THE USE OF HORSERIDING IN THE LIVES OF CHILDREN WITH CEREBRAL PALSY – AN ECOSYSTEMIC EXPLORATION

by

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SUMMARY

In the realm of therapeutic horseback riding one becomes aware of the idiosyncratic way in which each unique individual depicts his or her experience of a therapeutic riding endeavor. This study focuses on the meanings attributed to therapeutic riding in the lives of children with cerebral palsy because the complementary use of horses in therapy with these children may be of great importance to the medical fraternity. This exploration investigated the influence of the children's relationship with a horse, and the parents' perception of horseriding as a complementary therapy to occupational - and physiotherapy. The theoretical background and a literature review on therapeutic horseback riding and cerebral palsy were presented in this study.

This study followed a holistic, ecosystemic epistemology. Both a qualitative approach and a quantitative approach were adopted as two complementary sides of a more encompassing whole and provided rich descriptions of the context and research process.

Key words: Therapeutic horseback riding, divisions of therapeutic riding, cerebral palsy, movement disorder, context, attribution of meaning, ecosystemic epistemology, social constructionism, constructivism, triangulation.

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CHAPTER 1

INTRODUCTION

Your reason and your passion are the rudder and the sails of your seafaring soul. If either your sails or your rudder be broken, you can but toss and drift, or else be held at standstill in mid-seas.

Kahlil Gibran

General Introduction

From the days of Aesculapius, the Greek god of medicine, patients who were not 'healed' were given a horseback ride to cheer their spirits. In time the therapeutic value of horseback riding evolved. According to Mayberry (1978) the work of Quellmaltz in 1735, and Chassaigne in 1870, are of particular interest, since Chassaigne conducted a systematic study of horseback riding as therapeutic modality and concluded that it was beneficial in the treatment of some neurological conditions and other disabilities. Quellmaltz also described therapeutic uses of horseriding. There is substantial literature on the positive physical effects of therapeutic riding on those with disabilities but according to Cawley, Cawley and Retter (1992) there has been little research on emotional factors. This dissertation proposes to explore the unique experiental world of the child with cerebral palsy who participates in horseback riding.

In this study the research problem involves the need to have a better understanding of the implications, influences and contributions of the therapeutic use of horses in relation to a child with cerebral palsy. By means of an ecosystemic approach this problem will be investigated in a circular way, connecting the context with the research process, searching for patterns of interaction and reading the feedback in the relationships between the parties that will be involved in this study. This study is inspired by the researcher's personal therapeutic connection with horseriding and her curiosity in exploring the meaning of horseback riding in the lives of children with cerebral palsy. Perhaps it is important to begin with a brief, general discussion of cerebral palsy and therapeutic horseback riding.

Cerebral Palsy and Therapeutic Horseback Riding

Cerebral palsy is a complex condition and an umbrella term often used to cover problems related to birth injury. Cerebral palsy is a persistent but not unchanging disorder of movement and posture appearing in the early years of life due to traumatic or inflammatory brain damage or a nonprogressive disorder of the brain. It may also be due to the result of interference during development. Many other clinical signs may be present. Cerebral palsy may refer to different neurological conditions that produce a disability because of muscular incoordination and weakness. Thus cerebral palsy is a complexity of neurological disorders characterised by great variformity. In children who have cerebral palsy the acquisition of movement skills is invariably slower and their developmental pattern is different from children with a normal developmental pattern (Chruickshank, 1955; Griffiths & Clegg, 1988; Schleichkorn, 1983; Towbin & Thomas, 1960).

Horseriding is a movement activity, and the governing principle of riding therapy is according to Heipertz (1981) that mobility is the medium of action, and that motor accomplishments with their physiological, psychological and sociological effect have significant influence on the child's development, his or her capability, behaviour and emotions. According to Piaget, (Louw, 1985) a child's initial stage of development is the sensorimotor stage which is dependent upon movement. If development in these basic skills is impaired then later development will be directly affected. Hence, it is thought that movement is the basis of learning. Through the three-dimensional (up and down, backwards and forwards and side to side) movement of the horse the child is forced to adjust his or her balance to that of the horse (Heine & Rosenweig, 1998; MacKinnon, Noh, Lariviere, MacPhail, Allen & Lalibere, 1995; Mayberry, 1978; Pearce, 1982; Sherman, 1977; Straub, 1998).

The original inspiration for a scheme of organised riding for the disabled came from a champion lady dressage rider of Scandinavia, Lis Hartel. She was stricken in her youth by poliomyelitis and insisted on riding again. She won the silver medal for dressage in the keenly contested 1952 Olympic games in Helsinki (Henriksen, 1971; Mayberry, 1978; Tuttle, 1987; Wood, 1990). Motivated by this achievement Norah Jacques established a center at Chigwell, Essex, in 1964, to further the use of riding in

the rehabilitation of children and adults who have a disability. Today, children with cerebral palsy are one of the groups that benefit from this unique therapeutic encounter.

Cerebral palsied children form the majority of disabled riders in South Africa. According to South African Riding for the Disabled, they are the group with the most complex problems and are also the group where knowledge of the disability, and of how to handle it, really pays off in terms of enjoyment and achievement. Handled correctly they can also improve in function, but if allowed to continually sit or move in an abnormal way the child's condition could get worse (Sampson, 1997; Woodman, 1998). In Chapter 2 an overview of therapeutic riding will follow, but it may be meaningful to set the stage with a short definition of the different divisions of therapeutic horseback riding. Therapeutic horseback riding can be divided into Hippotherapy, Vaulting, Remedial riding, Riding for the Disabled and Recreation riding. Hippotherapy can be defined as physiotherapy with a child on horseback (Weber, 1998). Vaulting and Remedial riding include educational methods that involve the horse as medium through which behavioural changes and or learning problems in a child may be corrected (Wood, 1990). Riding for the Disabled is a form of physical education with additional psychosocial benefits in the lives of children with disabilities (Wood, 1990). According to Weber (1998) Recreation therapeutic riding is a sport, where competition and fun become the main objective.

It would appear that horseriding not only affects the child with cerebral palsy but also influences his or her family and the wider social context. Each child with cerebral palsy is unique, therefor different children and their families may attribute various different meanings to the child's unique experience of horseback riding. According to Fourie (1997) the exchange of meaning in time leads to the co-construction of a particular reality or shared meaning for a specific system.

This study will explore the perceptions of parents and / or other respondents in relation to the meanings they attribute to a child with cerebral palsy and the related horseback riding experience. Previous studies (see Chapter 3) indicated that there is a need to expand on the psychological impact of therapeutic horseback riding. It is not the intension of this study to prove that horseback riding has a lineal influence on the functioning of a child with cerebral palsy, but rather to explore the meanings and

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perceptions of the child and his or her family of therapeutic riding. Keeney (1979) states that one can understand a phenomenon, (like therapeutic riding) in greater complexity when it is seen within its larger context. This complexity underlies the interconnection and links between the systems and may unfold significant information with regard to therapeutic horseback riding. Both qualitative and quantitative methods will be used to inform the exploration. Case studies will be used to inform the qualitative part of the study and a questionnaire will be used to inform the quantitative part of the study. Through triangulation of the qualitative and quantitative findings and the researcher's self-referential experience of the research process, the researcher hopes to introduce new meanings and constructions that will facilitate ideas on therapeutic horseback riding (Erlandson, Harris, Skipper & Allen, 1993; Guba & Lincoln, 1988; Keeney & Morris, 1985; Lincoln & Guba, 1985; Reichardt & Cook, 1979; Sells, Smith & Sprenkle, 1995; Wassenaar, 1986).

An Ecosystemic Exploration

It is difficult to break up human behaviour and complex social processes into parts and elements, to attach reductionistic values to 'objective observations' and to predict the outcome of a study (Fourie, 1998). To describe the meaning of the use of horseriding in the lives of children with cerebral palsy one needs a different approach, one that encompasses the complexity and unique circumstances of each child and each riding school, and an approach that reflects on the context and research process. As will become evident in Chapter 5, an ecosystemic approach provides a different way of thinking about human behaviour. The term 'ecosystemic', "combines the focus on systems and on ecology and emphasises the complicated, interlinked and ever-changing networks of ideas and meanings within and between systems" (Fourie, 1998, p.17). According to Keeney (1983, p.92),

A cybernetic epistemology proposes that we embrace both sides of any distinction that an observer draws... a therapist should adopt the perspectives of both pragmatics and aesthetics, control and autonomy, simple cybernetics and cybernetics of cybernetics, and even lineal and recursive descriptions.

Wassenaar (1986) states that researchers in both lineal and circular epistemologies have lost the fact that form and process, structure and function, part and pattern, observer and observation, reductionism and holism, are cybernetic complementarities. The researcher will attempt to embrace both sides of the coin in each complementarity. To adopt a cybernetic view is to adopt a radically different way of drawing distinctions and a new world of descriptions, "cybernetics is part of a general science of pattern and organisation" (Keeney, 1983, p.6). There is a distinction between simple cybernetics and second-order cybernetics.

> At the level of simple cybernetics we place ourselves outside the system as observers of what is going on inside the system...Our focus is on describing what is happening...Thus therapists discover and treat problems and direct change from outside the system. (Becvar & Becvar, 1996, p.83)

By contrast from the perspective of cybernetics of cybernetics we must consider taking into account the interactions of the two systems (observer and observed) as they both exist within a larger context. From a second-order perspective, the observer becomes part of, or a participant in, that which is observed. In the observer's observations are the reflection of his or her own values and epistemology. "There is no reference to an outside environment; the boundary is unbroken and the system is closed" (Becvar & Becvar, 1996, p.76). Thus, even if there is an independent external reality we can only know it through our own interpretations of it.

