

**UNDERACHIEVEMENT IN SCHOOLS: AN ECOSYSTEMIC APPROACH**

by

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## SUMMARY

Over the years, extensive research has been conducted in the field of underachievement. Many solutions to the problem have been put forward, none of these proposals universally addressing the problem.

The present research's aim was to address the problem of underachievement ecosystemically. For this purpose, through the process of a series of interviews, information was gathered about the underachieving behaviour of a particular <sup>12</sup> and his interaction with his teachers and his parents in connection with his behaviour. It was found that the underachieving behaviour could be described as part of a larger interactive pattern, characterised by compliant/non-compliant behaviour on the part of the pupil, and involved/non-involved behaviour on the part of the teachers and parents.

## INTRODUCTION

## What is Underachievement?

Underachievement is a problematic behaviour that has puzzled both teachers and parents as they have attempted to understand why their pupil or child is not performing at school in a way that is consistent with his or her\* perceived ability. Like other school related problems, it has been extensively researched, the research generally characterised by a great diversity of methodologies, little theory and arbitrary definitions (McCall, 1994). Though there is this discrepancy about the nature, and even the existence, of underachievers, most classroom teachers can readily recall a student whose classroom performance seemed far below the evidence of his ability (Colangelo, Kerr, Christensen & Maxey, 1993).

Several definitions of underachievement have appeared in the literature. A common theme among these definitions is that a pupil is described as underachieving when there is a discrepancy between their performance on some standardised test that measures intelligence, and their performance in school (Ford, 1993). For the purposes of this study the following definition will be used: Underachievers are those pupils who, by the teachers' observations, demonstrate a high capacity for academic achievement and are not performing satisfactorily in daily academic performance in the classroom. That is to say, through their daily interaction with a particular pupil (specifically in

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\* Though the writer acknowledges the non-sexist nature of the problem under discussion, for the sake of easy reading, throughout this dissertation, any reference to an individual will be made in terms of the male gender.

informal interaction and class discussion), teachers might observe the pupil thinking critically and creatively, and demonstrating problem-solving skills. However, in terms of daily academic performance (written classwork, class tests, and examination), the pupil is unable to demonstrate the equivalent level of ability. The teacher would then describe this pupil as an underachiever.

### Past Research

The results of the extensive research that has investigated the problem of underachievement indicate that a wide range of factors can be included in a description of underachieving behaviour. While the argument continues as to which factors are the most salient, researchers (Ford, 1992; Maitra, 1991; Rimm, 1988a) generally do acknowledge that underachieving behaviour is too complex a phenomenon to describe in terms of single causal factors. In the descriptions being put forward, it is now being assumed that the school, the teacher, the home environment, and the personal characteristics of the pupil all, in some way, impact upon the pupil's lack of progress (Fehrenbach, 1993). What remains unclear, however, is in what way can research be conducted so that all these factors are included, and on what theory can the resultant description of underachievement be based, that would facilitate intervention.

The present research proposes a way in which the relevant factors can be integrated into a description of underachievement. The proposal involves a change in the underlying paradigm presently being used by researchers, teachers, and clinicians to observe and describe underachieving behaviour. To better understand how this change in paradigm will generate a more comprehensive description of this problematic behaviour, an understanding of the notion of paradigm is necessary, and in particular, an

understanding of the link between paradigm, observation and description.

### Paradigms

Paradigm comes from the Greek word paradeigma meaning pattern. A paradigm is a set of rules, used by a specific group, to define a subunit of a universal reality (Auerswald, 1988). One such paradigm that has been most popular for the study of human behaviour has been the positivistic paradigm. Positivism can be defined as "a family of philosophies characterized by an extremely positive evaluation of science and scientific method" (Reese, 1980, p.450). The basic assumption of positivism is that there is a real world which exists "out there", and that if we are rigorous enough in our observations, we will be able to obtain an increasingly accurate and objective view of that world. From this paradigm emerged theories such as behaviourism and psychodynamic theory. (A more complete explanation of these theories follows in chapter 2).

More recently, human behaviour has been studied and described, using theories based on an alternative paradigm, namely constructivism. A constructivistic view of the world maintains that the world we think we see is only a view, a description of the world (Keeney, 1983). According to those who support a constructivistic view of the world, there is no such thing as a "neutral" or "uncontaminated" grasping of "reality" (Bateson, 1972). All descriptions of behaviour include in them the observer's role in constructing the reality being observed. The epistemological implication of constructivism is that "objectivity" is erroneous since it assumes a separation of the observer and the observed. An observer can only make a description if he has the properties that allow him to generate such descriptions (Keeney 1983).

The proposal of the present research is that the understanding of, and related interventions for underachieving behaviour, shift from being based on a positivistic paradigm to a constructivistic one. This paradigmatic order of change is often difficult to achieve, because it requires a questioning of our accustomed ways of perceiving phenomena. It is not a question of merely adjusting a definition here or there, or of rearranging familiar concepts in a somewhat novel fashion. The change that is required is of a far more drastic nature. It involves the demolition of our everyday conception of reality (Atkinson & Heath, 1987).

The implication of this shift is more fully explained in the following chapter. However, in order to understand how this change in the paradigm being used to investigate under-achieving behaviour can change our understanding of the problem, a brief explanation of the impact of an individual's paradigmatic premises on his observations and ultimately on his descriptions of behaviour follows.

## Observations, Descriptions and Paradigms

### Observations

The theoretical assumptions of human behaviour held by the observer of a particular phenomenon (for example, underachieving behaviour) influences what the observer observes about that behaviour. For example, a psychodynamic theorist will observe underachievement in a particular way, while a behavioural theorist will observe it in another way. In other words, the observer's theoretical assumptions influence the way in which he distinguishes underachieving behaviour from other behaviours. His perception of underachievement is shaped by the distinction that he draws.

Keeney (1983) notes that it is impossible not to draw distinctions. We need to draw distinctions in order to know our world. "Drawing a distinction is the starting point for any action, decision, perception, thought, description or theory" (Keeney, 1983, p.18). But the decision to draw a particular distinction, is always influenced by the theoretical assumptions we hold about that which we are wanting to distinguish.

For the most part, past researchers of underachieving behaviour have distinguished the behaviour using causal distinctions. Some have distinguished it by the pupil's lack of effort and motivation, others have distinguished it by the pupil's poor relationship with his teacher and peers, yet others have drawn the distinction in terms of a multitude of factors that they perceive as simultaneously causing the pupil to underachieve.

In any field of research, there are endless ways of drawing a distinction around the phenomenon being studied, but each is always dependent on the paradigmatic premises held by the observer.

### Descriptions

Descriptions arise from what we observe. So, if we are to understand more completely the description of a phenomenon being described by a describer, we need to go back and unravel the theoretical assumptions of that describer. Chalmers (1982) puts it rather succinctly: "Observation statements [descriptions] are always made in the language of some theory" (p. 29). For this reason, our understanding of a phenomenon comes not from discovering its present appearance, but in remembering what we originally did to bring it about (Keeney, 1983).

In summary, the description of any reported under-achieving behaviour then, is dependent on the type of distinction being drawn. And the distinction that was drawn followed the researcher's habitual pattern of distinguishing phenomena, which was in keeping with his theoretical premises for making distinctions. In other words, it is the researcher's world view that shapes how he is going to distinguish a phenomenon, and it is his distinction that is then described.

#### The Implications for Underachievement Research

In the past, underachieving behaviour has been distinguished in a way that is in keeping with the theoretical assumptions emanating from a positivistic paradigm. This allowed for a quantitative analysis of the problem. The results of these studies have been descriptions of underachievement made in the language of a positivistic paradigm. That is to say, the descriptions have been based on metaphors derived from a material world which carries assumptions about substance, energy, and quantification (Keeney, 1983). This positivistic research contributed to the field of underachievement research by identifying and quantifying factors that could be causally linked to the behaviour. Furthermore, in some cases, this type of research offered a model which could be universally applied to all underachieving pupils in attempting to reverse the underachieving behaviour. For example, some research (Geffen, 1992; Rimm & Olenchak, 1991; Whitmore, 1980) identified low self-concept as a factor precipitating underachievement, and a classroom model (Gaskins, 1992) for working with such pupils was put forward.

The present research proposes that by studying underachievement using a constructivistic paradigm, a different distinction of this behaviour can be drawn, and a more

comprehensive description of the problem can be attained. The present research is an attempt to broaden and extend the partial descriptions generated from positivistic underachievement research. In the studying of an individual underachieving pupil, the present research attempts to describe the interactional pattern surrounding the underachieving behaviour. Part of this pattern could sometimes be the partial elements described in positivistic research.

### Conclusion

The aim of the present research is to offer the field of research into underachieving behaviour a directive. If we are going to move beyond the present impasse in addressing underachievement, it is, first and foremost, critical that the paradigmatic bases underlying patterns of perceiving underachieving behaviour be made explicit and are understood. Secondly, it is worthwhile considering an alternative paradigm for studying underachieving behaviour.

The present research, therefore, attempts to make explicit the paradigmatic and theoretical assumptions presently being used in underachievement research. Furthermore, it clearly outlines the theoretical assumptions underlying an alternative paradigm.

The following chapter gives an outline of the different theories (and their paradigmatic bases) that have been used to investigate underachieving behaviour in the past, and puts forward ecosystemic theory, based on a constructivistic paradigm, as a more comprehensive way of describing underachievement. Chapter 3 reviews past research of underachieving behaviour, categorising the research in terms of its theoretical assumptions. Chapter 4 makes explicit the method used in the present research of underachieving

behaviour, while chapter 5 indicates how the data generated through this chosen method can be processed so that a comprehensive description of the pattern of behaviour, of which underachieving behaviour is a part, be put forward. The final chapter is an integration of the theory and practice of this research.

## C H A P T E R 2

### THEORETICAL BASES OF UNDERACHIEVEMENT RESEARCH

#### Introduction

Making explicit the theory underlying a particular description of underachievement is essential, whether it be the theories underlying past descriptions or the theory underlying the proposed description. As Fisch, Weakland and Segal (1982) put it: "Only by understanding the general conceptions of problems and treatment - in short, the theory - to which specific practices are related, can one go beyond such blind responses, either to judiciously reject or judiciously accept and apply an approach" (p.5).

An understanding of this relationship between theory and practice is particularly important in the context of purposive problem-solving behaviour, because the ideas or premises a person holds concerning the nature of the problem strongly influences how they will attempt to solve the problem.

In this chapter, a brief overview of the theories underlying different descriptions of underachieving behaviour will be given. The theoretical progression (the movement away from the use of theories based on a positivistic paradigm to theories based on a constructivistic paradigm) that has taken place in social scientific research is outlined. This overview will also help to historically ground the theory of the present research, that is, ecosystemic theory. This theory will be explained more fully later in the chapter, suffice it to say that a describer using ecosystemic theory attempts to describe the phenomena in a holistic and comprehensive way.

## Historical Overview of Theories underlying Underachievement Research

As has been briefly noted in the previous chapter, the positivistic paradigm has had a considerable influence upon social scientists, notably in promoting the status of experimental and survey research and the quantitative forms of analysis associated with them. The all encompassing premise of this paradigm is that positivistic science, conceived in terms of the logic of the experiment, is the most appropriate model for social research. This experimental logic, argued as the defining feature of science, is characterised by quantitatively measured variables being manipulated in order to identify the relationship among them (Atkinson & Heath, 1987).

Theories emanating from the positivistic paradigm have two essential characteristics. Firstly, in its particular conception of scientific method, there is a search for universal laws. A premium is placed on the generalisability of findings. Secondly, priority is given to phenomena that are directly observable. Any appeal to intangibles runs the risk of being dismissed as metaphysical nonsense.

### Theories based on a Positivistic Paradigm, and Their Contribution to the Field of Underachievement Research

#### Psychodynamic Theory

Psychodynamic theory focuses on the individual, as a whole, that consists of intrapsychic elements, and explains the behaviour of the whole in terms of these constituent parts. Its emphasis is not primarily on the overt behaviour or other people surrounding a problem (this is seen as mere

background to the problem behaviour), but on the presumed underlying intrapsychic matters (O'Connor, 1977).

According to this theory, underachievement is described in terms of intrapsychic conflict that influences the pupil's motivation to achieve. An example of this conflict would be when a child is described as having a low self-esteem. Succeeding at school results in an intrapsychic conflict, since success is at odds with their perceived self-esteem. Therefore to reduce the anxiety emanating from this inner conflict, the child continues to underachieve, so that his school results are more in keeping with his low self-esteem. A solution to the problem would involve counselling the pupil in a way that helps him to understand why he is not motivated to achieve in a way that is commensurable with his ability.

### Behavioural Theory

While psychodynamic theorists suggested that the motivation of the actor is internal, with the environment as mere background, the behaviourists suggested that the performer can only behave in a way that his environment allows. This way of understanding problematic behaviour emerged as a reaction to the subjective nature of psychodynamic explanations. In their view, only the study of directly observable behaviour and the environment that "controls" it, could serve as a basis for formulating scientific principles of problematic behaviour (Carson, Butcher & Coleman, 1988).

The behavioural approach would describe underachieving behaviour as a problematic behaviour that has developed through its repeated association with positive reinforcers in the pupil's environment. Alternatively, achieving behaviour is avoided because it has a repeated association with aversive stimuli from the environment (Carson, et al,

1988). Following this theory, an investigation of the environment would take place to elicit any factors that are preventing the pupil from achieving or factors maintaining the underachieving behaviour.

### Interactional Theory

In their extremes, the psychodynamic and behavioural orientations were antithetical positions in that the former put forward internal (intrapsychic) explanations for problematic behaviour, while the latter advocated external (environmental) explanations. It was these two extreme positions that opened the way for a theoretical synthesis in a dialectical development of psychological thought (Jasnoski, 1984).

The dialectical synthesis of these two disparate positions resulted in interactional theory. This new conceptual position considered the mutual contributions of person and situation in addition to an important third factor, their relationship or interaction.

The interplay between person and situation came to be viewed as a process of reciprocal causation or interaction. The simple linear, unidirectional cause-and-effect models of behavioural and psychodynamic theories were being transformed into a multiple causation, bidirectional model.

An interactional model of underachievement considers the environment, the individual, and the interaction between the two, as factors contributing to the underachieving behaviour. For example, the pupil's lack of motivation is considered as well as his class environment (in which most of his peers are possibly motivated), together with the pupil's response to his class environment and his peer's response to him.

