in eternity and decides our status for eternity.

An interesting idea for me is that perhaps the reason why our experience of time and our knowledge is finite, but God's time and knowledge is unlimited, is perhaps because time is knowledge. Consider the verse "Now I know in part, then I shall know fully" (1 Cor 13 vs 12). There is a time when we have limited knowledge, but there comes a time when we will know in full, unlimited, and as far as the Christian understanding goes, this will occur after our death, when we will be with God for all eternity, when time is no more. Consider the history and progress of the world, that over time, humankind achieves a broader and deeper understanding of things - our planet, our bodies, our minds.

The shift from the Cartesian-Newtonian paradigm to a more holistic and ecological one, which emphasises relationship and pattern is an example of this. When the Cartesian-Newtonian paradigm dominated, our understanding and descriptions were rigid and dogmatic. This began to be replaced by a more holistic view which emphasises relationship and interconnectedness. This shift can also be described in another way. In the Old Testament, God and our relationship to God was understood and described in a very rigid

and dogmatic way as well. With the coming of Christ, the new message was love, a deeper and more meaningful relationship with God and others.

There is a time for everything. A time for Cartesian-Newtonian science to carry us to where we are today, a time for cybernetics to reconnect the bits and pieces of the planet, and a time to see that the Pattern that connects is God.

For me, that time is now.

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