In a second-order cybernetic or ecosystemic epistemology the observer influences and is influenced by that which he or she observes. As such he or she contributes to the construction of realities (Keeney, 1982). Thus, the author will be a participant and collaborator in the co-creation of realities and meaning about the use of horseriding in a child's life – a life being framed and coloured with the label of cerebral palsy. Keeney and Morris (1985) suggest that we prescribe the distinctions we use in constructing a research reality. In tracing the recursive operation of drawing distinctions, distinctions upon distinctions, and so on, we are enabled to uncover the way we construct and bind together an ecology of ideas - the construction and maintenance of a reality (Keeney, 1983). The researcher realises that there are various maps for cerebral

palsy; horseriding and for children with cerebral palsy's experiences of horseback riding.

Purpose of the Study

This dissertation proposes to explore the therapeutic horseback riding context. The aim of this study was to give a description of the meanings attributed to horseriding in the lives of children with cerebral palsy. The qualitative and quantitative parts of this study are viewed as part of a bigger cybernetic complementarity (Keeney, 1983).The theoretical conceptualisation underlying this study implies both lineal and recursive, both qualitative and quantitative, both constructivistic and constructionistic descriptions and distinctions on different levels of descriptions.

The aim of this study is further to unfold rich descriptions of the meaning of horseriding within the family context, thus the researcher and co-researchers (subjects) will be seen as participant observers in a specific context. The researcher hopes to orchestrate unique and valuable experiences in conversation with the co-researchers (Anderson & Goolishian, 1988). In time new ideas and meanings may evolve; the outcome of this study is unpredictable and emergent (Lincoln & Guba, 1985). The study will not evaluate a specific therapeutic riding programme (hippotherapy, remedial riding, vaulting or riding for the disabled) and does not aim to prove that horseriding has a significant influence on cerebral palsied children. The study will be executed in order to reconstruct the therapeutic horseback riding reality.

> The relationship between language and experience has important implications for our view of conducting research. Because we think in language and because words can never say everything about anything, our ability to interpret experience and to share it with others is limited to the capacity of these constructions. (Erlandson et al., 1993, p.24)

For this reason it is important for the researcher to attempt to share the constructions of those whose human setting the researcher is about to investigate by means of the unstructured interview or conversation.

The aim of the quantitative part of this study is to describe, rather than to judge or to interpret the meanings of the 196 respondents (Landman, 1988). A questionnaire will be used to inform the quantitative part of the study - the researcher will develop a questionnaire together with Sharon Rufus (Therapeutic riding therapist) and Engela Young (Occupational Therapist with 20 years' experience of therapeutic riding). The respondents will be parents of the children, or the person responsible for taking the child to therapeutic horseback riding.

This research will take place in a social setting, it will be descriptive and it has as its aim to construct consensus. Triangulation – thus using case studies, questionnaires and the researcher's personal experience, will be used to colour the research process. This will be ellaborated on in Chapter 5.

Chapter Review

This study will comprise a literature survey as well as a theoretical and practical component.

Chapter 2 provides a theoretical background on therapeutic horseback riding. It describes the divisions of therapeutic riding, as portrayed according to the Swiss four-phase model and the German three-circle model. This is followed by the unique behavioural characteristics of a horse.

Chapter 3 provides the existing body of knowledge relating to cerebral palsy and provides a literature study on the previous use of therapeutic horseback riding within the lives of children with cerebral palsy.

Chapter 4 depicts an ecosystemic exploration, and looks at the theoretical foundation for this study. There will be a reflection on the researcher's epistemology, and an overview of Newtonian Cartesian thought, in contrast to an ecosystemic approach. There will be a discussion on general system theory, cybernetics and cybernetics of cybernetics. Constructivism and social constructionism form the fundamental base for an ecosystemic conceptualisation of therapeutic horseback riding.

Chapter 5 portrays the research design used in this study. It provides an understanding of the use of both qualitative and quantitative methodologies in this study.

Chapter 6 provides an overview on the findings of the descriptive questionnaire.

Chapter 7 provides an overview on the conversations and co-constructed stories of the therapeutic riding context and the meaning it has in several families. It depicts the researcher's reconstruction of the co-evolved themes and constructions, followed by a meta-perspective on each research context and a self-reflexive disclosure on the research process.

Chapter 8 is the concluding chapter. The researcher will reflect on the triangulation process. The study will be evaluated and the recommendations and conclusion will follow.

Conclusion

This study with its ecosystemic conceptual framework encompasses both qualitative and quantitative methodologies. In doing so it will complement both sides of the research coin, allowing for different meanings to co-evolve within a specific research context. Chapter 2 outlines an overview on the theoretical background of therapeutic horseback riding.

CHAPTER 2

A THEORETICAL BACKGROUND AND LITERATURE STUDY

The horse has always exerted a peculiar emotional effect on both the rider and the observer: he has raised the rider above himself, has increased his power and sense of power, and has aroused a sense of inferiority and envy in the humble pedestrian... Through long ages the horse has been the symbol of superiority, of victory and triumph.

Walter Prescott Webb

Introduction

The swift and powerful horse has long been domesticated by human beings for use as a draft animal, for transportation, and in warfare, and has figured notably in art and mythology. There is a depth of relationship that has drawn humans to the love of horses throughout the centuries, a mythic love that people who cherish horses celebrate in story, art and memory from Pegasus to Secretariat, from unicorns to Walter Farley's *The Black Stallion.* In the American Indian history horses were obtained in about 1680, the Ute helped to spread them north to the Comanche and to other Great Basin peoples. After horses reached the Umatilla in about 1740 and then spread northward, many plateau peoples began to participate in the great bison hunts. Horses ascribed value and status to the American Indian owner. Their familiar nomad worldview expanded rapidly. The horse symbolised sacredness, and enabled the rider to be an immortal warrior. The Comanche called it 'god-dog' and the Sioux named the horse 'medicine dog' (Grolier, 1997).

Throughout the centuries, human-animal interaction developed, and it is now recognised as a credible field of study with important implications for various professions. In South Africa the interest in this field emerged during the 1980's with articles published in veterinary periodicals. According to Odendaal (1995) interest in the study of human-animal interaction can be ascribed mainly to two factors which accentuate the need for companion animals in modern societies. The first factor is the changing life circumstances manifested in a highly competitive society, and secondly the changing life environment manifested by urbanisation. Thus a psychological need

for tension relief and a need to re-connect with nature has emerged in society. Companion animals can fulfil both these needs. On this path to natural integration, occupational therapists, physiotherapists and psychologists are finding that working with animals is a tremendous help for them and for their clients. Several authors (in Wilson & Turner, 1998) show that animal contact could promote health. Animal assisted therapy could facilitate dialogue among family members, children, and elderly people, people with disabilities and people who are lonely. It contributes to a child's development of nurturance (when the child takes responsibility in feeding and caring for the animal) and the child's self-concept as well as physiological well being. It is furthermore a supportive element during bereavement and reduces anxiety levels. During the 1990's there has been an increased need for professionalism and credibility in working with animals. This has resulted in the development of the first comprehensive standards of practice in this field. Definitions of 'Animal Assisted Therapy (AAT) / Animal Assisted Activities (AAA)' by Standards of Practice for AAA and AAT are as follows:

> AAT is a goal-directed intervention in which an animal meeting specific criteria is an integral part of the treatment process. AAT is delivered and/or directed by a health or human service provider working within the scope of his/her profession. AAT is designed to promote improvement in human physical, social, emotional functioning or cognitive functioning. AAT is provided in a variety of settings and may be group or individual in nature. The process is then documented and evaluated. AAT is provided by a health or human service professional who includes an animal as part of his/her practice. Specific goals for each client have been identified by the professional, and progress is measured and recorded. AAA provides opportunities for motivational, informational, and /or recreational benefits to enhance quality of life. AAA are delivered in a variety of environments by a specially trained professional, paraprofessional, and/ or volunteer in association with animals that meet specific criteria. AAA activities involve animals visiting people. The same activity can be repeated with different people, unlike therapy that is tailored to a particular person or medical condition. (Wilson & Turner, 1998, pp.25-26)

A recent study by Carruthers (1998) acknowledges a remarkable relationship between human and animal. She narrated a human-animal connection between a woman and her horse.

According to Fox (in Carruthers, 1998, p.139),

Keeping a companion animal can help one mature through understanding, to appreciate the intrinsic worth and basic rights of a fellow earth being. As we learn to relate better with animals, so we will relate more effectively with our own kind since selfish demands and unrealistic expectations are a barrier to any meaningful relationship, be it with a human or with a non-human.

For the purpose of this study the focus will be on the human - animal interaction between horses and children with cerebral palsy. In this chapter firstly a literature review on therapeutic riding will be given followed by a brief overview on the characteristics of the horse, *Equus caballus*. In the following chapter the existing literature on therapeutic riding and cerebral palsy will be reviewed.

Therapeutic Horseback Riding

Therapeutic riding, also known as Equine Assisted Therapy, Equine Facilitated Therapy and Riding for the Disabled, refers to the use of the horse and equine orientated activities to achieve a variety of therapeutic goals. These goals may be of a cognitive, emotional, physical, educational, social and / or behavioral nature.

Therapeutic riding is practised in some form in most countries in the world. Great Britain formed the Riding for Disabled Association programme initially to promote competition and equine sports for the disabled. There are more than 500 registered groups in Britain and more Riding for Disabled groups in 43 other countries. Children with cerebral palsy probably form the majority of riders with a disability in South Africa (Sampson, 1997). According to South African Riding for the Disabled, they are the group with the most complex problems and are also the group where knowledge of the disability, and of how to handle it, really pays off in terms of enjoyment and

achievement. Handled correctly they can also improve in function - but if allowed to continually sit or move in an abnormal way they can deteriorate (Woodman, 1998).

Germany and Switzerland have been in the forefront of developing and establishing hippotherapy ('hippotherapy' will be discussed in detail later in this chapter) as a medical model of equine-assisted therapy. The division of horseback riding varies in different parts of the world. In South Africa the Progressive four-phase Model (Figure 2.1) is used as a guide to explore therapeutic riding.