## Systems Theory: A Shift from the Positivistic Paradigm

With the advent of interactional theory, the fit between the positivistic paradigm and the social sciences began to be questioned, particularly with respect to the paradigm's emphasis on reductionism and causality. The stage had been set for the emergence of a non-positivistic systems approach to the study of human behaviour.

Before giving a brief description of the main theories emanating from this approach, it is important to outline the basic differences in the assumptions of theories based on positivism and theories following a systems approach.

### Basic differences

Holism vs Reductionism. One of the fundamental differences between theories based on a positivistic paradigm and systems theory is the way in which they propose how phenomena can be best understood. Theorists following a positivistic approach believe that phenomena are best understood when a reductionistic logic is used, while systems theorists propose a holistic understanding of phenomena.

Reductionism is a philosophical point of view which postulates that complex phenomena are best understood by a componential analysis which breaks down the phenomena into their fundamental, elementary aspects (Reber, 1985). Basic information about the behaviour is sought out by means of reductionistic research methods. For example, in terms of a pupil's underachieving behaviour, the behaviour is analysed in a way that isolates single causal factors that are believed to be contributing to the behaviour.

Holism, on the other hand, is a philosophical approach that maintains that complex phenomena cannot be understood

by an analysis of the constituent parts alone. That is, the whole is considered to be greater than the sum of its parts; each can only be understood in the context of the whole; a change in any one part will affect every other part (Reber, 1985).

For example, the reductionistic logic of psychodynamic theory is apparent in its emphasis on studying the individual as a whole with constituent intrapsychic parts. The behaviour of a person is understood and explained in terms of these parts. In contrast, systems theory views the individual as part of a larger whole rather than as a whole in itself. The behaviour of the part (the individual) is described in terms of its relationship with other parts and its function for the whole. The whole is maintained through the relatedness and connectedness between the parts. The organisation of the whole is described as a patterned organisation of its parts, rather than individual descriptions of the parts as found in psychodynamic theory (Palazzoli, Boscolo, Cecchin, & Prata, 1978).

In sum, holism demands that attention be focused on connections and relationships rather than on the individual characteristics of the parts. Instead of concentrating on basic building blocks or basic substances, it emphasizes basic principles of organisation (Capra, 1982).

Lineal vs circular causality. Lineal thinking is an atomistic, reductionistic, anti-contextual, analytical logic concerned with combinations of discrete elements (Keeney, 1983). Systems theory, on the other hand, through its emphasis on holism, maintains that no one event or piece of behaviour causes another, but rather, that each is linked in a circular manner to many other events and pieces of behaviour (Papp, 1983).

In other words, to say that X causes Y to act in a

certain way is incompatible with the idea that all parts of a system are mutually and recursively interconnected. Therefore, if reductionism is to be replaced by holism, causal reasoning based on reductionism needs to be replaced too.

Circular thinking in systems theory emphasizes ecology, relationship, and whole systems. In contrast to lineal thinking, it is attuned to interrelation, complexity and context (Keeney, 1983). For example, component A may affect component B; B may affect C; and C may 'feed back' the influence to A and thus close the loop. When such a system breaks down, the breakdown is usually caused by multiple factors that may amplify each other through interdependent feedback loops (Capra, 1982).

Two theories that encapsulated these concepts of holism and circular causality were general systems theory and ecological theory.

### General Systems Theory

General Systems Theory was introduced by the biologist Von Bertalanffy (1967) to describe the principles of wholeness, of organisation and of the dynamic conception of reality that had become apparent in all fields of science. Simply stated, the theory examines the functioning and structure of a group of interacting components in which the whole group, working together, has greater import than the sum of the independent parts (Capra, 1982).

Underachieving behaviour described from a general systems point of view would consider the organisation of the school system, and describe how the underachieving behaviour of a particular pupil is organised or fits with the behaviour of all those concerned with this pupil in the school system in a circular process.

Although general systems theory has been interpreted and applied in many different fields, the key concepts of wholeness, organisation and patterning have remained common to all applications.

### Ecological Theory

Ecological thought is based upon the fundamental doctrine that all things in nature are complexly, but systematically, interrelated. The theoretical base of human ecology relies on both systems theory and ecological thought. Systems theory describes the systemic functioning of an ecosystem, while ecological thought includes the context of the systemic processes, delineating the extent of the system being considered.

The bounds placed on this ecological perspective are not the traditional psychological boundaries of the individual, but rather the organisational structure that includes and encompasses the individual. It is consistent with three basic assumptions. Firstly, that human behaviour occurs in a context. Secondly, that clinical processes connected to human behaviour are a function of interaction between persons and larger systems. Thirdly, that the outcome of clinical interventions is a function of person, environment, and the interactive process with larger surrounding systems (O'Connor & Lubin, 1984).

From the perspective of human ecology, underachievement would be viewed within a particular context, the boundary of that context being determined by the extent of larger systems in which the pupil's behaviour is embedded. Under-achieving behaviour is seen as a function of the recursively linked interactive processes between the pupil and the larger surrounding systems. Described as such, the unit of treatment may more comprehensively be seen as an ecosystem, rather than a single individual in an ecosystem.

## The Evolution of Systemic Thinking

The movement described above, away from positivistic thinking to a more systemic way of thinking, opened new horizons both on a theoretical and practical level to the understanding and descriptions of human behaviour. Ecosystemic theory, the proposed theory of this research, evolved from this general movement towards systems theory. In order to understand the foundations of ecosystemic theory, a brief overview of the progression within systems theory is given.

### Systems Theory and Cybernetics

Systems theory, as it has been applied to the field of family therapy, is a loosely connected series of concepts rooted in general systems theory and cybernetics (Papp, 1983).

Cybernetics, a term coined by Wiener (1967), comes from the Greek Kybernan ("to govern"), and it is the science of communication and control in man and machine. It is an apt metaphor to use for human systems since cybernetics belongs to the science of pattern and organisation which is distinct from any search for material or things. On the contrary, cybernetics calls for an undoing of materialistic abstractions and the constructing of distinctions that indicate patterns of relationship and recursive process (Keeney, 1983).

The basic idea of cybernetics is that of "feedback," which Wiener (1967) defines as follows: "Feedback is a method of controlling a system by reinserting into it the results of its past performance" (p.84). The whole system regulates itself through a series of feedback loops that are referred to as cybernetic circuits. Information travels back

and forth within these feedback loops in order to provide stability or change for the system.

Contexts of behavioural change (e.g., therapy or problem-solving situations) are principally concerned with altering or establishing feedback. A dynamic therapeutic process requires the creation of alternative forms of feedback which will provide an avenue for appropriate change (Keeney, 1983).

Bateson (1972, 1979) was the writer who drew most brilliantly upon the cybernetic analogy, using a cybernetic framework to describe the recursive, cyclical patterns in human systems. He recommended that the only appropriate descriptive language for talking about personal and social change is cybernetics. His ideas about the patterning of social fields, and the cybernetic paradigm he developed to support those ideas, had an unique influence on the family therapy movement (Hoffman, 1981).

#### First-order and Second-order Cybernetics

Since its baptism in 1948, the field of cybernetics has progressed through two main stages, namely first-order cybernetics and second-order cybernetics. First-order and second-order denote a logical typing, second-order cybernetics being meta to, or inclusive of, first-order cybernetics (Sluzki, 1985). While first-order cybernetics is focused on patterns "out there", second-order cybernetics involves a meta step to include the observer's role in constructing the reality being observed. Reality is no longer conceived as independent of an observer's attempts to organise it. As Keeney (1983) put it:

In contrast to the simplistic 'black box' approach where an outside observer attempts to detect the redundancies (or rules) in input-output relations,

cybernetics of cybernetics jumps an order of recursion and places the observer as part of the observed system. Every description is self-referential, including the observer's role in constructing the reality being observed. (p.77)

The implication of second-order cybernetics for under-achievement research will be discussed more fully later in the chapter, since the ideas of ecosystemic theory (the theory of the present research) are based on second-order cybernetics.

### Cybernetics and Constructivism

In the acknowledgement that descriptions are self-referential, the ideas of second-order cybernetics are consistent with a constructivistic view of systems theory. There is a recognition that cybernetics provides us with the most appropriate language for describing the world constructivistically (Silverman, 1974). Second-order cybernetics, being the cornerstone of ecosystemic theory, will be discussed in the next section, suffice it to say that second-order cybernetics is critical to the validity of the constructivist position, because without its proposal of hierarchies of feedback loops which do the reconstructing, constructivism would appear to be a mystical conception inapplicable to any branch of science (Silverman, 1974).

This shift to a constructivistic paradigm within the systems theory field of family therapy is no small shift. As has been mentioned in the previous chapter, it is this shift from a positivistic paradigm to a constructivistic one that is the most significant change being proposed by the present research.

Ecosystemic theory, emanating from second-order cybernetics, rejects positivism, with its emphasis on an

objective reality, reductionism, universal laws and lineal causality. It proposes that the traditional notion of an external objective world lineally acting upon our sensorium in order to shape the descriptions of representations is incomplete. Similarly, it is a partial view to see the entire world as made up by our prescriptions for construction (Keeney, 1983). That is to say, ecosystemic theory maintains that the world of experience is neither entirely made up, nor entirely independent of an observer's activity. The theory does not reject the existence of an independently existing external world. What is rejected is the notion that we can have direct access to that world through objective observation.

## Ecosystemic Theory

### Introduction

Ecosystemic theory is rooted in the ideas of cybernetics, ecology and systems theories. It can be defined as,

....a set of ideas that attempts to disseminate ideas in terms of (a) translating reified nouns into linguistic forms that signify relationship and process and (b) shifting the boundaries of individuals, families and other ecosystems toward the context of completed circuits. (Keeney & Sprenkle, 1982, p.8)

As is apparent in the above definition, ecosystemic theory takes as its foundation the concepts of relationship and process from systems theory and cybernetics. An attempt is made to recognise the totality and connectiveness of the interactive process of which the problematic behaviour is a part, rather than to describe isolated behaviours. And the

ideas of human ecology ensure a more complete description of the behaviour under study.

Using ecosystemic theory for the present research of underachieving behaviour, will involve patterning observations (and the descriptions that emerge from these observations) in a way that avoids rigidly demarcating the systems connected to this behaviour into isolated elements. Theories based on a positivistic paradigm abstract from relationship and create "objects" with characteristics. Ecosystemic theory necessitates an abandonment of these metaphors of substance and an acceptance of metaphors of form and pattern. The theory requires that we undo our traditional ways of knowing the world and construct distinctions in an alternative fashion by identifying patterns that recursively connect the problem behaviour with other behaviours (Keeney, 1979).

This section describes in detail the implications of shifting from descriptions of underachieving behaviour based on metaphors of substance to descriptions based on metaphors of form and pattern. This explanation follows the two key concepts of ecosystemic theory outlined in the definition above, namely, that ecosystemic theory attempts to translate reified nouns into linguistic forms that signify relationship and process, and secondly, that an ecosystemic description attempts to shift the boundaries of individuals towards contexts of completed circuits.

#### Translating Reified Nouns

Reification, taken from its Latin roots, literally means "thing-a-fying." It is the making real and concrete of that which is abstract (Reber, 1985). Watts (in Keeney & Sprenkle, 1982) suggested that we tend to do this (see "substantive nouns" and "things" instead of "processual verbs" and "patterns of relationship") because of the

limitations of our senses (or our research instruments to discriminate highly complex patterns. Hence, when we encounter sufficient complexity (e.g., networks of human relationship), our sensory limitations lead us to committing what Whitehead called the "fallacy of misplaced concreteness" (Keeney, 1979, p.120). For example, in the case of underachieving behaviour, it is possible that there is a complex network of human interaction of which the problematic behaviour is a part. Because of the complexity of this human interactional network, observers have distinguished isolated bits of behaviour and given these behaviours names, one of the names being underachieving behaviour.

An ecosystemic description of underachieving behaviour then, assumes that there is some underlying pattern (a series of actions) that is organising the behaviour of this particular pupil. Understanding the construction of a second-order cybernetic description and the concept of logical typing can help to avoid misplaced concreteness and facilitate the distinction of patterns.

### Second-order Cybernetic Descriptions

As has been mentioned previously, ecosystemic theory, based on the ideas of second-order cybernetics, postulates that all descriptions are self-referential. All descriptions of behaviour include in them the observer's role in constructing the reality being observed.

That is to say, psychotherapists and other helpers are constructors of a reality around a problem (Colapinto, 1979). Their knowledge of a particular problematic behaviour, is not the result of a passive receiving, but rather originates as the product of an active subject's activity (von Glaserfeld, 1984). For this reason, ecosystemic descriptions involve a movement away from a

preoccupation with the properties of the observed to the study of the properties of the observer (Howe & Von Foerster, 1975).

In sum, there is a cybernetic, recursive pattern between the observer and the observed. The observed influences the observer, and the observer influences the observed.

In the case of underachieving behaviour, those advocating a positivistic description postulate that one can objectively "see" and "observe" underachieving behaviour. From an ecosystemic framework, however, it is believed that what is being observed is a construct of the observer and is probably saying more about the properties of the observer than about the observed. What one observes when observing a problematic behaviour that has been named underachievement, is dependent on the theoretical assumptions of the observer.

The implication of this for the present research is that making accurate "objective" statements with regard to what is underachievement and what is not underachievement is not possible, since we cannot set ourselves apart from this problematic behaviour that we are attempting to describe. The result of attempting to make "objective" statements, is helpers focusing on and reifying one part of the dysfunctional system (e.g. the pupil), and not making explicit the involvement of themselves as part of this system. They act as though they are distinct from the system of interest (Keeney, 1983).

Second-order descriptions include the helper as part of the system of which underachieving is a part. A particular pupil's underachieving behaviour can then be described in as many ways as there are describers of it.

In an effort to avoid reification then, important

questions such as, "Who is doing the describing?" and "What is their relationship to the problematic behaviour?" need to be asked.

In sum, in ecosystemic thinking, there are no absolutes or certainties; reality and truth are circular, a relationship between the observed and the observer (Papp, 1983). We need to use language carefully and systematically if we are to avoid describing relationship in reified terms. An understanding of this strong pull to focus on individuals rather than interactional patterns can be partly understood in the processes of logical typing and logical mistyping.

### Logical Typing

Bateson's (1972) used the ideas of Whitehead and Russell (1910) in developing the conceptual tool "logical typing". Briefly, this theory postulates the fundamental principle that, "whatever involves **all** of a collection must not be one of the collection" (Whitehead & Russell, 1910, p.37). For example, mankind is a class of all individuals, but it is not itself an individual. Ignoring this distinction between member and class and the fact that a class cannot be a member of itself, can lead to confusion and the puzzling consequences are ubiquitous (Watzlawick, Weakland & Fisch, 1974).