Division of Therapeutic Horseback Riding for Therapeutic Use

The term therapeutic riding is used to describe all the rehabilitative uses of the horse (Engel, 1994). Therapeutic riding can be divided into various areas of study: *Hippotherapy* (medicine) –Classical German hippotherapy and American hippotherapy, *Vaulting and Remedial Riding Therapy* (remedial education) and *Riding for the disabled* (physical education, sport, recreation) (De Pauw, 1986; Wood, 1990).

REHABILITATION

MEDICINE	Equine Assisted Therapy Developmental riding therapy, American Hippotherapy	HORSEMANSHIP
Classical German Hippotherapy		Adapted Sport/ Therapeutic Recreation Riding for Disabled
	Remedial riding Vaulting	

PSYCHO-EDUCATION
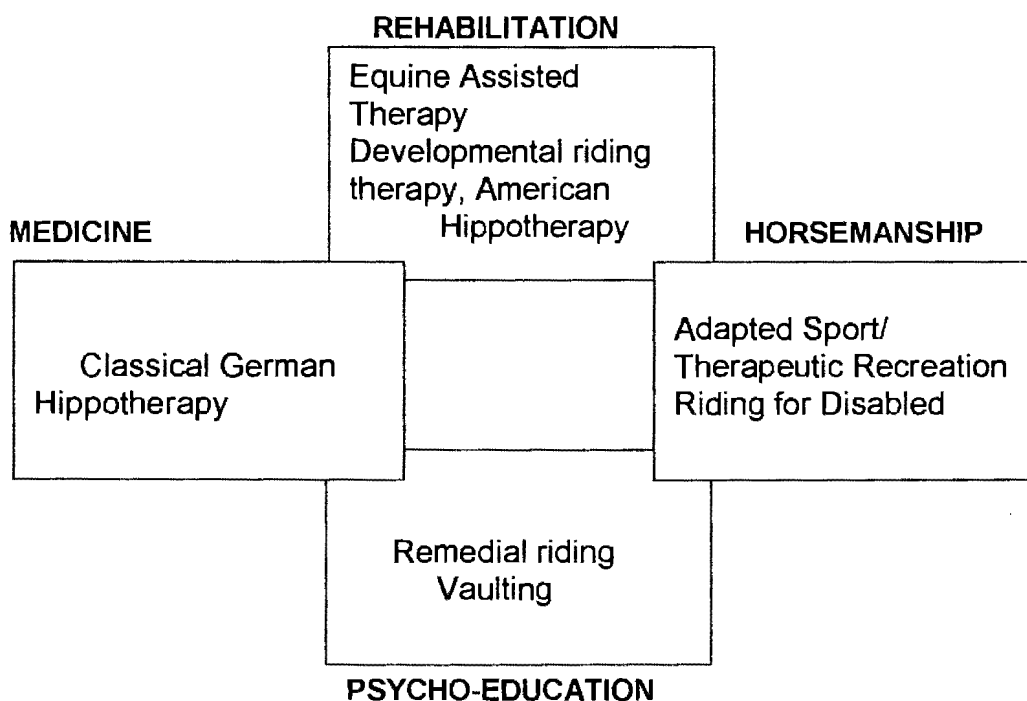
Figure 2.1. Altered four-phase model for therapeutic riding: Progressive model for physicians, therapists, educators and riding instructors (Engel, 1994).

In the three-circle German model for therapeutic riding, Heipertz (in Spink, 1993) includes Riding for the Disabled underneath 'Horsemanship'. Therefore the above model also includes Riding for the Disabled underneath 'Horsemanship'. The Germans attracted many professionals (physicians, special educators, occupational therapists, speech therapists, physiotherapist, and psychologists) who were interested in combining equestrian activities with clinical treatment and educational objectives. This systematic approach established therapeutic riding as a valid treatment option in psychology, medicine and education in Germany (Spink, 1993). In this study the researcher will discuss Sport / Recreation riding seperately form Riding for the Disabled. An introduction into the division of therapeutic riding, starting with hippotherapy, will follow.

Medicine and Rehabilitation: Hippotherapy

The term hippotherapy has survived for more than 30 years and is generally understood by health professionals in 20 countries (America, Australia, Austria, Belgium, Brazil, Canada, England, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Luxemburg, Portugal, Singapore, South Africa, Switzerland, New Zealand). According to a survey conducted with the member nations of the Federation of Riding for the Disabled International (Wilson & Turner, 1998) a typical hippotherapy session would consist of the following elements:

- A client with movement dysfunction usually resulting from neurological impairment.
- A horse moving on at the walk.
- A physician's written referral for the client.
- A physiotherapist with specialised training who analyses the client's movement prior to and during the hippotherapy treatment, making adjustments to ensure the optimal transfer of the movement of the horse's back to the client.
- A client in a sitting position on the horse.
- A client responding to but not influencing the horse's movement.
- A horse handler who controls the horse according to the therapist's directions.

Literally "Hippotherapy means physiotherapy with and on a horse" (Weber, 1998, p.23). Thus classical hippotherapy refers to the medical use of the horse and it involves the transfer of movement from the horse to the child (Baker, 1994; Copeland, 1992). Hippotherapy involves therapy for the whole body and in principle it represents a complement to conventional and physiotherapeutic methods of treatment. The initial stages of hippotherapy may appear to the outsider as nothing more than a 'pony ride'. It refers to the mainly passive form of therapeutic riding wherein the child sits on the horse or is placed in different positions on the horse, and accommodates himself or herself to the swinging motions of the horse (De Pauw, 1986; Heine & Rosensweig, 1998).

According to the American Hippotherapy Association (1995) Hippotherapy (that is, treatment with the help of a horse) comes from the Greek word *hippos*, meaning horse. Specially trained physical and occupational therapists use this medical treatment for clients with movement dysfunction. In classical hippotherapy, the horse influences the client, rather than the client controlling the horse. The therapist directs the movement of the horse, analyses the client's responses, and adjusts the treatment accordingly. "The goals of classic hippotherapy are to improve the client's posture, balance, mobility, and function" (Wilson & Turner, 1998, p.44).

The movements of the horse's back serve to relax the rider, strengthen his or her muscles and improve circulation, it also allows the development and training of balance, co-ordination, upright posture, and gait. A horse at a walk transmits up to 110 multi-dimensional movement impulses per minute onto the rider, however, sitting balance is a prerequisite to receive, transform and transmit these movement impulses. In the riding position, the swinging motions of the horse's back are transferred to the child's pelvis and back. As the child passively follows the horse's rhythm, his or her muscles are alternately tensed and relaxed to correspond to the rhythm of the horse's movement. Thus it is a special form of kinetic therapy whereby the horse is used as a mediator for giving movement impulses, while balance, coordination and reflexes are practised simultaneously (De Pauw, 1986; Heipertz, 1981; Straub, 1998; Tauffkirchen, 1998; Wood, 1990; Would, 1998). "The individual is not in a controlling position on the horse, rather the focus is on the individual's response to his reactions, both physical and psychological, whilst astride the broad back of the horse" (Rufus, 1998, p.7). Straub

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(1998) makes the point that no other physiotherapy method can replace or imitate the possibilities of movement stimulation the horse offers.

According to Heipertz (1981) classical hippotherapy is a distinct medical procedure that should be employed only by a physician and / or trained therapist. Primarily physiotherapists practice as hippotherapists, however other health professionals such as speech therapists, occupational therapists and psychologists also receive training in hippotherapy (Wilson & Turner, 1998).

Classical German hippotherapy is a method which focuses on benefiting clients who have mild to severe movement dysfunction – a purely medical or physical rehabilitation orientation. According to Spink (in Engel, 1994) American hippotherapy (Development riding therapy) is different from classical German hippotherapy in the sense that it addresses clients
with deficits in language, learning, behaviour, cognition and/or general movement competency.

A second definition adopted by the American Hippotherapy Association (1995) states how the treatment approach is currently implemented in the United States of America and Canada:

> Functional hippotherapy is a treatment approach that uses the movement of the horse on the basis of principles of classic hippotherapy, neuromotor function and sensory input designed to elicit appropriate adaptive responses from the client. It does not teach specific skills, but rather provides a foundation of improved neuromotor function and sensory processing that can be generalised to a wide range of activities outside of treatment. Hippotherapy is used primarily to achieve physical goals but may also effect psychological, cognitive, behavioral and communication outcomes. Hippotherapy is used by licensed health professionals having a strong background in posture and movement, neuromotor function, and sensory processing (Wilson & Turner, 1998, p.44).

Developmental riding therapy can be a transition between the specific medical techniques in hippotherapy and the group work, which characterises psycho-education

and sport or therapeutic recreation. It may also be a complement to hippotherapy and serves as an entry point for clients whose skills are not yet developed enough for remedial riding or vaulting (Engel, 1994). According to Fitzpatrick and Tebay (in Wilson &Turner, 1998) therapists in France, Finland, Belgium and Brazil have broadened the classic definition of hippotherapy to include more emphasis on psychological aspects of disability, resulting in a more holistic approach.

A health professional who wishes to work with clients in hippotherapy must be able to demonstrate certain riding and horse handling skills. "The ideal horse for hippotherapy is almost of mythical proportions" (Wilson & Turner, 1998, p.50). A hippotherapy horse must possess a gentle, tolerant temperament and be in good health. The horse must be well muscled and supple, be symmetrical and well-balanced, move with even strides, be able to track up at the walk and be trained to work on the bit, with a rounded frame, good impulsion and smooth transitions.

Horsemanship: Sport / Recreation Therapeutic Riding

Horsemanship is according to Minner, Lawton and Rusk (1983) 'riding therapy' or 'equine therapy'. All people experience a need for interesting and normalised recreational activities. There are different motivations for participating in horseriding as a sport; love of the sport and of horses, health and fitness, pleasure and enjoyment or the challenge of competition (Riffin, 1998). Any sport is seen as an attempt to reify a focus on ability rather than a disability, signifying the desire to take part in a normal lifestyle.