Bateson adopted logical typing as a descriptive tool for discerning the formal patterns of communication that underlie human experience and interaction (Keeney, 1983). Logical typing can therefore be simply regarded as a way of classifying distinctions that have been drawn.

Logical typing involves assigning meaning to perceptions. In the course of this assignment of meaning, perceptions are also accorded a place in a logical hierarchy

of types, or orders of abstraction. A dialectical ladder (Keeney, 1983) can be constructed to help one analyse interactions and sort out orders of logical typing (see Figure 2.1). The ladder can be seen as an "alternation between classification of form and the description of process" (Bateson, 1979, p.214). Description of process refers to the 'raw' data of observed behaviour. Classification of form refers to punctuations of patterns by the observer.

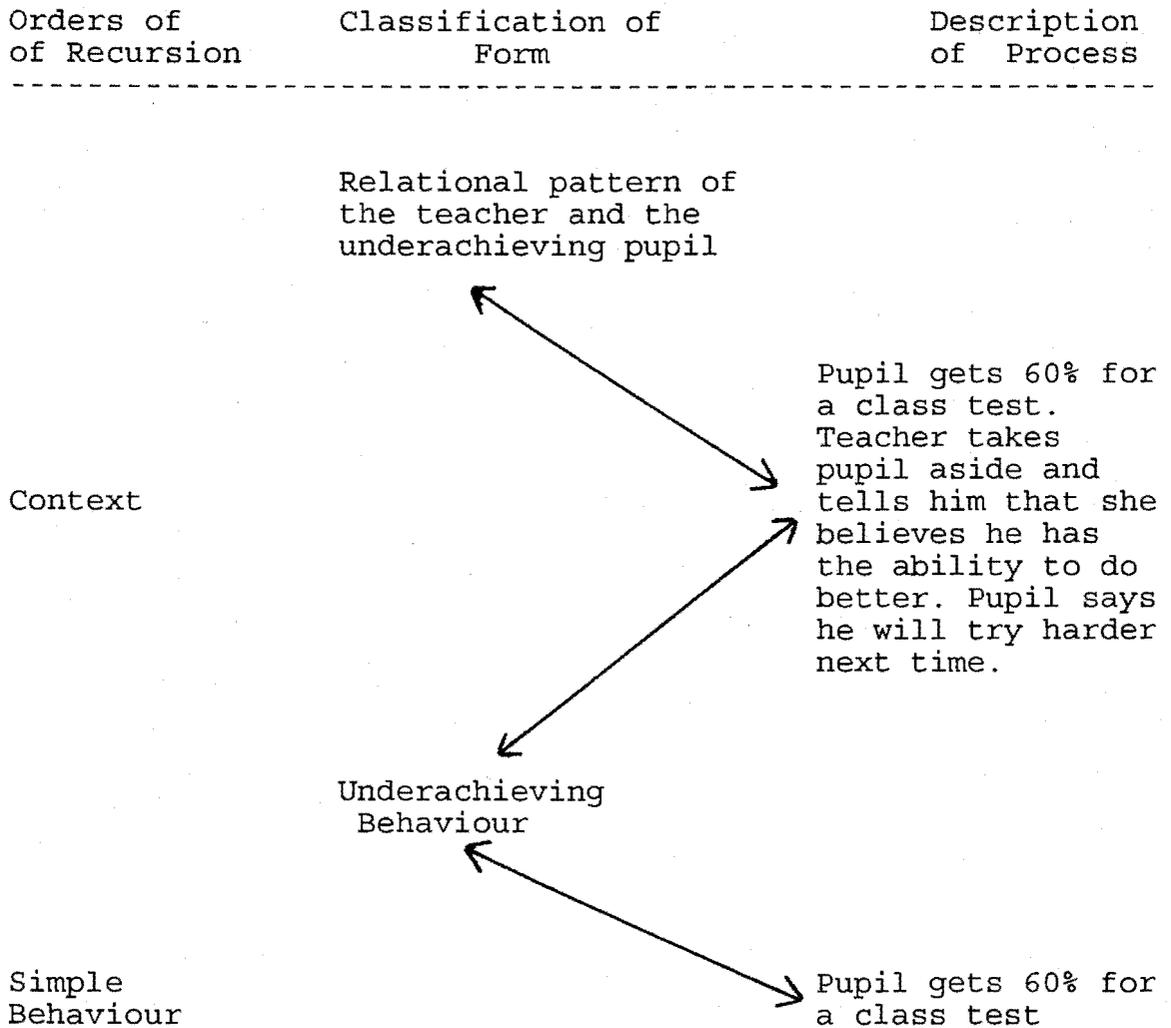


Figure 2.1: A Dialectical Ladder of Underachieving Behaviour

The dialectical ladder in Figure 2.1 illustrates the placement of perceptions with regard to underachieving behaviour in a logical hierarchy or order of abstraction. Descriptions of simple action (behaviour) in this ladder includes individual units of action such as the pupil's particular mark in a test. On the same behavioural level, this action can be typed by the observer as belonging to a "category of action" called underachievement. On a contextual level, however, descriptions of interaction include the relationship between the simple actions. The description of the interaction is at a different order of abstraction to the simple actions.

In this assignment of meaning to perceptions, there is always a chance that errors called logical mistyping (Bateson, 1979) will occur. Logical mistyping occurs when a speaker confuses different orders of abstraction in thinking or speaking, but acts as if that confusion has not occurred. As a result of this, higher order explanations may be offered for lower order behaviours as if the explanations were the behaviours.

To illustrate this, let us again use the example in Figure 2.1. A teacher or parent might observe that their pupil or child got 60% for a class test. In the course of attempting to explain this observation, they may mistype the order of abstraction to which this action belongs. They may refer to the situation as the pupil or child's "lack of motivation" or "laziness" or "disinterest," when the situation or the context of the action is qualitatively different. Leaping from this observation of simple action to reports of higher order abstractions is an example of logical mistyping.

In order to avoid logical mistyping, we need to differentiate between a description of our sensory experience and a typology or categorisation of that

description. Classifications of descriptions of sensory experience cannot be directly perceived. But most clinicians habitually encounter the world without differentiating between their sensory experience and their created abstractions about that experience. The problem is that clinicians' higher order abstractions, rather than their more immediate sensory based information, often become the primary data of therapy (Keeney, 1983).

In the present case, the teacher may conclude that the problem rests within the pupil, so that if the teacher can identify the cause and intervene effectively, the problem will cease to exist. The teacher has used a simple, incomplete description to explain a problem that is an interactional phenomenon. This jump is not necessarily problematic when it is for simple descriptive or colloquial purposes. The problem with this mistyping arises when these mistyped higher-order descriptions are used as the basis for the justification of the implementation of particular problem-solving strategies.

This separating of parts of a system and treating each part as if it were a distinct entity while ignoring the reciprocal processes of the interaction around the problem results from logical mistyping. It is possible that interventions that follow from this logical mistyping, may, in the long run, increase the incidence of an individual's underachieving behaviour, because such interventions ignore the response the other aspects of the system may make following the intervention. "The things which are categories of action do not obey the reinforcement rules the way action obeys the reinforcement rules" (Keeney, 1983, p.34).

Underachievement is not a simple, observable behaviour but a category of actions. Bits of behaviour or simple action are always organised as parts of an interactive

process. Problematic behaviour fits into the organisation of a particular interactional context.

In sum, reconstructing our descriptions of a problematic behaviour such as underachievement is essential if we are going to move away from offering solutions to the problem as though the problem was a simple, reified action carried out by an individual student. Descriptions need to move away from seeing underachievement as an isolated, simple action to seeing it as a behaviour that is part of a larger interactional pattern. In order to make this shift, there needs to be an awareness of the observer's role in the construction of, and interaction with, the described problematic behaviour. Furthermore, the reification of the problem can be avoided by constantly distinguishing between our descriptions of a process and our classification of that process, in essence avoiding logical mistyping.

#### Shifting the Boundaries of Individuals toward the Context of Completed Circuits

The second feature of ecosystemic theory is that there is an attempt to shift the boundary or punctuation of individual behaviour towards descriptions that are contextual, including in them the relevant cybernetic interactional patterns that could possibly be maintaining the problem.

As highlighted in a previous section, what we perceive always follows from an act of making a distinction. The distinction that the observer makes is an arbitrary punctuation of what he observes. A description of the distinction made is what the observer reports he perceives.

Those who made use of theories based on positivistic explanations, drew distinctions of parts, rigidly demarcating the causal elements of the problem under study.

Following ecosystemic theory, however, distinctions of cybernetic patterns are drawn. By considering a systems wholeness, helpers may come to recognise that the "total self-corrective unit which processes information, is a system whose boundaries do not at all coincide with the boundaries either of the body or what is popularly called the self or consciousness" (Bateson, 1972, p.319)

The implication of this for the present research is that drawing a distinction of the problematic behaviour that includes all the relevant completed circuits of which the behaviour is a part, will influence the diagnosis that is made, and in turn, influence the type of problem-solving intervention that is chosen. Furthermore, an ecosystemic description will also assist the helper in understanding the processes and methods of change that are desired. A detailed explanation of these implications for an ecosystemic investigation of underachieving behaviour follows. Firstly, describing underachieving behaviour in a contextual way needs to be understood.

#### A Contextual Description of Underachieving Behaviour

Problematic behaviour can be represented as recursive feedback cycles of escalated behaviour and experience that are organised in a whole interactional system. That is to say, at the order of social interaction, an individual's problematic behaviour marks a particular kind of recursive relationship with others.

Therefore, in our attempts to describe problematic behaviour, we are always dealing with many interacting cycles and loops (Hoffman, 1981). However, because of our limited consciousness of particular situations, it is not possible for the helper to always know the problem behaviour within the context of all completed circuits. Because of our

limitedness in identifying all the cybernetic circuits associated with the problematic behaviour, focusing on specific patterns that we are consciously aware of, is an important start in working out how the problem behaviour is being maintained.

The basic ecosystemic premise is that any bit of behaviour (problematic behaviour or otherwise) is always part of an encompassing interactional process, and that this interactional process be described cybernetically, that is, within the context of recursive feedback. Within a particular system there are as many forms of cybernetic processes involving a particular behaviour, as there are ways of drawing distinctions. The particular cybernetic patterns that we choose to distinguish will depend on their usefulness to us in solving the problematic behaviour. If an intervention directed toward a particular cybernetic cycle does not work, another cycle can be drawn. Innumerable cybernetic processes can be discerned and identified.

The task then is to identify problematic recursive cycles and direct interventions at them. One such feedback cycle that we can be consciously aware of is the circular, or recursive relationship between problems and solutions.

Problems and Problem-solving Behaviour. Keeney and Ross (1985) maintain that problems arise from people's attempts to solve them, while solutions arise from people experiencing the problem. This is so because ecology is based upon the fundamental doctrine that all things in nature are complexly, but systematically, interrelated - morally, mentally and physically (Keeney, 1983). Whenever there is a point of ecological disconnection, solutions and cures may perpetuate problems. An important pragmatic question then, is the extent to which problem-solving behaviour creates, perpetuates, or maintains the very problems it purports to cure or solve.

The possibility exists that well-meaning helpers, through their recursive interaction with the pupil, may help to maintain the problem. For this reason, it is important that in the description of the ongoing problem, teachers take into account themselves and other helpers who have become an integral part of the problem-solving process as they have become part of the problem situation.

In the case of underachievement, the underachieving pupil can be depicted as an individual caught in a recursive sequence that includes both his own problem-solving behaviour, and the problem-solving behaviour of helpers. Each effort to avoid underachieving perpetuates further underachievement. Attempts to overcome the problem help to define and maintain it.

Higher-order Cybernetic Processes. The cybernetic process that is maintaining the problem is not always necessarily the recursive process between the problem behaviour and problem-solving behaviour. For example, higher-order cybernetic processes involving recursive interactional patterns within the family could also be maintaining the problem. As Keeney (1983) maintains, "the limits of individual health are controlled by the health of individual's immediate contexts - their families" (p.138).

From this perspective a therapist must be able to distinguish not only simple feedback which maintains the client's presenting problem, but also higher-order feedback which maintains those lower-order processes. The therapist's goal is to activate the order of feedback process that will enable a disturbed ecology to correct itself.

This cybernetic view does not necessarily suggest that we shift our punctuation from a "problematic individual" to that of a "problem family". Rather, the suggestion is that a specific organisation within a family can be maintained

through a recursive interactional process, and it is possible that this process is helping to maintain an individual's problematic behaviour. The cybernetic view helps to identify these recursive interactional patterns.

### Diagnosis

The second implication of describing underachieving behaviour ecosystemically is the effect it has on the diagnosis of the problem behaviour. As can be deduced from the previous sections, diagnosis based on ecosystemic theory focuses on knowing problematic situations in an ecological and systemic way. What becomes critical in diagnosis is knowing how the cybernetic network (of which the problematic behaviour is a part) is interlinked or structured. This idea follows the basic rule of systems theory described by Bateson (1971): "If you want to understand some phenomenon, you must consider that phenomenon within the context of all completed circuits which are relevant to it" (p.244). The relevant completed circuits for the therapist refer to the network of complexly intertwined human relationships in which symptomatic communication has a function.

Being mindful of the social ecology in which the problem is embedded will assist teachers and other helpers by offering them a more comprehensive understanding of the problem.

### Change

The third implication of an ecosystemic description of underachieving behaviour pertains to an understanding of the process of change. Cybernetics not only helps us to describe and understand the pattern of interaction that is maintaining the problem, but it also assists the helper in understanding the processes and methods of change necessary to address the problem. In describing the problematic

behaviour cybernetically, there is acknowledgement that the problematic behaviour is part of the organisational logic of the individual's ecology. It follows then that any strategy or proposed solution needs to remain in the context of the organisational logic of the individual's ecology.

This way of negotiating change is in contrast to a pragmatic, reductionistic approach to solving the problematic behaviour, which can often stem from a decontextualisation of the problematic behaviour.

Conscious purpose, with its aim of achieving specific problem-solving goals, does not always take into account the ecological context of the problem behaviour. Because the problem behaviour has not been thought of in the context of completed circuits, lineal forms of pragmatic plans are attempted to solve the problem. Bateson (1977) reminds us that "the ecological ideas implicit in our plans are more important than the plans themselves, and it would be foolish to sacrifice these ideas on the altar of pragmatism" (p.505). Ecosystemic theory stresses both an aesthetic and pragmatic position to problem solving (Keeney & Sprenkle, 1982).

In summary, the application of an ecological model to develop a strategy to facilitate change, requires that one firstly describes the cybernetic pattern that is maintaining the problem. Following this, an attempt would be made to alter the existing feedback in that circuit. It is then possible that the problem can be alleviated by the creation of alternative forms of feedback which could provide an avenue for change.

### Conclusion

If research in the area of underachieving behaviour is

going to arrive at a creative, comprehensive way of handling the problem, then it is going to be necessary to think about underachieving behaviour differently, and subsequently describe it differently.

The theory for the present research proposes that research in this area move away from describing under-achieving behaviour in materialistic, reified terms, as though it really exists, but rather to describe this problematic behaviour within the interactional context in which it is present.

This cybernetic contextual description is sometimes interpreted as pointing to an "invisible" world since there is nothing to count or measure, and questions regarding what is real are often irrelevant (Keeney, 1983). However, "seeing" a cybernetic world does require changing our habit of viewing reified objects exclusively. Cybernetics frees us from getting stuck with one reified description of the problem, but rather allows for the problem behaviour to be described in many different ways.

This adopting of an alternative way of thinking about underachieving behaviour is easier said than done. Seeing the ecological organisation of which an individual is part rather than a collection of individual behaviours goes against our conventional way of distinguishing school problems. The research presented in chapters 4, 5 and 6 can help to understand how an ecosystemic approach to underachievement can be implemented.

## A REVIEW OF THE LITERATURE ON UNDERACHIEVEMENT

## Introduction

Research investigating the problem of underachievement has been extensive. Throughout recent years, the literature pertaining to this research has been reviewed several times (Borkowski, Carr, Rellinger & Pressley, 1990; Dowdall & Colangelo, 1982; Maitra, 1991; Mandel & Marcus, 1988; Whitmore, 1980). The trend of lack of agreement about the nature, cause and even existence of underachievement continues.

The review of the literature in this chapter attempts to highlight the continual change in thinking evident in the research investigating underachievement. To this end, the literature has been categorised according to the theoretical assumptions of these past researchers.

## Studies Based on Reductionism.

One of the earliest trends in the study of underachievement was the adoption of reductionistic method of research. An attempt was made to reduce the phenomenon of underachieving behaviour to a single causal factor. The research involved isolating single variables which could possibly be causing a pupil to underachieve. From a methodological point of view, rigour and preciseness were emphasised, in an attempt to control the variables not being investigated, so that the effect of the variable under investigation could be measured. The rationale for these studies was that if underachievement can be reduced to a

single causal factor, then a solution to the problem could more easily be implemented.

This type of research can itself be further divided into those studies that focused on external causal factors (environmental factors such as school or family) and internal causal factors (intrapsychic factors). The more popular research has focused on internal causation, that is, searching for the cause of the underachievement within the individual pupil. For example, some researchers have concentrated on the personality of the underachieving students, others on the pupil's attitudes and motivation, while an extensive amount of research focused on the self-concept of the individual.

### Internal Causal Factors

#### Emotional Tensions

Bricklin and Bricklin (1967) maintained that at least 80% of all underachievers were doing poorly because of emotional tensions. Though they did categorise their opinion of causative factors into four groups - physical causes, pedagogic or 'teaching method' causes (that is, when a child fails to learn because he is being taught poorly), sociological causes and emotional causes - they stated that the majority of students underachieve because they suffer from debilitating conflicts.

Kohn (1977), after conducting a longitudinal study of underachieving students, maintained that since the early days of psychoanalysis the consensus of clinical thinking has been that learning difficulties were intimately related to the vicissitudes of the child's social and emotional development and to the nature of the resolution of conflicts. They concluded that nothing has really changed pertaining to the causal factors of underachievement today.

He investigated the correlation between the sociocultural matrix in which the child is embedded and his school achievement, and found that his results fully supported the hypothesis that early emotional impairment was predictive of later underachievement.

### Attitudes

Other researchers have highlighted the issue of individual attitudes, believing that it is the pupil's attitudes that lead to underachievement. Parish and Parish (1989) attributed underachievement to the pupil's attitude to school, stating that helping pupils feel good about school may be the first step in helping them do better in school.

Rimm (1988a) maintains that underachievement is linked to the pupil's attitude to competition. Using a method known as AIM (Achievement Identification Measure), which is a parent report intended to identify pupil underachievement characteristics, it was found that a central underlying factor related to underachievement is the student's inability to cope with competition. She concluded that pupils who have not learned to handle losing often view school as a game or chore in which they see little hope for success.

### Self-concept

Mandel and Marcus (1988) report that many studies have attempted to differentiate achievers from underachievers by looking at general or global self-concept, with a substantial amount of research concluding that underachievement is closely linked to the self-concept of the student. Geffen (1992) reports that the most distinguishing characteristics of gifted underachievers were a low self-

concept, low self-esteem, and an external locus of control orientation.

From their research, Rimm and Olenchak (1991) concluded that while underachieving pupils may acknowledge that they are "smart", they do not usually have the confidence to prove their high ability levels through school accomplishments.

Others (Emerick, 1992 and Wolfle, 1991) maintain that underachievement can be attributed to the lack of development of other skills apart from academic skills. If performance in school is deemed inadequate, the pupil may also perceive himself as inadequate in other kinds of learning experiences. As these unpleasant experiences continue, a negative attitude toward school, self, and learning in general may result, and poor motivation habits may develop.

Whitmore (1980) substantiates these findings through his review of the literature on underachieving gifted students. He states that:

Reviewers of the literature on underachieving gifted students, generally have identified the child's difficulties in personal and social adjustment as causes of his underachievement. The difficulties reported have included inadequate social and family relationships, inability to persevere, lack of integration of goals, poor self-concepts and negative outlooks on life. (p.189)

### Underachieving Personality

Mandel and Marcus (1988) found that many researchers have considered underachievers as an homogeneous group (in terms of personality structure) and have tried to

utilise clinical observation and various psychological instruments to differentiate underachievers from achievers, attempting to find evidence that would suggest a generalised underachieving personality. For example, Bricklin and Bricklin (1967) found that passive aggressiveness dominated the personality of the underachiever.

The passive-aggressive person is terrified by the feeling of anger. Passive-aggressive children seek hidden ways to express anger, such as through the development of an education problem. The passive-aggressive child with an educational problem strikes back at his parents where it 'hurts' - in their pride over his achievement. He expresses his anger 'passively' by wounding the parents' pride. (p.14)

Similarly, Rimm (1988a), concluded from her research, that the personality of underachievers is marked by manipulative traits: "Underachievers are virtually all manipulative, some less obviously than others. They may overtly attempt to manipulate parent against parent, teacher against parent, parent against teacher, or friend against friend" (p.3).

In her attempt to characterise underachievers as an homogeneous group with regard to personality, Heacox (1991) developed several broad characterisations of those who can not or will not play the school game. Her stated rationale was not to create a way of labelling students, but rather that the characterisations would enhance our understanding of certain behaviours and characteristics.

#### External Causal Factors

Research suggesting external causal factors for underachievement focused mostly on the school and the family.

## Family

Gowan (in Maitra, 1991) summarised the findings from various studies. According to his findings, parents who are either too autocratic, too dominant, too protective, or too laissez-faire arrest the child's development. These studies conclude that underachievers missed the most needed early experiences in realistic goal setting which generally led to a personality with a strong superego. The gifted underachiever turns out to be a kind of intellectual delinquent who withdraws from goals and activities and active social participation generally.

Wellington and Wellington (1964) in their study of parents of underachievers concluded that:

....it is the parents that falter into playing the role of conscience for their child, and this role is usually assumed by the mother. Then she assumes the perpetual battle of continuing to act as the child's conscience so that he accomplishes something, or of pushing and yelling when she is tired of forcing. (p.54)

While they state that their results are inconclusive and require further research, they do suggest that their findings point to the following causal factors of underachievement: (1) the parent's lack of real respect for the child's ability, (2) antagonism by the parents toward him because of his failures, and (3) the parents communicating to the child in a way that leaves him feeling that it is he alone who is at fault.

Elliott (in Mandel & Marcus, 1988) found definite differences in the reported child-rearing practices of parents of achievers and parents of underachievers. There was a lack of agreement between parents of underachievers on standards of expected behaviour of the child. Mothers of

underachievers were less certain of child-rearing practices than mothers of achieving children, and parents of underachievers were more lax in immediate rule enforcement. Mothers of achievers were found to be more effective socialising agents, in that they used more praise, rational but nonrestrictive control, reasoning, and fewer tangible rewards.

Rimm (1988b) refers to 'oppositional families' as causing underachievement. These families are characterised by the husband and wife virtually always being embattled, and although they recognise their own marriage problems, they typically do not identify the sabotage effects on their own children. However, the children's school achievement and behavioural patterns will reflect the battling parents with whom they identified. She draws the conclusion that:

A basic underlying cause of Underachievement Syndrome is power struggles within the family. The degree and methods of power struggle will heavily influence the achievement patterns of the children, and teachers will have very little control over reversing these patterns without the help and cooperation of parents. (p.60)

Mandel and Marcus (1988) summarise the findings of a number of studies that examine the family composition of underachievers. With regard to sibling variables, research has produced either negative or equivocal results regarding the relationships among birth order, age spacing, and academic achievement. Subtle interactive influences may occur among many variables, but these have not been fully explored. Socio-economic status has been a confounding variable in many of the studies in this area.

### Schools

Kolb and Jussim (1994) maintain that underachievement

is a result of classroom conditions that fail to meet the needs of the gifted and lead them to tune out or act-out. The teachers then interpret these behaviours as evidence of low classroom competence, and communicate expectations for continued poor performance. A self-fulfilling prophecy of underachievement may then occur. They conclude that teacher expectation can be used to enrich, rather than impair, the school experience of underachieving gifted children, by the teacher intentionally maintaining high expectations, and promoting positive self-fulfilling prophecies.

Butler-Por (1987) emphasized that children are not born underachievers, their school behaviour is acquired. She concluded that teachers can be very effective in helping underachieving children to fulfil their potential when they are provided with appropriate methodology on how to help the individual overcome the specific problems which prevent him from enjoying school learning and from attaining the scholastic level of which he is capable.

Rimm (1988b), continuing to believe that the Underachievement Syndrome is usually initiated at home, maintained that schools and teachers can and do make a dramatic difference. For example, some classroom environments maintain and actually exacerbate the Underachievement Syndrome, while other classrooms help to cure it. Some school circumstances actually can become the main cause of the Syndrome. While teachers may follow many philosophies of education, some environments can be extremely problematic for underachieving pupils.

### Peers

Ford (1992, 1993) conducted a two-phase study investigating the determinants of underachievement. After the first phase, Ford (1992) found underachievement to be linked to the student's attitude towards an ideology of

achievement, maintaining that this attitude plays an important role in their academic behaviours. At the same time, their attitude toward achievement is affected by the importance they place on friendship. She concluded that if friendship is more important to students than academic achievement, then gifted students may choose to underachieve to avoid feelings of isolation. In the second phase of her study, Ford (1993) found her results to be consistent with past research in that she found that peer pressure and fear of isolation are powerful contributors to underachievement.

### Summary

The research that has been categorised as single variable reductionistic research, never seemed to adequately address the problem, and in some ways seemed to even exacerbate it. This point is well illustrated by the findings of Parish and Parish (1989).

As a response to the idea that underachievement is rooted in the home environment, many schools spend a great deal of effort trying to teach parents how to motivate their children, and how to enhance their achievement. But accepting the familial effect model (i.e. attributing the probability of school success to factors related to family background) allows teachers to despair when faced with low-achieving students.  
(pp.72-73)

Furthermore, in the attempt to isolate particular personality traits as unique to underachievers, the only conclusive results to emerge are that the list of personality-related characteristics for underachievers is most heterogeneous and contains seemingly incongruous combinations. For example, underachievers have been described in some studies as unassuming and easygoing, while at other times they have been described as anxious,

depressed, or inhibited affectively (Mandel & Marcus, 1988).

It was the failure of this single variable reductionistic research to elicit any substantive strategies to address the problem of underachievement that led researchers to investigate this phenomenon in other ways.

While not disregarding these single factors which seemed to be in some way linked to underachieving behaviour, an attempt was made to describe variables that were interacting with each other to bring about underachievement.

#### Studies Based on Interactionism

In 1965, Lavin (in Mandel & Marcus, 1988) summarized over 300 published studies investigating underachievement. He pointed out that studies used a variety of possible predictors, including personality variables, intellectual functioning, and sociological factors (e.g., socio-economic, demographic, teacher-student relationships, peer relationships, etc.). Lavin clearly delineated the shortcomings of each type of approach in offering predictor factors of underachieving behaviour to prediction, and stressed the need for research which would combine psychologically based variables (e.g., personality) as they interact with sociological variables.

Research describing the causal factors as interactional in nature began to emerge, particularly emphasising the interaction between the underachieving pupil and the teacher.

Gaskins (1992), following on from previous studies that highlighted the student's lack of confidence as a causal factor to underachievement, found that the pupil's relationship with his teacher can positively affect his

confidence and therefore his ability to achieve. He emphasised the importance of confidence and motivation in learning, maintaining that learning requires a continual cycle of tearing down and rebuilding one's personal knowledge structures so that one can have a more comprehensive understanding of the world. This rebuilding process is a risky business. Having the courage to restructure requires self-confidence and the motivation to take such action. Gaskins (1992) maintains that although such self-confidence and motivation cannot be instilled in a person, knowing that someone is behind you - a trusted person who will support and guide you and come to your assistance if assistance is needed - does seem to provide learners with the increased confidence that will allow them each to take risks and venture forth to their fullest potential.

It was from this theoretical base that Gaskins (1992) put forward a "mentor program" as the solution to under-achievement. It is a program in which students receive not only guidance in the application of learning strategies but emotional support as well.

Mandel and Marcus (1988) maintain that there are many dimensions which have been recognised as contributing to the relationship between teacher variables and pupil academic achievement. These dimensions include both teacher and student factors. For example, a student's physical attractiveness, school file information, socio-economic status, racial characteristics, classroom behaviour, and academic performance do have an impact on teacher expectations for that pupil's academic performance. Yet even these may not automatically continue to play a definitive role, especially as the teacher gets to know the pupil better.

Felton and Biggs (1977), though acknowledging that the

causes of underachievement are multi-dimensional, believe that:

Covert messages in the classroom interchange between teacher and student, in the hallway exchange between student and administrator, in the encounter between parents and system, or community and school district, lead the student to define herself and her place within the educational system. (p.6)

Emerick (1992), in interviewing students who had overcome underachievement problems, found that each student acknowledged the role of an individual teacher who was compassionate, held high expectations, and was knowledgeable and enthusiastic about the academic subject.