Horses as mystical creatures (as being portrayed in the stars, stories and history) have not only fascinated people who are healthy over centuries but also people who have a handicap. "Learning horsemanship can benefit handicapped persons in two ways, by providing recreational opportunities and therapy in the areas of social skills, physical development, and self-concept" (Minner et al., 1983, p.36).

When one wants to develop and implement an equestrian programme four factors need to be considered:
- Instructors need proper training and education to work with the handicapped.

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- Horses and equipment (like special saddles) are needed to implement the programme.

- Thorough promotion of the programme to identify handicapped children and adults to participate in the activities.

- Implementing the program and revising it on the basis of the participants' needs and abilities (Minner et al., 1983).

A traditional curriculum for a therapeutic horsemanship programme would consist of:

- grooming (brushing the horse and cleaning the hooves) ;

- tacking (preparing the horse for riding and saddling the horse) ;

- mounting the horse (may require some special adaptations) ;

- mounted exercises (simple callisthenics on the horse) and

- general horsemanship (walking and trotting) (Minner et al., 1983).

Equestrian therapy may have a positive outcome on social, academic and motoric abilities of handicapped people, however these possible outcomes are not yet sufficiently supported empirically.

Psycho - Education: Remedial Riding and Vaulting

According to De Pauw (1986) and Wood (1990) 'Vaulting and remedial riding' include educational methodology that involves the horse as the medium through which positive changes in behaviour can be introduced and trained in children with behavioural and / or learning problems. It refers to individually prescribed, active physiotherapeutic exercise on horseback. Thus the rider is not only passively influenced by the movement of the horse, as was the case in hippotherapy, but also actively performs exercises. This therapy appears to normalise muscle tone, improve equilibrium reflexes, train fine motor skills and coordination, further the stabilisation of head and trunk control, and improve rotation around the body's central axis – that is, facilitate the development of laterality and improve spatial orientation (Heipertz, 1981). Vaulting refers to the performance of gymnastic exercises on horseback. Its main objective is to correct behavioural problems, but other perceived values include building trust, diminishing anxieties, building concentration, providing sensory and motor

stimulation and increasing social interaction (Heipertz, 1981; MacKinnon, Noh, Lariviere, MacPhail, Allan & Lalibere, 1995; Ringbeck, 1998).

Riding as therapy refers to riding for its preventative or rehabilitative value. This type of riding is controlled aerobic exercises under medical supervision. Sometimes it is recommended for patients with heart, respiratory or circulatory diseases (Britton, 1991).

Principles of remedial or psycho-educational treatment are:

- The child masters the initiative for movements or exercises.
- Treatment always ends before the child is physically or psychically exhausted, thus not longer than twenty minutes.
- With every exercise one follows an invitational approach, the selection of exercises is orientated to the individual developmental process.
- Normal children are integrated into the process, and combining partner exercises are possible.
- It is ideal to integrate one or both parents into the whole process (Schultz, 1998).

The setting for developmental riding follows the 'New Harmony Triangle' developed by Spink in America, modified by Kluwer (in Schultz, 1998). Spink (1993) describes the primary objective areas touched by Developmental Riding Therapy as sensory motor skills, cognitive skills and affective skills. A harmonious dance among all three areas results in a holistic, developmental progression of therapy.

NEW HARMONY TRIANGLE

Horse/
Child

Therapist

Parent
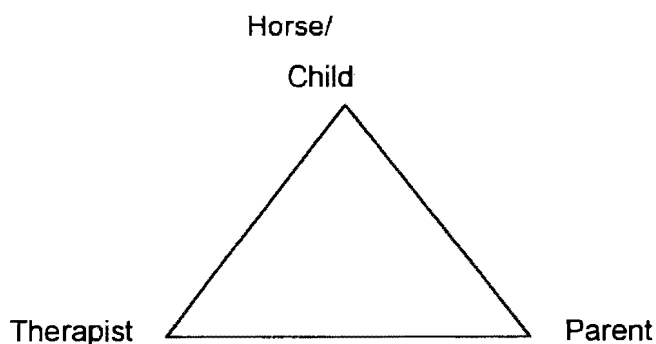
Figure 2.2. Setting in developmental riding (Schultz, 1998).

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Riding for the Disabled

According to Wood (1990), riding for the disabled is a form of physical education with additional psychosocial benefits. MacKinnon, Noh, Laliberte, Lariviere, & Allan (1995) defined a therapeutic horseback programme as a riding programme in which the primary objective is rehabilitation, rather than solely recreation or the teaching of riding skills. On the other hand, Wood (1990) suggests that the general purpose of horseriding for the disabled is to provide children with a disability with an opportunity to benefit physically and emotionally. The emphasis may shift according to individual needs, but it is a form of recreation for people with limited opportunities. According to Mayberry (1978), therapeutic riding has as its primary objective the alleviation of the rider's handicap or disability through a prescribed riding programme. "All horseback riding is therapy, all horseback riding is recreational. Any riding programme for the developmentally disabled, if properly organised, supervised and carried out, will provide physical improvement and emotional satisfaction" (Mayberry, 1978, p.192).

The aim of the United Kingdom's Riding for Disabled is to teach riding, and for riders to enjoy their riding experience, and includes stable management (Hatton-Hall & Claridge, 1998). It thus teaches riding, which is in itself therapeutic and holistic, but it does not see the essential element as being 'therapy'. Riding as a sport for those with disabilities serves to train and strengthen physical functioning as well as to help create positive mental attitudes. Sport riding includes recreational riding, driving, riding holidays and competitive riding. Although the intention of sport riding is not necessarily a therapeutic one, various therapeutic benefits are often realised as a result of riding (De Pauw, 1986).

Programmes of therapeutic horseback riding existed since the 1950's, however interest in research on horseback riding for individuals with disabilities is relatively new (DePauw, 1986) and there is a striking lack of studies examining the psychosocial benefits that children can receive from therapeutic riding (MacKinnon, Noh, Laliberte, Lariviere, & Allan, 1995).

The aim of horseback riding for the disabled is to provide mental, physical and social stimulation and to treat the abilities as well as the disabilities of people with a

handicap (Eltze, 1998; Haskin, Erdman, Bream & MacAvoy, 1974; Henriksen, 1971; Pearce, 1982; Satter, 1977; Walker, 1978).

Benefits of Horseriding

Physical Benefits

Therapists and some physicians suggest that the unique gait of the horse, coupled with the need of the child to concentrate upon controlling the mount, result in relaxation of spastic muscles. In addition, riding may lead to improved co-ordination, normalisation of muscle tone, increased strength, balance and improved mobility (De Pauw, 1986; MacKinnon, Noh, Lariviere, MacPhail, Allan, & Lalibere, 1995; Mayberrry, 1978; Vermeer, 1985). According to Biery and Kaufman (1989) therapeutic riding intervention fostered trunk stability and postural adjustments while the subjects were responding to the movements of the horse. Wood (1990) states that the aim of horseback therapy is at improving neuromuscular control of the head and trunk, maintaining symmetry and physiological posture of the trunk and improving muscular control of the hip joints. The effects of horseback riding was found to lead to similar normalisation of muscle tone and improvement in co-ordination as found with traditional physical therapy, but the lessening of spasticity was found to be greater after riding (De Pauw, 1986). Lastly, the sensory input received during riding may have other beneficial effects such as improved body awareness and improved visual perception (MacKinnon, Noh, Lariviere, MacPhail, Allan, & Laribere, 1995). The movement and body of the horse may have other forms of sensory input, such as auditory, visual and tactile stimulation that may be beneficial to the child in various ways.

Psychosocial Benefits

Spastic cerebral palsy has left Destiny's body very stiff, and she totters a bit trying to keep her balance while standing next to her therapist, who stands 13 hands tall on four legs and weighs 900 lbs. Her mother 's hand steadies the 6-year-old girl as she extends her arm to offer her therapist her payment –an apple. (Gentry, 1986, p.30)

Throughout the literature research focussed on intrapsychic attributes of horseriding, it has a potential effect on self-confidence, self-concept, self-esteem and motivation (MacKinnon, Noh, Lalibere, Lariviere, & Allan, 1995). Valuable information has potentially been lost due to efforts to quantify subjects' experiences. Research done by Wood (1990) mirrored a glimpse of the potential of a thicker description by taking into account the broader context, connecting the child, family and wider social systems. Wood found that riders who had learned to form relationships with horses and helpers carried this skill over to their total life situation, and many parents reported that their children's lives had been enriched. According to Wood one mother reported that her son's balance and co-ordination had improved to such an extent that he learned to ride a bicycle a few months after he started horseriding.

Horseriding is a movement activity, and the governing principle of riding therapy is, according to Heipertz (1981), that "mobility is the medium of action, and that motor accomplishments with their physiological, psychological and sociological effects have significant influence on the child's development, his capability, behaviour and emotions" (p.9). The horse's walk provides sensory input through movement, which is variable, rhythmic and repetitive. The resultant movement responses in the client are similar to human movement patterns of the pelvis while walking. The variability of the horse's gait enables the therapist to grade the degree of sensory input to the client, then use this movement in combination with other clinical treatments to achieve desired results.

Through the three-dimensional (up and down, backwards and forwards as well as from side to side) movement of the horse the child is forced to adjust his or her balance to that of the horse (Heine & Rosensweig, 1998; MacKinnon, Noh, Lariviere, MacPhail, Allan, & Lalibere, 1995; Mayberry, 1978; Pearce, 1982; Sherman, 1977; Straub, 1998). This three-dimensional movement influences spatial orientation too, linking with balance and equilibrium, which are also dependent on the vestibular system.

In South Africa Engela Young has been an occupational therapist for 24 years, since 1996 she has combined sensory integration and horseback riding. She puts each patient through a series of different activities on horseback depending on their needs. Some exercises stimulate neural functions while others stimulate the integration of the left and right hemispheres of the brain. From an occupational perspective she currently

names this combined therapy 'Equitherapy' (Young, 1999). Equitherapy is as yet an innovative and significant piece of the bigger puzzle concerning therapeutic riding (In the next chapter a more detailed description on sensory integration will follow).