#### Summary

This category of research which emphasized the interactional factors between the pupil and the teacher focused more on solving the problem of underachievement than trying to elicit the precise causal factors of this problem. Like the previous category of research reviewed, the interactional studies again produced many variables which could plausibly be contributing to underachievement.

It was the large number of possible variables seemingly attributing to underachieving behaviour, that led the research into the area of multi-dimensional research. There was an acknowledgement that underachievement could not be attributed to one single causative factor, nor to one interactional relationship between the student and another. The causation of underachievement was now being put forward as multi-faceted and multi-dimensional. Rather than focus on only one dimension, such as personality or family or peer variables, research began to take a multifactorial approach and studied a number of variables simultaneously.

### Multi-dimensional Approaches

Research had begun to acknowledge that underachievement, and its other side, achievement, were multi-dimensional phenomena and that a broad inclusive investigation of the many factors that may be contributing to the underachievement of a any particular pupil was necessary. There was a movement by researchers to take into consideration the complexity of the underachievement phenomenon.

Felton and Biggs (1977) maintain that for many years it has been clear that the problem of underachievement had multiple causes which, in today's terminology, might be grouped into psychodynamic, sociocultural, and educational categories. Psychodynamically, underachievement is viewed as a reflection of deep-seated conflicts, manifested in passive aggression and other defenses which the individual has adopted to cope with his early environment. Socioculturally, under-achievement is seen as stemming from the impact of the individual's ethnic or racial heritage and environment on those attitudes and behaviours relating to achievement motivation, achievement values, or educational-occupational aspirations. Educationally, underachievement may result from the student's reaction to differential treatment reflecting teacher or administrator bias relative to social class, ethnicity, personality type, or sex.

Krouse and Krouse (1981) concluded from their study that underachievement was the result of weak academic skills, deficient self-control skills, and interfering affective factors. They proposed a multi-modal theory of underachievement.

Rimm (1988a), after years of research in the area of underachievement, maintained that there is certainly no one simplistic explanation for the educational dilemma which

finds tens of thousands of children with good abilities who are not learning within the same classrooms where teachers successfully teach other youngsters. Her work started to become more multi-dimensional.

A parent or teacher alone is likely to have little effect on the overall societal conditions, but together or separately they can adjust their home and school environments to compensate for social impacts and can thus foster achievement within their children. (Rimm, 1988a, p.294)

One of the most comprehensive research reviews on the interaction of variables which impact on the learning process was reported in the classic work by Cronbach and Snow (in Mandel & Marcus, 1988). Studies which focused on the inter-action among such variables as aptitude, learning rates, type of instruction, content of instruction, personality variables, and cognitive skills, structures, and styles were all conceptually and statistically reviewed and evaluated. Cronbach and Snow's integrative work highlighted the complexity of variable interactions and effects on learning and achievement.

More recently, Baum, Renzulli and Hebert (1994) reported that dealing with underachievement involves addressing four main problems: emotional issues (expressed in acting out behaviour), peer group pressure (seen in the need to be popular), the lack of an appropriate curriculum and an undiagnosed learning problem. Their proposed intervention focused on the crucial role of the teacher in (1) taking time to get to know the student before initiating an investigation; (2) using their time with students to facilitate the process rather than counsel them regarding their underachievement, and (3) recognising the dynamic nature of the underachievement problem by observing students, reflecting on their behaviours as they work on

their projects, and identifying strategies to help students overcome problems.

### Summary

As a reaction to the large number of variables that were reported contributing to underachieving behaviour, research tended toward a multi-dimensional model. Research making use of this model concluded that underachievement is a complex phenomenon that cannot be adequately described in terms of a single causal factor.

#### The uniqueness of Each Underachieving Individual

With the acknowledgement of the complexity of underachieving behaviour, came the movement away from generalising about this problem to more focusing on the individual underachieving student.

As early as 1971, Zilli (in Mandel & Marcus, 1988) concluded that no one factor can be found to explain underachievement. She summarised those factors implicated in underachievement: (1) Lack of motivation, (2) desire for peer acceptance, (3) excessive authoritarianism by school authorities, (4) poor teaching skills and attitude, (5) personality characteristics of underachiever, (6) over-protectiveness by parents, (7) over-permissiveness by parents, (8) authoritarianism by parents, and (9) large families. Though this list of etiological factors is extensive, the researcher qualifies them by stating that it has been her clinical and research experience that different types of underachieving students react differently to each of the above conditions. For example, one type of underachieving student may react negatively and intensely to an authoritarian school structure, whereas this may not be true for another type of underachiever.

In order to understand the process of the reversal of the underachievement pattern, Emerick (1992) proposed that it is necessary to discover those factors that may contribute to above-average performance in school by investigating bright children and young adults who have moved from patterns of underachievement to academic achievement. She found that there were six factors identified by the students as having a positive impact on their academic performance: out-of-school interests, parents, goals associated with academic achievement, classroom instruction and curriculum, the teacher, and changes in self. Emerick concluded that individual patterns varied considerably and that underachievement and its reversal is complex and unique to each child.

Fehrenbach (1993) reported the development of a program that changed patterns of underachievement in students to patterns of success. A strong factor in the success of the program was the individualisation of goals to meet the needs and interests of each student.

#### Summary

With multi-dimensional research acknowledging the complexity of the problem of underachievement, there was a concomitant acknowledgement that the complexity lay not only with the number of factors attributable to the underachieving behaviour, but more so, the differences in the manifestation of individual underachievement.

#### Conclusion

This review of the literature highlights the fact that considerable research has been devoted to understanding, predicting and resolving underachievement. Studies have varied with regard to methodology and theoretical bases. For

example, some studies have focused on identifying characteristics unique to this group, isolating causal factors, and developing effective interventions to reverse the underachievement pattern, while others have focused on interactional patterns between the underachieving pupil and the teacher or the parent.

An obvious hallmark of this literature is the diversity of the findings of the studies. Each study seemed to be adding onto past investigations, acknowledging their findings, but at the same time stressing another contributing factor to underachieving behaviour.

All these studies have made a significant contribution to the research of underachieving behaviour. They have highlighted different factors involved in this behaviour. However, more recent studies have been using a different language to describe underachieving behaviour. For example, Maitra (1991), referred to underachievement as a chain process, each variable interacting with the other, giving rise to a situation which may lead to a chronic behavioural pattern. Rimm (1988a) asserted that if a child who is underachieving is going to be helped, the pattern needs to be identified early to help the child reverse the process.

With this change in the language being used to describe underachievement, ~~there was also an acknowledgement of a need to move away from traditional and conventional paradigms.~~ Ford (1992) concluded her study stating that "underachievement is a complex and perplexing concept, requiring a movement away from traditional theories and paradigms, including those which hold that underachievement results only from a lack of motivation to achieve" (p.134).

Though this articulation of the need for something different in the research of underachievement continues to emerge in the recent literature, there is still a confusion

of what needs to be different. For example, Ford (1992) acknowledges the need for a different paradigm, but she continues to refer to underachieving behaviour in reductionistic terms. She states: "Underachievement is an interactive, multidimensional concept that also incorporates effort into the definition. That is, students who do not put forth high levels of effort in school may not reach their full academic potential and are underachievers" (Ford, 1992, p.135).

Researchers continue to be tempted to 'encapsulate' underachievement succinctly in terms of characteristics and definition. After acknowledging the complexity of underachievement, Rimm (1988a) concluded that because measures of underachievement are not available and because underachievement plagues many families and schools, it seems appropriate to develop a theory of underachievement and a means to define and describe its characteristics. In her most recent research Rimm (in Rimm & Lovance, 1992) concludes that when gifted children lack locus of control and are not good at competing, there are usually school and home reasons for their underachievement.

There is now a consensus that underachievement is a complex phenomenon, and can be perpetuated by a number of contributing factors. There is a general assumption that school, teachers, family and personal characteristics of the student can all impact upon the student's success or lack of progress in school (Fehrenbach, 1993).

With the acknowledgement of the complexity of underachieving behaviour, a radical shift in paradigm needs to occur, with the concomitant change in language used to describe the phenomenon. Complexity cannot be described using reductionistic methods and reductionistic terms.

## METHODOLOGY

## Introduction

The previous chapters have emphasised the need for a shift in the way underachieving behaviour is described. As has been outlined, this shift involves a fundamental change in the underlying paradigm used by those doing the describing. Descriptions of underachieving behaviour, for the most part, arise out of research. It follows then, that the research premises and the overall design of the present research need to undergo a concomitant fundamental change. The necessity for this change can be best explained by taking one of the basic differences between positivism and a systemic worldview, that is, positivism's emphasis on reductionism and systemic approach's emphasis on holism.

Ecosystemic theory, based on the assumptions of a systems worldview, assumes that an holistic approach to the study of human behaviour, renders the resultant descriptions of behaviour more complete and more comprehensive than those emanating from a reductionistic, positivistic approach. The language used to describe the results of research based on holism is one of pattern and connectedness. More specifically, ecosystemic theory advocates that the descriptive patterns that are most useful in changing problematic behaviour are the cybernetic patterns prevalent in the interactional network of which the problematic behaviour is a part.

A positivistic approach to research, on the other hand, aims at creating data amenable to measurement. In order to do this, an interactional network in which the problematic

behaviour is embedded, is transformed into immutable characteristics of individuals impervious of context but amenable to measurement (Schwartzman, 1984). In other words, the aim is to reduce this interactional network (of which the problematic behaviour is a part), to single, isolated variables, so that through quantification and measurement, the causal factors of the problematic behaviour can be ascertained. Yet, as Bateson (1978) states: "Quantification will always be a device for avoiding the perception of a pattern" (p.42).

It is necessary for ecosystemic research to avoid quantification in order to perceive pattern. The theory assumes that there are interactional patterns, (that are recursive in nature, and can be most aptly described in cybernetic terms), that are maintaining the problematic behaviour, and these need to be identified. Once they have been described, problem-solving strategies can be implemented that attempt to restructure or re-pattern the network. An appropriate restructuring of the network can possibly result in the alleviation of the problematic behaviour (Keeney, 1979).

Therefore, whereas the purpose of positivistic research is to identify single variables through a reductionistic, quantitative approach, the purpose of ecosystemic research is to identify and describe, qualitatively, cybernetic interactional patterns connected to the problematic behaviour. Weakland (1982) explains it this way: "We aim to understand and explain any selected item of behaviour by viewing it in relation to its wider context of social interaction" (p.172). In order to more fully understand the implication of this fundamental shift from reductionism to holism for the present research, the basic differences between quantitative and qualitative research are detailed below.

## Qualitative vs Quantitative Research

### Ecological Validity

Qualitative research places an emphasis on ecological validity. Ecological validity refers to the drawing of inferences from responses under experimental conditions, (or from what is said in interviews), to what people do in everyday life. Those advocating qualitative research question the validity of generalising from results of research conducted under experimental conditions to everyday situations.

Quantitative research, on the other hand, assumes entities separate from the systems of which they are a part. The assertion is that the social world **can** be understood by the subsumption of social events under universal laws, regardless of the context. As Schwartzman (1984) put it, "since an atomistic science can only produce atomistic 'facts,' it is constantly validated by experiments that assume atomistic data and concurrently eliminate process and context as basic aspects of the psychosocial world" (p.226).

In other words, if research is about concentrating on specific identifiable variables, it is possible that the researcher may shut out or ignore an enormous amount of sensory based information during the course of his investigation. He may become disconnected from ongoing events in the social interactional field.

The implication of this for the present research is that there is no search for universal laws pertaining to the predictability of underachieving behaviour. This is rejected in favour of detailed descriptions of the experience of underachievement and the patterns that constitute it. The premise is that bits of behaviour are always organised as parts of an interactive process. In other words, it is

assumed that problematic behaviour fits into the organisation of a particular interactional context.

In sum, research conducted qualitatively, stresses the importance of the ecological validity of the research. It follows then that the only legitimate goal of this research are descriptions and complexity in description.

### Objectivity

Closely linked to the previous point of ecological validity, are the ideas of objectivity, which is another distinguishing feature of these two types of research. Quantitative research assumes that a real social world exists independently of our observing of it and that this independently existing world is singular, stable, and predictable. It further assumes that if we apply the proper methods, we can have increasingly accurate views of what really happens in the world. Ecosystemic qualitative research does not assume that "what is out there" is necessarily singular, stable, or predictable. Instead, it assumes that at any point in time there may be many equally accurate ways to describe events in the social world (Atkinson, Heath & Chenail, 1991). No observer has privileged access to "what really happens" in the social world by uniformly applying a specific method of observation.

Ecosystemic theory, based on the ideas of self-referentiality, asserts that descriptions of sensory-based experience are always connected to some sort of internalised symbolic system that prescribes certain ways of encountering the world through ones senses. The fact that abstractions are mixed with sensory experience suggests that there is really no such thing as "pure sensory experience" or "raw data" (Keeney, 1983). As Atkinson et al., (1991) put it, "contrary to what scientists have believed for decades,

there is no general methodology that can lead to the kind of certainty that we once had hoped the positivist approach to science would give us" (p.164).

Ecosystemic theory assumes that the same physical stimulus can mean different things to different people, and, indeed, to the same person at different times. The aim of research then, is to describe the interactional process in which the problematic behaviour is embedded in many different ways, being careful to describe complete cybernetic patterns, which include the connectedness of the behaviour of the relevant individuals in the system. The specific description that is reported is dependent on for whom it is being made and for what purpose. Moreover, if a wide variety of patterns are drawn, then one is less likely to get stuck with a perpetuation of the problem. That is, if a drawn cybernetic system, does not lead to the desired outcome, then another can be drawn.

Choosing one description and saying it is more correct than others, is deciding to punctuate your world of problem-solving in a very limited way. If the same distinction is drawn each time, it is possible that the recipient of your problem solving frame does not fit into your frame of action (Keeney, 1983).

Therefore, it is more helpful to refer to a description generated from research as the "pragmatic truth," (as it is referred to by the Milan team). This is the most "useful" truth in that it connects certain events and behaviour in such a way as to enable the family or school to make constructive changes (Papp, 1983).

#### Legitimacy

With this shift in research methodology, there needs to be a shift in the criteria for legitimising the research.

The major criticism of qualitative research is that it is too subjective and uncontrolled to yield valid findings.

However, those in favour of qualitative research contend that the legitimacy of any research findings cannot be determined by the researchers themselves. Atkinson et al. (1991) maintain that while the insights generated through qualitative research need to be scrutinised and evaluated, the trustworthiness of hypotheses, insights, or explanations cannot be established by individual researchers, regardless of the methods they use. Legitimacy needs to be established by a communal judgement process.

The implication of this for the design of research is that communal judgment about the quality of a research report can only be determined to the extent that readers have access to the researcher's process. The research needs to offer the reader insight into the researcher's investigative process. That is, the researcher's pattern of organising experience needs to be exposed and open for scrutiny. How the data has been organised needs to be clearly shown. Once the reader learns this proposed way of drawing distinctions of the particular behaviour under study, they can begin applying this set of distinctions in their own daily lives, and in this way, examine the legitimacy of the present method. In other words, readers will decide the legitimacy of the proposed set of distinctions as they replicate this way of drawing distinctions themselves (Atkinson et al., 1991).

### Designing Qualitative Research

The previous section has outlined basic characteristics of qualitative research. These characteristics necessitate a different approach to the designing of a methodology for the present research. The following three characteristics of a

qualitative research design are detailed because they directly pertain to the design of the present research.

### An Evolving Process

The end result of qualitative research is a description over time of an interactional pattern, in a particular context rather than the quantification of static variables. In order to achieve this end, the research can be assumed to be characterised by flow and development. Because of this evolving nature of the research, it is not viable to design the research (inquiry) in any final, definitive way before actually embarking on the process.

In order to maximise information about interaction within a context, the design of the research must be emergent rather than preordinate. Precise procedures cannot be specified. This is for two reasons. Firstly, because meaning is determined by context to such a great extent, and secondly, because the existence of multiple realities constrains the development of a design based on only one (investigator's) construction (Lincoln & Guba, 1985).

Though the design is an evolving one, a focus for the inquiry still needs to be determined. This serves the purpose of establishing continuity and coherence through delineating the terrain.

### A Human Instrument

The human is the instrument because only a human has the characteristics necessary to cope with an indeterminate situation. The qualities of the human as instrument are as follows: "responsiveness, adaptability, holistic emphasis, knowledge base expansion, processual immediacy, opportunities for clarification and summarization and

opportunity to explore atypical or idiosyncratic responses" (Lincoln & Guba, 1985, p.194).

### Natural Setting

Qualitative research is always carried out in a natural setting (as opposed to a laboratory setting), because the context is heavily implicated in the meaning of the behaviour under study. That is to say, the phenomena under study takes its meaning as much from their contexts as they do from themselves (Lincoln & Guba, 1985). The idiographic characterisation of the context under study imbues the behaviour with a unique meaning.

### Design of the Present Research

Having considered the main differences between quantitative and qualitative research, and some specific characteristics of qualitative research, the rationale of the present research design can be better understood.

### Aim

The aim of the research is to gather information so that the underachieving behaviour of a particular pupil can be described in an ecosystemic way. It can be recalled, from the theoretical chapter, that this will be a description of the ongoing interactional pattern of which the under-achieving behaviour is a part.

### Focus

The focus of the research will therefore be the relationships between this particular underachieving pupil, and all other systems that interact with him about his behaviour. The focus could be drawn as wide as his whole

school career thus far, and as inclusive as all his relationships in this time frame, from his relationship with his parents and siblings, to his relationships with his peers, both in the classroom and in his extramural activities. But in order to make the inquiry manageable, there needs to be inclusion and exclusion criteria of new information that comes to light.

Therefore, the limits decided upon for this research context are going to be the underachieving pupil and his relationships with others who are concerned about his progress or lack of progress at school, namely his teachers and his parents.

The time period decided upon is the second and third terms of the school year 1995. These two terms were chosen because they offer the necessary variety in class activity, so that a comprehensive pattern can be described. For example, the Std. 5 students write June exams at the end of the second term, and they have cycle tests during the third term, both of which contribute to their promotional mark at the end of the year. Added to this, is a parents' evening at the end of the second term, at which the teachers discuss the student's progress with their parents.

### Sampling

Following the definition of underachievement put forward for this research (that underachievers are those pupils who, by the teachers' observations, demonstrate an exceptionally high capacity for academic achievement and are not performing satisfactorily in daily academic performance in the classroom), the teachers at the school were asked to choose a pupil that they thought was underachieving and who would be willing to participate in the research. His parents were then contacted, to ask if they would agree to their son participating in the research. They were asked if they would

also participate in the research.

### Evolving Process

In order to realise the aim, information needs to be gathered about the pupil's underachieving behaviour and other people's reaction to it. This needs to be conducted in a way that will facilitate a description of this interactional pattern over time and in a particular context.

In order to gain information about the interactional pattern between the student, his teachers and his parents, the research involves ongoing interviews with each of these systems over the stipulated time frame.

The nature of each interview is dependent on the information generated in the previous interview. That is, the aim of the ongoing interviews is to gain a comprehensive and complexified description of the interactional pattern around this problematic behaviour. Each interview increases the understanding of this pattern. But it is only after each interview, in the processing of the data that has been generated from the interview, that it will be possible to prepare the questions for the next interview.

The dates on which the interviews were to have taken place are as follows: (1) Mid-way through the second term (25 May 1995) - initial interviews, gaining an understanding of how each system sees the problem and how they are dealing with the problem. (2) The end of the second term (21 June 1995) - interviews just after the exams have been written, to gather information about how each system have reacted to the exam results. (3) Mid-way through the third term (16 August 1995) - interviews to gather information about the progress being made and how the different systems are responding to the progress/lack of progress of the June Exams. (4) The end of the third term (27 September 1995) -

interviews to get an overall description of how each system have understood the progress/lack of progress over the course of this year.

### The Evolving Content of Each Interview

Content of Interview 1. In the first interview with each system - the teachers, the pupil and the parents - the aim was to get them to describe how they see the problem. The descriptions helped me to generate a tentative hypothesis of the pattern of interacting behaviour around this problem of the pupil underachieving.

The teacher's described Peter\* as a loud mouth, a student who did not do as he was told, and someone who lacked self-discipline. They saw the problem as Peter not producing work when he had been asked to (i.e., not doing homework), and when he did do the work, it was 'slap-dash'.

Their response to this perceived problem was to vigilantly keep a watch on Peter's work, and to constantly reprimand him when work was not up to standard. Furthermore, their response was to alert the parents to the fact that Peter's work was not up to standard.

Peter himself did not see that there was a problem. He felt that his work was up to standard, and that he and the teachers got on fairly well.

The parents felt that Peter could be doing better, but that he needed time to settle into the school. Their main concern was that the teachers seemed to be picking on him a lot, and are seemingly finding fault with everything that he does or does not do.

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\* The name of the pupil has been changed in order to maintain anonymity.

After the first interviews with the respective systems, my tentative hypothesis was as follows: The less work that Peter did (the less that Peter saw there was a problem), the more the teachers would interact with him, verbally reprimanding and threatening him about his work, and the less the parents seemed to be interested in the teachers' perception of Peter's lack of progress.

This pattern would escalate until the parents would get involved. The more the parents were involved, the less the teachers would negatively interact with Peter, and the more work Peter would do.

From the formulation of this tentative hypothesis after the first set of interviews, the content for the second set of interviews could be formulated. The pattern described so far pertains mainly to the situation when Peter is not progressing as the teachers think he ought to. It would be important to find out more about the pattern when Peter is progressing in a way that the teachers believe is consistent with his ability. In the next set of interviews, it needs to be found out how the different systems respond when Peter is doing better work.

The information that would be important to obtain from the teachers is: (1) Now that Peter is doing better, what is your response to him? (2) In your interaction with the parents, what has been your response to them, and their response to you? (3) What are they (the teachers) going to do to try to maintain Peter's present standard of work?

Content of Interview 2. The teachers' description of the situation now was that Peter was working better because they were not allowing him to get away with anything. Their response has been one of satisfaction, that they have managed to get Peter to achieve the way they think he can achieve. They are hoping that he will maintain this standard

of work, but they have no plan as to how they can ensure that he will maintain it.

Peter says there has been a difference in his school performance. He acknowledges that this has been a result of his parents having spoken to him about doing better at school. He has also noticed that since he has been performing better, the teachers have not been reprimanding him as they used to. He thinks he will continue to perform as he is doing at the moment.

The parents are happy that the teachers seem to be picking on Peter less. They are happy that he seems to have been making better progress at school, and that the teachers are acknowledging that Peter is a bright child. If things continue the way they are at the moment, they will be happy. They are not sure how to ensure that Peter continues to perform as he is at present. They say it is up to him.

After this second set of interviews, my tentative hypothesis was as follows: The more that Peter achieved and performed at school, the less vigilant the teachers were about his work, and the less the parents got involved in his progress at school.

From this hypothesis, the proposed content for the third set of interviews could be formulated. Some of the questions for these interviews would be as follows: (1) Now that you are happy with Peter's achievement, do you think that his level of present level of achievement is going to be maintained? (2) What is each system doing at this time when progress is seemingly being maintained?

Content of Interview 3. The teachers now described Peter as continuing to work well. They were predicting that his present level of achievement will be maintained. They had little knowledge of how Peter or his parents felt about

his present progress. Contact between the teachers and Peter (and his parents) had been minimal.

Peter reported that his schoolwork was going well. He said he was enjoying school at present, finding the activities interesting and fun.

The parents continued to be happy with Peter's performance at school. They were unsure of how the teachers viewed the present situation because there had been no contact between them and the teachers.

After this third set of interviews, my hypothesis had remained the same as it was at the end of the previous interviews. The questions for the fourth set of interviews would be of an exploratory nature, to find out more of what is going on between the three parties while Peter's level of achievement is being maintained.

Content of Interview 4. The teachers reported at the fourth interview that Peter's work had again dropped to a point where he was underachieving. According to them, he was doing the minimum of work, and again not handing work in when he was supposed to.

Peter, himself, said he was aware of the drop in his performance. He did not know how to account for it, but was not concerned. He said he would just have to put in a bit more effort for the rest of the year.

His parents had been informed, through a report at the end of the third term, that his performance had gone down. They were a little surprised because he had been working so well. But they felt that he would rectify things in fourth term, because he always does better in exams than cycle tests.

## Conclusion

The method adopted for this present research has allowed for information to be gathered about a particular pupil's school performance over the time frame of two terms. The information has been gathered in the form of interviews, which have allowed for evolving hypotheses about the interactional pattern between the pupil, the teachers and his parents to be explored and investigated.

The following chapter illustrates a way in which the information that has been gathered can be organised into an ecosystemic description of underachieving behaviour.

AN ECOSYSTEMIC DESCRIPTION OF UNDERACHIEVING  
BEHAVIOUR

## Introduction

Through the method of conducting on-going interviews with the pupil, teachers and parents under study, information about the interactional pattern, of which the underachieving behaviour of the pupil is a part, has been gathered.

This chapter describes in detail how this information can be distinguished in terms of a pattern. The pattern has been punctuated by three nodal points, the concept "nodal point" being used in this context to describe the pattern of interaction, when that described interactional pattern is at its most apparent. The change in the pattern is punctuated in terms of a point of bifurcation. The concept "point of bifurcation" is used in this context to mean a description of behaviours that are escalating at a particular nodal point, this escalation bringing about a change in the interactional pattern.

The outcome of the research, therefore, is a description of the interactional pattern between teachers, parents and pupil, punctuated in terms of nodal points and points of bifurcation. Excerpts from the different interviews are used to illustrate these different punctuations in the pattern.

There are probably other ways in which the information gathered could have been presented. For example, verbatim transcripts of the interviews could be put forward so that the reader could observe exactly what was said in the interviews, this presentation of the data giving the reader

the opportunity to process this information in the way that fits with his theoretical assumptions of underachieving behaviour. Or, it could be presented in a case study form, with a comprehensive description of the characteristics of the pupil under study.

Following the theoretical assumptions being used in this study, it is proposed that the most helpful way of presenting the information is in terms of a description of the interactional pattern of which the underachieving behaviour is a part. Following an ecosystemic epistemology, I am assuming that the interactional process surrounding the pupil's underachieving behaviour does follow a discernable pattern, and that describing this pattern is the most useful and comprehensive description when considering how and when to intervene in order to bring about change.

#### Processing the Information Gathered

Each interview was audio taped and then transcribed. The transcription was set out in such a way that allowed for the interactional process being described by the interviewees, to be given a classification of form. This was done by dividing the pages into two columns, putting the verbatim transcriptions of the interviews in the left-hand column and a description of the process in the right-hand column. In this way, a pattern over time could be explicitly observed and described.

The relevant excerpts from the interviews are detailed below, together with comments pertaining to the classification of those excerpts and how they fit into the broader pattern.

## A Patterned Description of the Interactional Process Over Time

In classifying the information gathered from the interviews, and describing the process, it is evident that the interactional process between the teachers, the pupil and his parents can be punctuated in terms of three nodal points. At each nodal point, the behaviour of the pupil can be classified in terms of his degree of COMPLIANCE or NON-COMPLIANCE, and the behaviour of the parents and teachers can be distinguished in terms of their degree of INVOLVEMENT or NON-INVOLVEMENT in the pupil's progress at school.

The interactional pattern at each of these nodal points seems to escalate to a point of bifurcation, at which time a different interactional pattern emerges. This different pattern (classified as the second nodal point) continues until such time as it also escalates to a point of bifurcation, again bringing about a different interactional pattern. This interactional pattern, at the third nodal point, resembles the pattern at the first nodal point, there being indication that the interaction of the teachers, pupil and parents over time follows a redundant pattern.

This classification of the information gathered through the series of interviews conducted over the time frame of two terms is summarised in Figure 5.1, and described in more detail in the pages following.

### First Nodal Point

When I first made contact with the teachers, pupil and parents at the beginning of the second term, the interactional pattern between them was characterised by non-involvement on the part of the parents, an involvement on the part of the teachers, albeit a negative, reprimanding involvement, and non-compliance on the part of the pupil.