What about the relationship with a horse makes the interaction therapeutic?
"Far back, far back in our dark soul the horse prances...
The horse, the horse.
The symbol of surging potency and power of
movement , and of action..."   D.H. Lawrence (1885-1930)

The Horse as Co-Therapist

Ten Behavioural Characteristics Unique to the Horse

1. The horse is flight orientated, thus depending on flight as its primary survival behaviour. The horse's anatomy, physiology and behaviour distinguish it as a sprinter, and this natural flightiness must be appreciated.

2. The horse is the most perceptive of all domestic animals, its sight, smell, hearing, taste and feel are extremely well developed.

3. Among all domestic animals, the horse has the fastest response time.

4. Through habitation and desensitisation the horse can be desensitised to frightening stimuli and is therefore more quickly responsive than any other animal.

5. The horse's memory is remarkable, however, horses will forgive.

6. Horses categorise life experiences as either something to fear, and hence to ignore, or something to fear and hence to flee.

7. Horses are the most easily dominated creatures of all domestic animals, need leadership and will readily accept it.

8. Horses exert dominance and determine the hierarchy by controlling movement of their peers.

9. Horses have their own unique body language, they use it to signal subordination or submissiveness. Humans can learn to read their language.

10. Horses are a precocial species, they must be able to recognise danger and flee from it (Miller, 1998).

Wood (1990) emphasises that there is no rule about which particular breed of horse should be used for disabled riders, but good temperament is a definite prerequisite. The ponies and horses should be calm, obedient, patient and tame enough to be touched – even unexpectedly at times. The size of the horse has an enormous influence on the helper or assistant, it can be very difficult to assist a person with a severe disability on a big horse. Spink (1993) differs from Miller (1998) and Wood (1990) in that he feels that there is no specific breed required, according to him there are certain genetically based features of the horse that are significant for therapeutic riding, such as breed type, size and conformation. Spink (1993) makes the point that an ideal size horse for therapy is 14.3 hands to 15.3 hands, this size is optimum for various special handling techniques such as the therapy triangle, modified leading, client-centred driving and therapeutic longeing. Such a horse is large enough to provide quality rhythm and tempo at gait, and still manageable and friendly towards the helpers. However, different size horses are periodically implemented in different sessions or facets of therapeutic riding, such as grooming, sensory awareness training, petting and handling exposure.

A horse used for therapy should exhibit most of the following behavioral tendencies:
- Leave its herd companions in the field for the chance to interact with and receive attention from humans. Voluntarily lower its head to greet clients, demonstrate submissive postures around clients.
- The horse must very selectively attend to signals from the primary handler while ignoring extraneous input from the client. This should remain consistent until it is

clear that the horse has been turned over to the client's control, such as when the therapist adds reining and steering skills to the session. When a well-trained therapy horse is confused or unclear about the client's request, it always looks to the key handler for communication or direction.

- The horse will remain actively engaged both mentally and physically for the duration of the day's work, which lasts about two to three hours.
- It will overcome its natural fight-or flight instinct through the reassurance of its safety and security (Spink, 1993).

Tuttle (1987) describes riding as "the great equaliser, the horse is perhaps the ultimate aid to mobility for the disabled rider" (p.334). Katcher (in Katcher & Beck, 1983) suggests that transactions between people and animals may have an incredible influence on our sense of well-being and physical health. He proposes four descriptive terms for the outcome of this unique relationship between man and beast: safety, kinship, intimacy and constancy. In this study the researcher seeks to explore and unfold descriptive terms for the outcome of the relationship between horses and children with cerebral palsy. There are manifold ways to describe and apply therapeutic horseback riding, and open-ended possibilities to envisage the relationship between a man and a horse.

Conclusion

In the next chapter the ecology of cerebral palsy will be investigated as well as research that has been done on therapeutic horseback riding and its role in cerebral palsy.

We need another and wiser and perhaps a more mystical concept of animals. Remote from universal nature, and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours they move finished and complete, gifted with extensions of the senses we have lost or never

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attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth (Katcher &Beck,1983,p.518).

CHAPTER 3

THE ECOLOGY OF CEREBRAL PALSY

Humpty Dumpty sat on a wall. Humpty Dumpty
had a great fall.
And all the king's horses and all the king's men
Could not put Humpty together again

Mother Goose

Introduction

Cerebral palsy is the most frequent cause of permanent physical disability in children (Davis & Hill, 1980). Perhaps it is important to begin with different definitions on cerebral palsy and then refers to the South African context.

Definition

The term 'Cerebral Palsy' was first used in describing a group of neuromuscular disorders as 'the cerebral palsies'. 'Cerebral' (from the brain) 'palsy' (difficulty in movemen). Palsy is an abbreviation of paralysis, which though commonly used with reference only to movement, actually means a loss of motion or sensation in a living part or member. In the case of an infant with cerebral palsy it is a developing nervous system that has been afflicted, and the manifestations may differ from those encountered in adults (Blencowe, 1971; Griffiths & Clegg, 1988). Cerebral palsy can be defined as a disorder of motor function resulting from a permanent, non-progressive defect or lesion of the immature brain (Arens, 1984; Davis & Hill, 1980). Cerebral palsy is a complex condition and a nonspecific umbrella term often used to cover various problems related to birth injury (Chruickshank, 1955; Griffiths & Clegg, 1988; Schleichkorn, 1983). In the literature there are several different definitions. According to Griffiths and Clegg (1988) it can be defined as a persistent, but not unchanging, disorder of movement and posture, appearing in the early years of life and due to traumatic or inflammatory brain damage or a nonprogressive disorder of the brain, the result of interference during development. 'Persistent' refers to the cerebral palsy being a life-long condition, it can not be cured but development, maturation and intervention may alter the movement patterns (Griffiths & Clegg, 1988).

Although cerebral palsy is characterised primarily by the motor disorders, it may also involve sensory deficits and intellectual impairments that vary in type and degree and result in minimal to severe dysfunction. It is widely held that to be defined as a cerebral palsy, the brain damage must occur before the child is eight or nine years old, however, the American Academy for Cerebral Palsy has arbitrarily defined five years as the upper age limit for damage to occur. According to the American Academy for Cerebral Palsy the function lost by injury to one part of the brain may sometimes be taken over by another part of the brain (Davis & Hill, 1980). Many other clinical signs may be present with cerebral palsy. These may refer to different neurological conditions that produce a disability because of muscular incoordination and weakness. The age range in which cerebral palsy occurs is very large. All age groups in this study will be referred to as children, they fit all the other descriptions of a child; dependent, need nurturance and constant care, live with parents or guardians, and the can not provide for their own needs like clothing, food and housing (Louw, 1985).

According to a survey for the Department of Health, South Africa, 1999, there was no clear category for children with cerebral palsy. But from a sample size of 2223 people the following causes of the disability were portrayed: Illness, 26%; Don't know, 21%; Before or during birth, 19%; Accident, 15%; Other, 9%; Violence, 5%; Witchcraft, 3% and Ageing Process, 2%. Respondents in that survey gave illness as the most common cause of disability. According to that study the prevalence rate by type of disability is: Movement activity, 2.0%; Daily life activities, 1.8%; Seeing, 1.7%; Moving around, 1.7%; Learning, 1.2%; Emotional, 1.1%; Intellectual, 1.1% Hearing, 1.0% and Communication, 0.8%.

Overseas incidence figures range from less than 2 per 1000 births in some European surveys to 5,9 per 1000 births in one American study (Arens, 1984). Cerebral palsy can be looked upon in broad terms as a brain injury in the child, which results in a disorder of movement.

In this chapter firstly a theoretical background on cerebral palsy will be given, followed by management of cerebral palsy and then a brief overview of sensory integration. Lastly a literature review on earlier research done in the field of therapeutic riding and cerebral palsy will be given.

Problems in Movement Control

"Only human beings have an upright bipedal locomotion all other primates are quadrupedal based on the structure of their muscle skeletal system and their locomotor pattern" (Von Euler, Forssberg & Lagercrantz, 1989, p.53). The control of movement normally develops gradually as the brain matures and the various areas in it are able to take up their allocated functions. Movement refers to the motion of the body and limbs produced as a consequence of the spatial and temporal pattern of muscular contractions. Thus a variety of potential movements may be generated to complete any one act and a variety of movements may be identified as a particular act. Movement is a response to a variety of stimuli. This is all according to a pattern of development, programmed in the brain (Boufford & Wall; Griffiths & Clegg, 1988).

In children with cerebral palsy there are a delay and deviance in movement; the acquisition of movement skills is invariably slower and their developmental pattern is different. The disorder of movement and posture in children with CP (cerebral palsy will henceforth be referred to as CP), is reflected in difficulty of control of movement and of position at rest. These difficulties may be apparent in any part of the body; may exist in unwanted movements or stiffness, and are exacerbated by lack of control and coordination of the rest of the body, making intentional movements less attainable. The term coordination refers to elements of skill expression that permits more than one limb segment to act in unison with others. Central to this is the timing relationship between the limb segments. The term control refers to the individual's capacity to modulate the timing or the forces produced in the particular muscles acting on the limb segments involved in the skilled activity (Boufford & Wall, 1990, Burton & Wade, 1990; Griffiths & Clegg, 1988). Children with CP never develop a prominent heelstrike and often maintain a digitigrade foot placement with a premature activation of the calf muscles. Some children actually develop a pure digitigrade pattern walking on their toes during the whole stance phase (Von Euler et al., 1989).

The different movement patterns in children with CP may in part be due to the persistence of primitive automatic reactions, but the main characteristic will be due to the site of the brain dysfunction. The site of the lesion determines the part of the body affected and the type of change in movement and also whether other neurological functions are impaired and to what extent. It is important to remember that the damage was done to a

developing brain thus the characteristics of the motor disorder may alter during this period and may not be apparent during the first few months of life (Christensen & Melchior, 1967; Griffiths & Clegg, 1988; Lezak, 1995).

CP can be classified according to the anatomic site of the brain lesion, clinical symptoms, topographical involvement of extremities, degree of muscle tone, severity of involvement and etiology. Simple classification of CP is spasticity, ataxia, athetosis and mixed type of CP. Different parts of the brain are damaged in different types of CP; the classifications are made according to severity: mild, moderate or severe and three major categories can be distinguished according to the time of occurrence of injury: prenatal, perinatal and postnatal. Thus, CP is a complex of neurological disorders characterised by great variformity (Arens, 1984; Chruickshank, 1955; Griffiths & Clegg, 1988; Schleichkorn, 1983; Towbin & Thomas, 1960).

Neuropathological Findings in Different Clinical Entities

Once the damage to the brain has occurred, the condition is established and incurable. It has been reported that at least half of the persons with CP are mildly mentally retarded (Christensen & Melchior, 1967). Too often the associated problems of CP give an outward appearance of retardation based on how people stereotype others. Such problems may include poor speech, drooling, poor posture and gait as well as incoordination. The fact that there is brain damage affecting motor control distinguishes CP from what is typically considered to be mental retardation.

Two basic classifications of CP are the neurological and the anatomical classification. The neurological classification consists of spastic, athetoid, ataxic, atonic, rigid and mixed type of CP and the anatomical classification consist of hemiplegia, diplegia and quadriplegia (Fixen, 1993).

Classification of Cerebral Palsy

<u>Spasticity</u>

According to several authors spasticity is the commonest motor disorder, accounting for more than half of all cases (Arens, 1984; Davis & Hill, 1980; Griffiths & Clegg, 1988). Spasticity results from damage to the cerebrum or motor cortex. The cerebrum is the largest part of the brain consisting of two hemispheres and is concerned with sensations and all voluntary muscular activities.

> Spastic cerebral palsy involves the pyramidal pathway and is characterised by spasticity; hypertonicity with an exaggerated stretch reflex; the presence of primitive reflexes such as the Moro, asymmetric tonic neck, and grasp reflexes beyond the time at which they would normally disappear; and abnormal reflexes referable to the pyramidal pathway, such as a positive Babinski reflex. (Davis & Hill, 1980, p.37)

Thus, a person with spasticity demonstrates a hyperirritability of muscles to stimuli. The muscles react to passive stretching by the examiner with an abnormally strong increase of resistance, however, this resistance disappears suddenly, causing the claspknife phenomenon. The muscles tend to tighten up which may cause contractures and deformities. This tightness prevents a child from functioning in a normal manner. Parts of the child's body most likely affected are the elbows, wrists, hips, knees and ankles. There may be some voluntary movement by the child but it will be slow and jerky at times (Arens, 1984: Christensen & Melchior, 1967; Davis & Hill, 1980; Lezak, 1995; Schleichkorn, 1983).

Spastic CP may be further described according to the distribution of muscles involved.

<u>Spastic Monoplegia</u>

One arm only or less frequently only one leg is involved. Usually this class turns out to be hemiplegias.

Spastic Hemiplegia

One side of the body is involved, this involves paralysis of the limbs of one side of the body, i.e. right arm and right leg due to a lesion of the opposite cerebral hemisphere. The difficulty in movement is most obvious at first in the hand, and may only manifest in the leg on weight bearing and walking. The arm is often held in a typical position being pulled in at the shoulder and bent at the elbow and wrist with the fist clenched. The gait of these children is often characterised by walking on the toes with a straight knee, because there is a tendency to pull in at the hip. They usually swing their legs outward and then inwards in a wide arc. They, however, have a good prognosis for ambulation (Arens, 1984; Watt, Robertson & Grace, 1989).

Spastic Diplegia

The whole body is involved but the legs more than the arms, children usually have good head control and moderate to slight involvement of the upper limbs. Stiffness may be noticed early when separating the legs and in rolling over. Ambulation is delayed and is characterised by walking on the toes with bent hips. Slight clumsiness in the hands and arms and some difficulty in using hands and eyes together is observed, this may result in some difficulty with writing and other manual skills.

Spastic Tetraplegia/ Quadriplegia

This refers to the involvement of all four extremities, thus affecting all four limbs. The child has severe difficulties in all forms of movement, involving arms, legs and trunk, and interfering with sucking, chewing, swallowing, eye - coordination and speech. Some of the children with spastic tetraplegia are never able to walk. 'Scissoring' resulting from tight hip adductor muscles and plantar flexion at the ankles is common. These children often have dysarthric speech and swallowing impairment (Arens, 1984; Blencowe, 1971; Boone, 1972; Davis & Hill, 1980; Griffiths & Clegg, 1988; Levitt, 1977; Schleichkorn, 1983).

Ataxia

The ataxic classification goes with damage to the cerebellum and the cerebellar pathways. Impairment in the cerebellum, located in the rear of the skull, results in loss of balance and incoordination. Almost 2% of all children with CP fall into this classification. The child may exhibit an unsteady, wide-based gait, along with an inability to walk a straight line or to walk in tandem. Voluntary movements are clumsy and uncoordinated. The ataxic patient may exhibit dysmetria (evidenced by overreaching or underreaching for an object), as well as intention tremors and poor fine movements of the hand. Some infants are hypotonic early on and either remain hypotonic or become hypertonic in later childhood. Most children with ataxia are eventually able to walk (Davis & Hill, 1980; Schleichkorn, 1983).

Athetosis

Athetosis is a major classification of cerebral palsy, comprising about 25% of all cases (Davis & Hill, 1980). The involuntary, uncontrolled movements are the result of damage to the area in the midbrain known as the basal ganglia. The basal ganglia are composed of four masses of grey matter located deep in the cerebral hemispheres. People with athetosis may also be classified as having dyskinesia, thus having difficulty with movement, hence directly related to involuntary movements. This is characterised by involuntary, purposeless, writhing movements, which may occur in swiping or rotary patterns or may be unpatterned. Athetosis is not frequently seen before eighteen months as is it depends upon the development of major motor patterns and brain maturation. Some characteristics of athetosis are facial grimaces, some drooling and slow, irregular, and twisting uncoordinated movements. Due to the difficulty the child has in controlling muscles that are required to produce speech, speech and hearing may be affected too. The involuntary movements often decrease with relaxation, drowsiness, fatigue, a prone position, elimination of emotional tension, or distraction. These movements become more severe during stressing, decrease with relaxation, and disappear entirely during sleep (Arens, 1984; Davis & Hill, 1980; Lezak, 1995; Schleichkorn, 1983).

Mixed Type

A mixed type of CP may occur when a child exhibits characteristics of athetosis and spasticity. Children with athetosis are most likely to have some form of spasticity, whereas children with spasticity may have some involuntary movements. Usually the lower extremities (legs) are spastic and the upper extremities (arms and hands) are involved with athetoid movements. Many of these patients have severe neuromuscular dysfunction (Arens, 1984; Davis & Hill, 1980).

In all types of CP a variety of functions and movements may be restricted. Mobility is the most obvious and is impaired to some extent in all children with CP. Manipulation may be severely affected in children who show involvement of all four limbs, they also frequently manifest with disorders of expressive speech (dysarthria). Children with impaired intelligence may need electronic aids to write with and gadgets to help them with household activities. CP can also be classified according to levels of severity.

Classification According to Severity

Schleichkorn (1983) distinguishes between mild, moderate and severe forms of CP by describing what the child with cerebral palsy's needs are in the activities required for everyday functioning/living.

Mild

The child needs no special treatment, has no speech deficit or problems, and is able to care for his or her daily needs and is able to walk without any appliances.

Moderate

The child needs treatment, he or she is inadequate in ambulation, speech or self-care. The child will make use of braces and self-help appliances.

<u>Severe</u>

The child needs special treatment. The prognosis for self-care, ambulation and speech is very poor.

The severity of the child's condition may arise from the time of occurrence.

Etiology

Although the cause of CP is often obscure, there are a number of known etiologic factors that may be classified according to the time of occurrence of injury, that is, prenatal, perinatal, or postnatal.

<u>Prenatal Period</u>

This is the period from the time of conception to the time of labor. Prenatal factors account for 10% of all cases of CP (Davis & Hill, 1980). Denhoff and Robinault (in Boone, 1972) found that 40% of all cases are caused by a family genetic basis. There may be;

1. Anoxia due to some problem with the umbilical cord ("Anoxia: when oxygen deprivation is sufficiently severe and lasts long enough it produces mental changes; Anoxia refers to a complete absence of available oxygen, in hypoxic conditions oxygen availability is reduced " (Lezak, 1995, p.272).)

2. Maternal illnesses such as anemia or metabolic disease such as diabetes, heart condition, hyperthyroidism, severe asthma, toxemia; and a miscellaneous category which includes disorders such as faulty implantation of the fetus, threatened abortion, fetal anoxia, maternal and fetal blood incompatibility, maternal drug ingestion, maternal trauma, genetic factors and fetal brain anomalies.

3. Intrauterine infections, (maternal infection) due to a viral or infectious agent such as rubella, herpes simplex or toxoplasmosis

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4. Rh incompatibility sensitisation – Rh-factor was first recognised in work done with the Rhesus monkey. The factor is part of the blood. When a Rh-Positive woman marries a Rh-negative man her children may be subject to Rh-disease, which can damage the fetus before or soon after birth.

Perinatal Period

In the majority of individuals with CP, damage occurs perinatally, thus from the onset of labor through the first 28 days of extrauterine life. In this period possible causes may be:

5. .Cerebral Anoxia / hypoxia: due to some obstruction involving the cord.
Other damaging factors include premature separation of the placenta, excessive maternal sedation and problems with resuscitation of the infant after delivery.

6. Asphyxia: resulting from a mechanical respiratory obstruction. Cerebral Trauma: any injury to the baby's head during labor, haemorrhage, forceps application and /or poor position of the infant.

7. Analgesics: administering of drugs (like barbiturates, morphine) affecting the respiratory center of the infant.

8. Pressure changes: too slow or too fast a delivery, Caesarean section, high forceps, breech delivery, mid forceps, low forceps, spontaneous delivery, low forceps with episiotomy (cutting the vulva orifice).