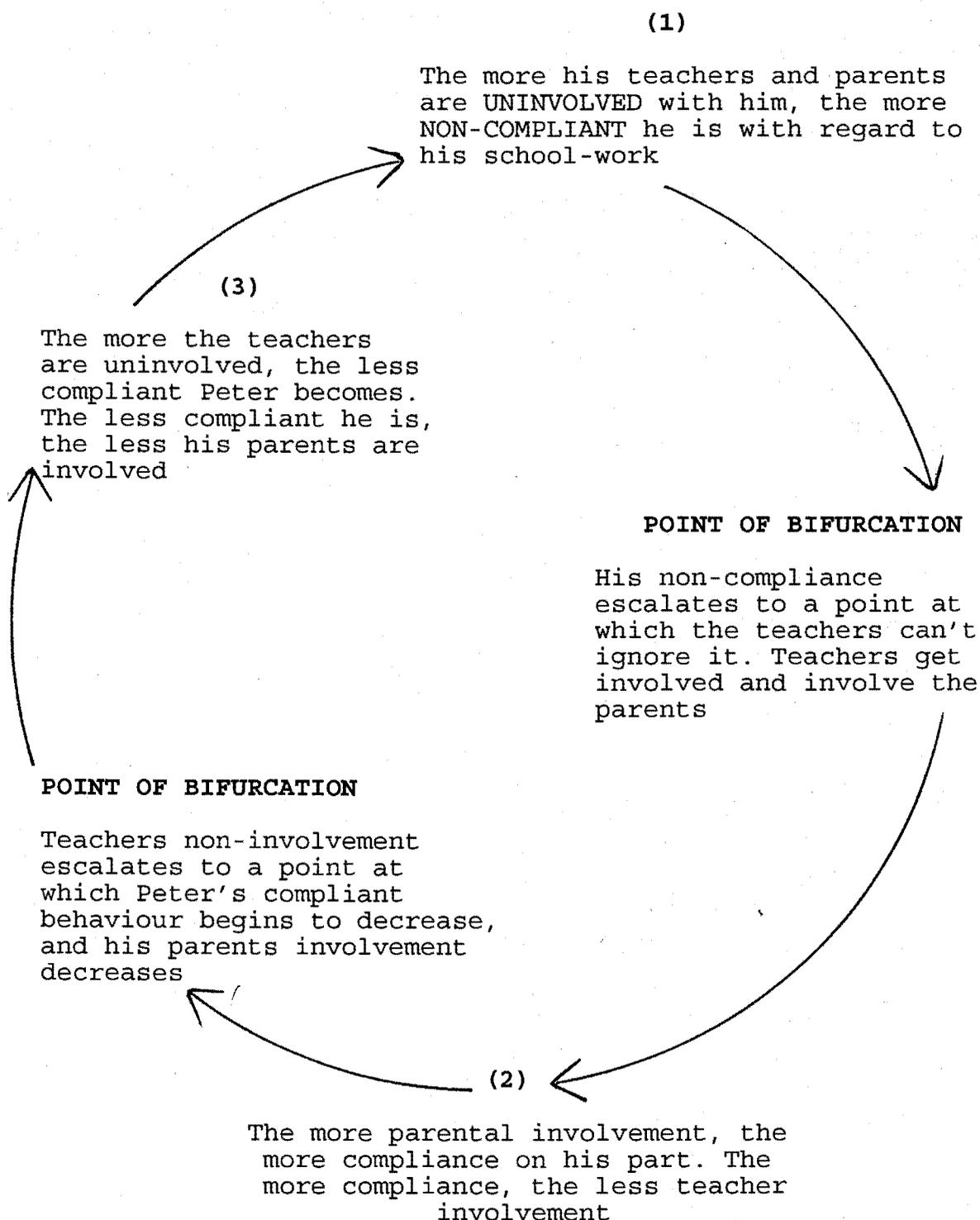


Figure 5.1. Diagrammatic representation of the recursive interactional pattern involving the teachers, parents and pupil

One of the teachers described the pupil's non-compliant first term behaviour as follows:

Teacher 1: His work was seldom finished, but he still scored reasonably well on tests, despite doing, as far as I could see, a minimum amount of work. He was repeatedly in trouble for work incomplete, for work not handed in. Just general slap-dash.

In interviewing the pupil for the first time, I asked him if he thought he was doing his best in his schoolwork at the moment.

Peter: Well, I could do a little better. I'm doing average now, but if tried a little harder, I think I'd do better. If I tried harder.

When asking his mother how she saw Peter's progress at school, her response was:

Mother: As far as I can see, his work is fine. You know, he is still settling into this school, which is very different from his last school. The teachers seem to think that his work is not good, but they do pick on him a lot. There's something wrong with everything he does or doesn't do.

Comment:

The description of the events of the first term by both the teachers and the pupil does suggest that the pupil could be achieving more with regard to his academic progress. Though his mother is of the opinion that his progress is fine at present, it does seem as though her only point of reference, at this point in time, is her son. She had had

no direct contact with the teachers with regard to her son's schoolwork.

The interactional pattern at this first nodal point can be described as follows: The LESS positively INVOLVED the teachers are with Peter, the LESS his parents are INVOLVED in monitoring his school progress, and the LESS COMPLIANT Peter is with his school work.

Point of bifurcation:

This pattern seems to continue while Peter's non-compliant behaviour is within a certain range. However, as his non-compliant behaviour escalates, the negative, reprimanding involvement of the teachers also escalates. The simultaneous escalation of both the teachers' reprimanding behaviour and Peter's non-compliant behaviour reaches a point of bifurcation, where the teachers perceive Peter's non-compliant behaviour to be unmanageable on their own, and this precipitates them contacting his parents.

The following excerpts from the second set of interviews (at the end of the second term), illustrates this point of bifurcation, where the redundant pattern (described as the first nodal point) begins to change. One of the teachers describes her experience of Peter's escalating non-compliant behaviour. It is interesting to note that the teacher perceives his non-compliant behaviour as not only pertaining to school work, but also including behaviours such as lying and deceitfulness. There is a general broadening of the description of the problem behaviour.

Teacher 1: I called his mother in, not about his lack of work, but about the lying and deceit. She was most upset that I had picked him up on this, but he was deliberately lying to get out of the work. When he saw that we were going to

contact his parents, when things were really out of hand, he settled down. This term he has been like a different child.

Interviewer: Can you describe the interaction between yourself and the mother on this occasion?

Teacher 1: The mother was very antagonistic, initially, when I called her in. She said I need to understand that he's come from a different school. We were far more strict about homework than he was accustomed to and that we need to give him time.

Comment:

Interestingly, at about the same time as the parents become involved, the teachers change their response to Peter, with their involvement with him taking on a more encouraging, positive tone.

Teacher 1: Then we had a chat with him, because he and I were really at war because I was fighting tooth and nail to get the work and he was fighting back and not giving me the work. Eventually I took him aside and said this must stop. From today, we start completely afresh. The past is history. You and I are friends. We are going to work together. I think all the teachers then took a turn to speak to him, and we seemed to get the message across that this was not acceptable.

### Second Nodal Point

This point of bifurcation described above is marked by the parents becoming involved in his school progress for the first time. This parental interest is accompanied by more consistent schoolwork on Peter's behalf (less non-compliant behaviour), which is initially met with a positive reaction by the teachers, but as time goes on, there is a lessening of the positive involvement from the teachers.

The following excerpts from the third series of interviews (in the middle of the third term), illustrates the different interactional pattern that emerges from this first point of bifurcation. One of the teachers describes it as follows:

Teacher 1:            Now he is doing more of the work. I seldom have his name on my lips. He is correcting himself without having to have this one to one. But he is still very much a loud mouth. It's just that he thinks of something, and he wants you to hear it. And it is often very good. I mean it is often quite inspired. It is the things that the other boys haven't thought of. He will come up and say, Mrs Dove, I watched such and such, an education programme. He is into national geographics, and he'll come and he has really understood what he has read. And it has been quite complex sometimes, and he'll tell the class, and I can see that some of them don't have a clue as to what he is talking about. And he has obviously researched it and enjoyed it. It's not that he is boasting. He has got something to say, but he won't sit back and wait for you to ask him. He just comes right

out with it. In that way I find that he is very loud.

Comment:

It is interesting to observe that though the primary goal of the teachers is that Peter achieve in a way that is consistent with his ability, there is a concomitant goal that once Peter is achieving in this way, that he maintain this level of achievement on his own, through self-motivation. There is a sense that they see their job as complete once he is achieving according to his potential, and that his parents need to ensure that he continue at a higher level of achievement.

Later in the interview, both the teachers comment on their encounter with Peter's mother at parents evening at the end of the second term. Both teachers seem pleased with his mother's renewed interest in his school work, and the encouragement that she is giving him. There is an intimation from both the teachers that Peter's more compliant attitude to his school work needs to be maintained by the parents and himself.

Interviewer: Now you had a parents evening at the end of last term. What did Peter's mother say with regard to his school work.

Teacher 1: She said that she was quite happy that Peter has got over this first term, because it is always a slow term for him. And she could see. And she had sat him down and had had a very long serious talk with him. And said that they wanted to see better marks from him and better behaviour at school. And she thinks that that has helped.

Teacher 2: When she got to me, she wanted to know why he had done so badly in first term. And I said all it showed was that Peter had not performed at all. When he did work, he did it beautifully. But the work that had to be done on his own was never done. And that this was just a reflection of non-performance, not non-ability. Non-performance. And she accepted that, and I could show her marks that we had accumulated so far in the second term, and I could tell her that he had started to work a lot better. And that we have been pushing him. And we were very aware that he was capable of doing a lot more. And she said she was very pleased that the school was acknowledging and could see that he **was** bright, but that he was underachieving, and that we weren't just writing him off. Because she always felt that he was clever, but didn't perform. So she was glad from that point of view, and was glad that we were pushing him alot, and getting him to work.

Interviewer: So the sense is that the mother is working with the teachers, rather than against them.

Teacher 2: Yes, I think so. And I think she is giving support at home.

Interviewer: It sounds like she is understanding the teachers' point of view more than she did in the past.

Teacher 1: Yes, she is not just siding with Peter. It is not an us and him confrontation situation anymore. I think she now realises where we are actually coming from. That we do have

Peter's best interest at heart, but he must give his part as well. It can't all come from us.

Interviewer: So, his second term's work was much improved.

Teacher 2: Yes, but we pushed him. Where there was work missing, he got his work into me before I added up the marks.

Interviewer: In the classroom, how has it been with him generally?

Teacher 1: He is still a bit talkative. I find he mumbles a bit. And then I say to him, Peter, I can hear your voice, just settle down please. But it is not a case as it was in the beginning, "Where's your homework? Where's that? Have you caught up?" Now, I don't need to check on him anymore. I just know it is done. No, he's fine. I've moved him away from his mate. They talk a lot. So long as they are apart, he is actually fine.

In the same interview, one of the teachers again comments on the parents increased involvement in Peter's school progress.

Teacher 1: She has been keeping a closer eye on him about what was actually happening. And I think that was the thing that Peter needed. That someone was actually interested in him. And I think that has helped him as well.

With a change in Peter's compliance with regard to his school work, there is an initial change in the way that his teachers perceive him generally, and this perception does

bring about a change in their involvement with him. They begin to notice an overall change in his attitude at school. Once again, there is a broadening of the problem behaviour on the part of Teacher 1. The pattern of interactional behaviour does not only include the identified problem behaviour, but other behaviours too.

Teacher 1: His class is doing a concert item, and he asked to be considered for one of the main parts. For which we did consider him. And he really tried hard, but the boy he was competing against, if you would like to put it that way, really, there was no comparison. But I could see that he tried. I was actually quite impressed that Peter actually came forward, and said he would like to be considered. Because I don't think he would have done that before. Yesterday the decision was made that it wasn't going to be Peter, and he took it well. There was no problem at all. I had wondered if we would have a bit of dramatics, but he took it very, very well. So, not just with the academics, but he has actually changed for the better as the year has gone on.

In the interview with Peter, he comments how he has noticed that his parent's interest in his school work has changed.

Interviewer: From your parents side, do they presurise you to keep doing your homework, to keep doing well, to keep on getting good results?

Peter: Ja, now they are starting to put a little pressure on me. They are like checking my homework, and stuff like that. That I do all

my homework, and take things that I need to take to school.

Peter's mother is also able to confirm that there has been a change in Peter's attitude to his school work.

Interviewer: When you look back to the way Peter worked in the first term, and the way that he has worked in the second term, have you noticed any difference?

Mother: Yes, there has been a big difference. I has settled down a lot more. As I said to the teachers, he seems to take a while to settle into a school year. That Christmas break is too long a holiday for him. It takes him a long time to get back into the school mode. He still thinks he is on holiday and he doesn't get into a routine very quickly. But now that he is settled, he is working well. He is more enthusiastic about doing his school work and homework now.

Interviewer: How do you understand this change, apart from what you have said about him taking a long time to settle into the school year?

Mother: I don't know. I think the main thing is that. The teachers tell me that they have been pushing him, which has probably helped him to work. Other than that, I don't know.

Comment:

This second nodal point is marked by COMPLIANT behaviour on the part of Peter, INVOLVED behaviour on the part of his parents, and initial positive INVOLVEMENT on the

part of the teachers. The pattern at this point can be described as such: The more the teachers communicate with the parents, the more the parents support the teachers encouragement of Peter. Also, the more parents and teachers communicate, the less "fighting" there is between the teachers and him, and the more compliant he is with his school work.

Point of Bifurcation:

This pattern is short lived. It seems that as Peter's compliant behaviour becomes more consistent and escalates, so the teachers involve themselves less with him. This escalation of Peter's compliant behaviour and the teachers' uninvolved behaviour reaches a point of bifurcation. The pattern that emerges from this point of bifurcation is that the less compliant Peter is with regard to his school work, the more the teachers get involved with him, albeit in a reprimanding way, and the less the parents are involved in his progress. Put in another way, it seems that the more negatively involved the teachers are with Peter, the less interested he is in schoolwork, and the less cooperative the parents are and the more they support Peter by making excuses for his lack of work.

The following excerpts from the fourth series of interviews (at the end of the third term), illustrates this point of bifurcation, where the teachers realise that he needs to be constantly encouraged to maintain a standard of work, but that they see this as the parents' job, or the task of Peter himself to keep on motivating himself.

Teacher 2: I think he actually needs constant sitting on. When I was marking his book recently, I was writing to the department head at the same time, saying that this child needs constant 'egging on,' constant supervision,

other than the teachers to keep motivating him.

Teacher 1: I think in the future, in high school, Peter will sink, because he will not have someone saying to him, "Where is your book", and I think it is going to be a waste unless it is pointed out to him that he has got to make the effort, because if he is not made aware of that, either from home or somewhere. Because this is where I think the parents must take over when he moves into high school. They have got to keep in touch with that boy, and make sure that he does achieve the potential that he has. But I really have my doubts with Peter, unless something is done now.

There is also a sense that the teachers are unaware of the importance of their encouragement to Peter. They believe that he can motivate himself. There is no acknowledgement that there is an interactional pattern involved in Peter's progress, and not just his ability to motivate himself or not.