9. Prematurity: complications at birth, respiratory distress, small for date – babies, (39% of children with CP have a history of low birth weight (Davis & Hill, 1980; Schleichkorn, 1983).

Postnatal Period

This period starts from the time of and after birth of the child up to 6 years of age. About 15% of cases of cerebral palsy result from postnatally acquired damage. These may be;

10. Trauma: damage to the head by fracture of wounds or as a result of child abuse.

11. Infections: Meningitis, childhood fevers, encephalitis or a brain abscess.

12. Anoxia: Strangulation, carbon monoxide poisoning, lead or arsenic poisoning, high altitude oxygen lack.

13. Vascular problems: haemorrhage, thrombosis.

14. Neoplasms: tumors, cysts, and hydrocephalus.

15. Falls and automobile accidents appear to be traumatic cripplers in the first two years of life.

Causes of CP take place in prenatal, perinatal and postnatal periods, but it is an immature nervous system, which suffers the insult in either one or all three-time periods. After the insulting injury the nervous system continues to develop in the presence of the damage. Thus CP is a complex situation of pathological symptoms within the body of a developing child. No one child with CP is the same, adaptations should be made according to each child 's handicap and individuality (Arens, 1984; Bobath & Bobath, 1975; Boone, 1972; Christensen & Melchior, 1967; Davis & Hill, 1980; Griffiths & Clegg, 1988; Levitt, 1977; Schleichkorn, 1983).

Other Physical Problems Related to Cerebral Palsy

The physical problems of a CP child are either directly related to the central nervous system lesion which has produced the CP or they are the result of the abnormal sequence of events that accompany the neuromuscular problems. Some of the physical problems in short are; epileptic seizures, bracing problems, orthopaedic surgery problems, visual defects, feeding and nutritional problems, hearing deficit, intellectual impairment and behavioural disorders. These will now be discussed in greater detail.

Management of Cerebral Palsy

Epilepsy

Epileptic seizures in a person with CP are the result of excessive neural discharge in the cortex, which may then spread to involve the entire cerebrum. Hence where cerebral palsy is concerned the significance of epilepsy lies in its association with cortical scarring and the nature of the aura. Recurrent seizures are mostly partial in nature, and affect up to 30% of all children with cerebral palsy. Seizures are more common in children with spastic CP, fortunately through the use of anti-convulsant drugs seizures may be reduced in frequency and intensity (Arens, 1984; Blencowe, 1971; Boone, 1972; Davis & Hill, 1980).

Bracing

Braces are used to correct and prevent deformity, to support and reinforce a weak skeletal structure, and to control unwanted movements. Since all children experience much sensory input from their environment, it is critical to facilitate movement in the environment for the child with cerebral palsy. Numerous appliances are available to assist the involved child with mobilisation. Appliances increase environmental exposure and allow for increased independence (Blencowe, 1971; Davis & Hill, 1980).

Physical Therapy

Physical therapy may assist in the gaining of muscle control, help facilitate locomotion, improve postural and skeletal alignment, and prevent contractural deformities. Traditional therapeutic exercises consist of stretching, active, passive and resisted movements. Non-traditional approaches recently utilised by physical therapists are designed to inhibit the neurologic mechanism of the motor dysfunction itself. These methods emphasise modification or enhancement of sensory output instead of focusing on specific involved muscle groups or joints as in the traditional approaches (Blencowe, 1971; Davis & Hill, 1980)

Orthopaedic Surgical Management

Orthopaedic intervention depends on the type of CP, level of involvement, the age of the patient, the needs and expectations of patient and family, functional limitations of the patient, previous treatment, access to treatment and how experienced the surgeon is (Dormans, 1993). Orthopaedic surgery is used to correct both fixed and functional deformities and is particularly helpful for the child with spastic CP who assumes fixed, abnormal positions. Two kinds of procedures are performed when bracing or physical therapy is not sufficient. Firstly, those procedures which are designed to restore muscle balance, (e.g., muscle / tendon lengthening, adductor muscle myotomy and anterior obturator neurectomy). Secondly, those procedures which result in bone stabilisation (Boone, 1972; Davis & Hill, 1980; Schleichkorn, 1983).

Management of Feeding and Nutritional Problems

In moderate to severe CP feeding problems result in nutritional inadequacies. Most of the feeding problems are caused by a combination of weak and uncoordinated movements of the muscle of the tongue and lips plus various retained childish reflexes like the bite reflex and infantile swallow pattern. Difficulties such as delayed closing of the mouth or swallowing are frequently seen in the child with athetosis because of reverse tongue action and extraneous oral-facial movements. These children will spit out, drop or push away more food than they are able to swallow.

Helpful alterations in feeding include closing of the jaw by raising the mandible and stroking the throat gently upward. Drinking from a straw, using adaptive utensils and preparing foods such as finger foods that the child can manipulate easily may aid in the development of independent eating skills.

Feeding may be a natural time for the parents to work on oral control since children are most aware of their tongues and lips when eating and just after. This provides a good opportunity for babbling games or conversation (Blencowe, 1971; Davis & Hill, 1980). Normal speech cannot be expected to develop until there is control over chewing, sucking and swallowing movements.

<u>Visual, Hearing and Speech Assessment</u>

Visual defects may be part of the symptomatology of CP. Peculiar to cerebral palsy may be problems of eye movement where the small ocular muscle movements may be impaired resulting in such conditions as diplopia (double vision) mystagmus (jerky to-and fro small movements of the eyes), or strabismus (one eye fixates on a target while the other deviates from it).

Children with CP may have a wide range of speech and communication difficulties. Speech problems may arise due to difficulties and problems in various areas, such as motor deficiencies of the tongue, paralysis of laryngeal, intelligence factors, facial or respiratory muscles, as well as lack of social interaction. Almost 65% of persons with cerebral palsy have some degree of difficulty with speech, depending on the extent of brain damage, the area of the brain and the type of cerebral palsy (Lezak, 1995; Schleichkorn, 1983).

If the speech center of the brain (Broca's area) is damaged, it may not be possible for the child to ever accomplish normal or intelligible speech, but the child will be able to communicate. Facial expressions and gestures may be valuable tools of communication. Children with adequate upper limb function may use gestural or systematic sign systems to communicate. The more severely physically impaired have recourse to visual systems; that is, picture boards, symbol displays or alphabet or word boards which can be indicated directly by hand, fist or finger pointing or indirectly accessed by switches operated by foot, hand or eye gaze. The tremendous advance in technology has ensured that there may be no child or adult too severely handicapped to communicate (Galjaard, Prechtl, & Velickovic, 1987). The most important single principle in training the child to communicate is that understanding of speech must come first. All the emphasis must be on understanding first, without any efforts to drill the child to produce executive speech. Provided they have the knowledge of language and understanding, there is always the possibility of being able to communicate back by some kind of technical device (Blencowe, 1971).

Deafness or hearing loss in CP, which is associated with athetosis results from the same pathological processes as those, which causes CP itself. The site of damage, which causes deafness, is higher up in the auditory pathway in the brainstem, in the cochlear nuclei (Lezak, 1995) Children with CP are often unable to combine simultaneously the use

of their sensory receptors. This may slow down their learning ability, in most cases learning happens by combinations of several sensory stimulation simultaneously (Blencowe, 1971; Bobath, 1980). Visual, hearing and speech deficits may have a definite influence on the child with cerebral palsy's learning ability. What might be considered abnormal behaviour could then be seen as a resultant difficulty in interacting with the environment (Brereton, 1972).

Psychological Aspects

The child with CP has ongoing psychosocial needs. This child may be so busy with treatments that his or her basic needs for play, relaxation and learning are neglected. The effect of anxious, over indulgent parents may also delay normal emotional development. Parents need to be taught to facilitate play, relaxation and the satisfaction of their child's needs. Some other vulnerability of children with CP is aggression, inhibition, withdrawal and immature behaviour (Blencowe, 1971; Brereton, 1972; Davis & Hill, 1980).

> Because of the sensorimotor handicap the child is likely to react in an exaggerated way to the objective world around him – He may throw it about (aggression) be afraid of it (inhibition), ignore it (withdrawal) or switch attention rapidly from one object to another in a random fashion. (Brereton, 1972, p.44)

In order for a child with CP to expand his or her repertoire of interaction, one must create a safe space in which a task is made easier by isolating a specific problem in which a certain stimulus can elicit a response within the child's repertoire. Thus, leading the child on a secure base to expanding areas of interaction through expanding the child's sensory integration (Ayeres, 1983; Brereton, 1972; Davis & Hill, 1980).

Sensory Integration and Movement

Sensory integration is the organisation of sensation for use. The brain must organise all of these sensations if a person is to move and learn and behave 'normally'. When the sensations flow in a well-organised or integrated manner, the brain can use those sensations to form perceptions, behaviours and learning (Ayeres, 1983). In children who have CP, the acquisition of movement skills is invariably slower and their developmental

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pattern is different from children with a 'normal' developmental pattern (Griffith & Clegg, 1988). "Movement can only be learned and corrected through movement" (Straub, 1998).

According to Piaget (in Louw, 1985), a child's initial stage of development is the sensorimotor stage which is dependent upon movement. If development in these basic skills is impaired then later development will be directly affected. Hence, it is thought that movement is the basis of learning. Sensory integration teaches the brain more about gravity and the space around a person's body, and how the human body moves. The sensation of gravity and movement comes from the inner ears. The spinal cord, brain stem, cerebellum and cerebral hemispheres use sensory input from receptors to produce awareness, perception, and knowledge in order to produce movements, body posture and the planning and coordination of movements, thoughts, emotions, learning and memory.

The brain stem contains a set of complex nuclei that processes sensations from the gravity and movement receptors in the inner ears and use this information to maintain equilibrium, upright posture and other automatic functions. The cerebellum processes all types of sensations, but is especially useful for organising gravity, movement and muscle joint sensations to make the human body move accurately and smoothly.