Interviewer: What would your prediction be with regard to his achievement now for the rest of the year? Do you think he is going to maintain his present level of achievement, or do you think he is going to have another patch of underachievement?

Teacher 1: Not before the end of the year.

Teacher 2: No, he'll be fine.

Interviewer: He has reached a peak now where he is going to stay?

Teacher 1: It depends how much work he puts in for the end of the year exams. He may even improve his marks.

### Third Nodal Point

With the teachers not seeing it as their job to keep motivating and encouraging Peter, Peter is left to himself to maintain a standard of work that is commensurate with his ability.

The following excerpts from the fourth series of interviews illustrate this different pattern that emerges from this point of bifurcation. Firstly, a teacher describes her experience of Peter's less compliant behaviour.

Interviewer: This drop in his performance this time, was there any kind of signs that it was going to happen? Did it happen all of a sudden, or was it a gradual thing that work just didn't come in?

Teacher 2: It was gradual. He just seems to slide by. He is a very slippery character. You can start something in class, and... he'll...great guns. Off he goes. And then at the end of the period it is half done. So it gets given for homework. And then unless you actually check up on him the next day, he'll slide by, and slide by, and then Friday you say, I want all the books in, and only when you are marking on Sunday night, do you realise that his book is not there. And then you start again the

next week. Bring it in. Bring it in. And you never actually get his book in.

Peter describes his experience of support with regard to his school work.

Interviewer: Who puts pressure on you to do well?

Peter: No one really. I don't really put pressure on myself to do very well. It is just like I try to do quite well, and I'm doing okay.

Interviewer: How do you understand this up and down business for yourself? What is going on for you?

Peter: I don't know. I didn't kind of try my best this term. I like...didn't study as hard as I would....I didn't put as much effort in as I did last term.

Interviewer: If you had to say what motivates you most to actually do well at school, what would that be?

Peter: For me, I think it is mostly self-motivation. Like if I think I have to do well in some things, or I want to do well in some things, then I probably will do well.

Interviewer: Who do you think was the most disappointed when your report came out?

Peter: I don't know. My parents were a bit disappointed that I had dropped. Not that I had done badly, but that I had dropped. And I

was a bit disappointed. But the teachers didn't say anything.

Interviewer: So their reaction was that they were kind of expecting it. Students do go up and down?

Peter: I don't think so. Maybe. But they didn't have anything to say about it. My teacher just came and called us up and told us our marks and said well you should be doing a bit better.

The teachers describe their experience of the parents decreasing involvement in Peter's progress.

Interviewer: According to Peter, it seems that his parents are a little disappointed in his third term performance. Have they actually mentioned anything to you?

Teacher 2: We haven't seen them and we won't see them.

Teacher 1: I've never met the father. I've met the mother. As I said, I called her in once. I also met her at parents evening. But the is the only contact I have had with her.

Peter's mother describes her reaction on receiving the report at the end of the third term.

Interviewer: You have just received Peter's progress report at the end of the third term. How did you find he had done?

Mother: His marks were down a little bit. It wasn't as good as second term. I think he could have worked a bit harder this term. He seemed to

lose a bit of his enthusiasm for school work.

The pattern at this third nodal point can be described as follows: The LESS INVOLVED the teachers are with Peter, the LESS INVOLVED his parents are in his school progress, and the LESS COMPLIANT Peter is in his school work.

Of interest, is that this perceived pattern (the third nodal point), mirrors the described pattern at the first nodal point. That is to say, at a higher level of abstraction, the interactional patterns detected and reported as nodal points, when linked, are themselves organised in a pattern. A pattern of a pattern has been observed and described. This higher-order pattern is a redundant pattern that is returning to the same point each time.

### Conclusion

The findings of the present research indicate that this pupil's underachieving behaviour is being maintained by the recursive interactional pattern characterised by involvement/non-involvement on the part of the parents and teachers and compliance/non-compliance on the part of the pupil. That is to say, the more involved the parents and teachers were with the pupil, the more compliant he was with regard to his school work. The less involved the teachers and parents were with him, the less compliant he was.

This recursive interactional pattern was observed over the time span of two school terms. Furthermore, it was observed that this recursive pattern, though returning to the same point over time, it was also constantly changing within this time frame. Patterns within this larger pattern could be distinguished, these patterns calibrated by escalations of particular behaviours. For example, at the

first nodal point in the described pattern, the pupil's non-compliant behaviour escalates to such an extent that the teachers can no longer ignore it. It is this escalated non-compliant behaviour of the pupil that leads to a point of bifurcation, which calibrates or changes the interactional pattern between the pupil, teachers and parents. The escalated behaviour at each nodal point that leads to a point of bifurcation is different, and the new interactional pattern is also different.

It is this larger pattern of interaction that could be said to be maintaining the problematic behaviour. Both the underachieving behaviour and the problem-solving behaviour of the teachers are embedded in this pattern, the behaviour of the pupil marked by compliance and non-compliance, and the behaviour of the teachers marked by involvement and non-involvement.

THE INTEGRATION OF THEORY AND PRACTICE

Introduction

The previous chapter has put forward an ecosystemic description of underachieving behaviour, resulting from the gathering of information about the interaction between a particular pupil, his teachers and his parents.

This way of describing underachieving behaviour has been made possible by a change in the paradigmatic basis of underachievement research. Whereas previous research has been based on a positivistic paradigm, the present research has been undertaken from a constructivistic viewpoint.

This chapter discusses the link between the present research findings and ecosystemic theoretical assumptions which emanate from a constructivistic paradigm. Furthermore a discussion of the implications of the present research for future work with underachieving pupils is presented.

A Linking of Ecosystemic Theory and the  
Present Research Findings

The ideas underlying ecosystemic theory have been stated in chapter 2. Briefly, it was stated that ecosystemic describers attempt to translate reified nouns into linguistic forms that signify relationship and process, and shift the boundaries of individuals toward the context of completed circuits (Keeney & Sprenkle, 1982).

There has been an attempt to adhere to these ideas in the present research. This section outlines this connection

between the assumptions of ecosystemic theory and the present research findings.

The description of underachieving behaviour in the previous chapter is a description that avoids reification by highlighting relationship and process. By describing the interactional behaviour of the teachers, parents and pupil over time, a static, reified description of the pupil's behaviour is avoided. Through the research process of interviewing all the parties involved and asking them relational questions, a description that rigidly demarcates behaviour into isolated elements has been avoided. Rather, the process that was adopted, has facilitated an identification of patterns that recursively connect the problem behaviour with other behaviours. For example, the non-compliant/compliant behaviour of the pupil is described in a way that links it to the involved/non-involved behaviour of the teachers and parents.

In sum, the research findings are descriptions based on metaphors of pattern rather than metaphors of substance. The research process has facilitated an acknowledgement that bits of behaviour are always organised as parts of an interactive process. The pupil's compliant/non-compliant behaviour does not take place in isolation. It is connected to the involved/non-involved behaviour of the teachers and pupils.

Furthermore, the present research findings move away from the positivistic attempt to obtain increasingly accurate and objective views of underachievement. In contrast, the present research maintains that at any point in time, there may be many equally accurate ways to describe underachieving behaviour. The description put forward in this research is one that could be most helpful in attempting to deal with the underachieving behaviour of this particular pupil. However, this described pattern of

involvement/non-involvement on the part of the teachers and parents, and compliance/non-compliance on the part of the pupil, is not the interactional pattern that is maintaining all underachieving behaviour.

It is here that lies the true value of the ecosystemic approach to underachieving behaviour. Following constructivistic assumptions, there is no one "objective" description of a particular behaviour that is more or less accurate. There are only descriptions that are more or less helpful, when viewed in the light of proposed strategies for intervening and changing the problematic behaviour. From a constructivistic point of view, the interactional pattern of which the underachieving behaviour is a part can be distinguished and described in many different ways. If the first pattern that is described is not helpful in changing the problematic behaviour, then another pattern can be described. Many distinctions can be drawn.

In sum, the present research is not an attempt to offer a general description of all underachieving behaviour. Rather, it is an attempt to suggest a way in which a different description of the behaviour of a specific pupil can be generated.

Finally, the present findings demonstrate the ecosystemic premise that the punctuation of underachieving behaviour shift from the individual to the context of complete interactional patterns. There has been an attempt to recognise the connectiveness of the interactive process (of which the underachieving behaviour is a part), rather than describing the isolated behaviour of the pupil. This has been done by describing the interactive process involving the behaviour of the pupil and his significant others with regard to the problem. In this way, the underlying pattern of behaviour that is organising the behaviour of this underachieving pupil has been described.

That is, the distinction of the underachieving behaviour in the present research is contextual, including in it one of the cybernetic interactional patterns that could be said to be maintaining the problem.

In sum, the present research has described under-achieving behaviour in a way that acknowledges, at the order of social interaction, the pupil's problematic behaviour as a particular kind of recursive relationship with others. The more compliance by the pupil, the more non-involvement by the teachers and parents; the more non-compliance by the pupil, the more involvement by the teachers and parents.

#### The Implications of the Present Research

The present research has offered a directive to the field of underachievement research. Firstly, it has indicated that there is a need for the behaviour classified as underachievement to be redefined. What constitutes underachieving behaviour is more complex than the definition put forward by past research (that underachievement is the discrepancy between the pupil's score on a standardised intelligence test, and the pupil's school performance (Ford, 1992)). The behaviour needs to be more comprehensively defined, in a way that includes the interactional context of which this behaviour is a part. That is, underachievement can be redefined as a simple action that is part of a larger recursive interactional pattern, which needs to be observed over time, so that the redundant pattern that is maintaining the problem can be distinguished.

Secondly, if strategies of intervention are going to be news of difference in addressing this problematic behaviour, the underachieving behaviour of each individual under-achieving pupil needs to be observed and described. To this end, quantitative research (searching for objective

universal laws pertaining to underachieving behaviour) needs to give way to qualitative research which investigates the problematic behaviour in the context in which it is occurring. It is the idiographic characterisation of each context that imbues the underachieving behaviour of that pupil with a unique meaning, and it is only in describing this unique context, that interventions can be devised for this particular pupil. Studying a particular behaviour out of the context in which it is found, and labelling this behaviour in a way that isolates it from the interactional network of which it is a part leads to the use of interventions that do not fit with the social ecology surrounding the problem.

Thirdly, the role of the helper or counsellor needs to be carefully considered to ensure that the very help that is being offered is not maintaining the problem. School counsellors need to be aware of the point in the under-achieving pattern at which they are intervening. Their conscious purpose, aimed at achieving specific problem-solving goals, does not always take into account the interactional context of the problem behaviour.

Referring to the example in the present case study, it is apparent that the teachers response of involvement is always at a particular time. That is, the less compliance on the part of the pupil, the more involvement on the part of the teachers. The more compliance on the part of the pupil, the less involvement on the part of the teachers. It is possible that if the times of involvement on the part of the teachers and parents were at other points in the overall interactional pattern, the pupil's compliant/non-compliant behaviour might also change. The counsellor can time his involvement in a strategic way so as to disrupt the pattern. For example, he could shift his involvement to a time when the pupil is more compliant. In this way, an intervention can be implemented that attempts to restructure (or

repattern) the interactional network of which the underachieving behaviour is a part.

Furthermore, the counsellor needs to exercise an amount of flexibility (and help the teachers to do the same), that allows for different patterns to be distinguished if the first pattern does not prove to be helpful when an intervention is attempted.

Fourthly, if alternative ways of intervening and changing underachieving behaviour are to be considered, then the behaviour needs to be observed and studied over a substantial time period. There is the danger that if the behaviour of an individual pupil is described and labelled in a static, reified way, the interventions prescribed could also be static and reified, following the logic of lineal causality, which does not consider the effect of the intervention in this particular context over time. Observing the underachieving behaviour over time, helps to intervene in a way that prevents the same pattern repeating itself year after year. To this end, communication and joint planning between the teachers across the different standards that are going to be teaching a particular child, could prevent the repetitiveness of a pattern that is maintaining underachieving behaviour. Creating continuity of involvement in the larger system would be a way of intervening. Referring to the present case study, it is possible that if the pattern of underachieving behaviour is changed, by being involved at times when the pupil is more compliant, then the underachieving pattern could revert back to a redundant pattern if the future teachers are not consistent in maintained their involvement at times of compliance.

### Summary

The present research has investigated the problem of underachievement from an ecosystemic point of view, a theory based on ideas from systems theory, cybernetics and human ecology. This research differs from past research on the problem, in that previous research has been based on a positivistic paradigm, whereas ecosystemic theory rejects positivism in favour of a constructivistic paradigm. The implications of this change in the paradigmatic basis of underachievement research are wide ranging and significant, allowing for a comprehensive process oriented description of underachieving behaviour.

An illustration of an ecosystemic description of underachieving behaviour is given in the case study that is presented. The investigation is presented in a way that gives the reader access to the research process. The way in which the data has been organised has been clearly shown, this allowing clinicians, teachers and other helpers wanting to investigate the underachieving behaviour of a particular pupil to replicate the method used.

This replication is of a different order to the replication and generalisability of positivistic research. The replication being suggested is not to search for a specific pattern of interaction that is applicable to all underachieving pupils. The pattern of involvement/non-involvement and compliance/non-compliance is the nature of the pattern between the pupil and his parents and teachers as punctuated by this research. The nature of the interactional pattern of other underachieving pupils will possibly be different. Therefore, the meaning of replication here is the replication of this method of observing pattern, rather than a replication of the particular pattern of this research. By replicating this method of observing pattern, the readers can decide for themselves the legitimacy of this

particular way of organising experience.

The findings of past research have been in keeping with positivistic premises, that underachieving behaviour is best understood by establishing universal laws with regard to a causal understanding of this behaviour. On the other hand, the findings of the present research are in keeping with the constructivistic premises of ecosystemic theory, where the specific context in which the underachieving behaviour occurs, is extensively studied, so that the connectedness between the interactional network of this context and the underachieving behaviour of the individual pupil is articulated. In this way the underachieving behaviour of each individual can be more completely described and understood.

Describing underachievement ecosystemically, it is assumed that the problematic behaviour fits into the organisation of a particular interactional pattern. Though it is assumed that there are many interactional patterns of which the underachieving behaviour is a part, the aim of the research has been to identify and describe the recursive interactional pattern that is maintaining the problematic behaviour.

Approaching underachievement ecosystemically allows for the exploration of the above ideas and suggestions with any underachieving pupil. Vigilantly observing that the behaviour does not exist in isolation from the interactional context of which it is a part, allows for a non-blaming assessment of the problem, and enhances the possibility of an effective strategy being used to change the underachieving interactional pattern.

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