The vestibular sense is the sensory organ that detects sensations concerning equilibrium. One's inner ear contains the labyrinth; it is a complex structure made of bone. The labyrinth contains both the auditory receptors and the two types of vestibular receptors. Gravity activates the one receptor that consists of tiny calcium carbonate crystals attached to hair-like neurons. The second type of vestibular receptors lie in tiny closed tubes that are called the semicircular canals or ducts. There are anterior, posterior and horizontal semicircular canals filled with a fluid called endolymph. Concerning the first vestibular receptor, gravity pulls the crystals downward and this movement of hair-like cells activates the nerve fibres of the vestibular nerve. When the head bends or moves in any direction that changes the pull of gravity upon the calcium carbonate crystals, there will be a change in the information in the vestibular system due to different input received by the receptors. When the head moves rapidly in any direction the fluid in the canals back up in one or more of the three canals in the inner ear. This pressure stimulates the receptors that lie inside the canals, which then produce impulses that flow through the vestibular nerve to the vestibular nuclei. Again the sensory input changes whenever the head's position changes, thus this

sense can also be called the sense of movement. A combination of these two receptors tells a person where the body is in relationship to gravity and movement, speed of movement and direction. The vestibular receptors are the most sensitive of all the sense organs. The vestibular senses are connected with all other senses in the brain. Disorders in the vestibular system might make a person lose his or her balance, causing more effort and difficulty, leading to less success and satisfaction when the brain does a poor job of integrating sensations. The vestibular system can be activated through various exercises and activities such as occupational therapy or horse riding (Ayeres, 1983; Ganong, 1979; Guyton, 1981; 1992). According to Ayeres (1983) sensory integration therapy works because the brain is designed so that the functions that are used are the functions that are most likely to develop. Also because the therapeutic environment is set up so it is fun for the child to use his or her sensory processes in a way that he or she could never use them before. Current research by Young (1999) focuses on therapeutic horseback riding and sensory integration. Research in the field of human animal interaction encounter a kaleidoscope of professions and epistemologies, resulting in multidisciplinary approaches concerning the topic. Contact with animals has been hypothesised to enhance the quality of life of their human partners. According to Garrity and Stallones (in Wilson & Turner, 1998) a search of the scientific literature between 1990 and 1995 uncovered 25 empirical studies in the English language addressing this issue. In South Africa only one quantitative study has been done by Rufus in 1997 concerning therapeutic horseriding (Pauw, 1998). Since 1735 to 1999 various studies have contributed to this expanding field of study.

Reflections on the Discovery of Therapeutic Riding

I saw a child who could not walk

Sit on a horse, laugh and talk

Then ride it through a field of daisies

And yet he could not walk unaided.

I saw a child, no legs below

Sit on a horse, and make it go

Through woods of green

and places he had never been

to sit and stare,

except from a chair

I saw a child who could only crawl

Mount a horse and sit up tall

Put it through degrees of paces

And laugh at the wonder on our faces

I saw a child born into strife

Take up and hold the reins of life

And that same child, I heard him say

Thank God for showing me the way...   *John Anthony Davies*

In 1735 Quellmatz was the first to describe the three -dimensional movement of the horse's back, and its unique implications for human health (Pauw, 1998). The first reported study was by Chassaigne in Paris, he conducted a study in 1875 on the value of horseback riding. He found riding beneficial in the treatment of paraplegia, hemiplegia and other neurological disorders. He stated that the passive and active movement of the horse had an influence on posture, balance, joint movement and muscle control (De Pauw, 1986). According to Bliss (1997) there are more than 500 accredited therapeutic riding centres serving more than 25 000 patients in Canada and the United States of America.

There is substantial literature on the positive physical effects of therapeutic riding on those with disabilities, but according to Cawley, Cawley and Retter, (1992) there has been little research on emotional factors.

Fox, Lawlor and Luttges (1983) designed a novel test instrument to quantify the progress of persons who participated in therapeutic horseback riding programmes. Each participant acted as his or her own control, and group means before and after the two-hour therapy session were taken. Nineteen children, ages 7 to 14 were evaluated before and after riding. Marked improvements were noted for most children for measures of sitting balance and coordination, hand, hip, knee and ankle strength. The clinical impressions of parents and therapist suggested concomitant progress in characteristics such as social interaction and self-confidence.

In a study by Bertoti (1988) on posture, 27 children (spastic diplegia or quadriplegia) were followed in a repeated – measures design: he firstly did a pre-test, followed by a 10 week period of no riding, then he repeated a pre-test 2, there after 10 weeks of riding, and lastly a post-test. Thus, each child served as his or her own control. They rode twice a week for an hour. A specific protocol was followed for each session and for posture evaluation. The sessions resulted in decreased spasticity, improved weight shift, improved balance and rotational skills, and improved postural control. Other subjective improvements were noted, such as improved self-confidence, less fear of movement, and position change; decreased extensor muscle hypertonus and hip adductor muscle spasticity; improved movements for sitting, walking and stance; and improved weight bearing. This study demonstrated that therapeutic riding could be a valuable treatment modality for children with CP.

Bliss (1997) reported that there has been an improvement in posture, muscle tone, and weight bearing abilities in children with CP after therapeutic riding. Other findings by Bliss includes improvement in standing and balance with mentally retarded patients, and improvements in self-esteem, self-image and enhanced interpersonal skills by other clients who took part in therapeutic riding.

When a child is able to expand the number of relationships he or she is involved with, the child is able to express his or her own identity, share trust and decrease isolation (Spink, 1993). Gentry (1986) parallels Bliss's (1997) postulate in stating that each day the therapists experience something good growing in the child's life, a bigger smile, a stronger sense of self-worth and even a new skill mastered on horseback.

Engelman (in Longden, 1998) found that although the aims of hippotherapy with patients with paraplegia and tetraplegia were to reduce spasticity, alleviate pain, improve joint mobility, and improve coordination and equilibrium control there were other important psychosocial and psychological effects. Several patients found that sleep disturbance was regulated. Bowel movements became regulated which allowed a reduction in medication. Hippotherapy had the effect of increasing motivation, which led to an increase in sociability and increased the effectiveness of other therapies. It was also of benefit to those suffering from depression (Longden, 1998).

A study by Cawley et al. (1992) was conducted to determine if a relationship exists between participation in a therapeutic horseriding programme and improvement in self-concept. Twenty-nine adolescents with special educational needs participated in the study, aged between 11 and 17. They were exposed to 16 hours of contact with a horse, during which time they got instructions on care and maintenance of the horse, and riding experience. It was found that the younger participants seemed to have the greatest improvement. However it is not known whether or not these individuals' self-concepts were affected by the riding experience, by their relationship with the volunteers that assisted them or whether they had a higher self-concept from the start.

According to Greenberg (1996, p.15), a veterinarian, "The mere presence of the animal's warm body has an incredible comforting and soothing effect. Further physiological advantages occur when the patient enters into the cyclical grooming, stroking and patting process of endearment towards the horse ".

Horseriding is generally considered to be a high-risk sport. Davis (in Riffin, 1998) suggests that horseriding provides an opportunity for children with a disability to achieve their physical potential, "the infusion of a little fear, properly controlled, will enhance the result and not only improve the functional activities, but will carry over into other activities of daily living" (Riffin, 1998, p.33). Mayberry (1978) built on Rosenthal's theory that while participating in this risk exercise indicates that horseriding could fill a primal, atavistic need, that of engaging in controlled risk and action, which could be of value in the habilitation of many children handicapped by disabilities. Horseriding not only enhances physical, mental and social functions but is also an exhilarating and joyful experience.

At a private psychological sport therapeutic home for 18 boys, ages 11 to 16, the use of the horse as an educational medium has been successful for more than ten years. It was also found that involvement with horses helps to strengthen character, while also providing adventure (Wood, 1990).

Hippotherapy not only has a positive effect on children with cerebral palsy but research by Weber (1998) and Rommel, Peterson and Rommel (1998) conclude that patients suffering form Multiple Sclerosis or with dyskinetic, dystonic motor disorders may also benefit from hippotherapy.

Ringbeck (1998) quoted the sport psychologist, Rieder in Heidelberg, as having said that "Vaulting is just about the most ideal sporting activity for children and adolescents as it helps develop great independence, cognitive abilities, social learning and a sense of community" (p.52). Since the sixties remedial vaulting has been an established curriculum in various German states' homes, hospitals, day schools, youth services, advice services, school psychology services, and adult centres. Ringbeck states that vaulting enables sensory stimuli, promotes sensory, psycho - and socio-motor skills and can offer more possibilities than conventional therapies, in respect of perception and actions.

Other people benefiting from horseriding are children with mental retardation, people who are neurologically or orthopaedically disabled and children who are deaf or blind (Mayberry, 1978).

Not everybody benefits from therapeutic riding, Mayberry (1978) suggests that there may be contraindications for some. These include the severely mentally retarded who are not in contact with their environment and / or those around him or her, people with epilepsy whose seizures are not under control, and people who may develop decubitus ulcers from pressure on their buttocks. Children or adults whose emotional or psychiatric disability is so severe that riding may cause danger to the rider, the horse or other riders, must rather be advised not to participate in riding. Therapeutic riding may also be contraindicated for the child with a progressive neuromuscular disability, hence the child is unable to sit erect or use his or her upper extremities to control the horse. Any bone or joint anomalies may constitute a danger too. Wood (1990) parallels Mayberry's (1978) concern and states that riding might be detrimental to the physical well-being of some disabled riders, for example

riding is not recommended for Down Syndrome individuals with atlantoaxial instability, referring to an abnormal degree of mobility in the two uppermost cervical vertebrae of the neck. Satter (1977) names the following contraindications; complete paraplegia, decompensated vitae, brittle bone disease, asthma bronchiole, and all acute illnesses.

One should never underestimate the danger involved in equestrian activities. Kriss and Kriss (1997) state that of the 30 million American horsemen, 50000 are treated in emergency rooms annually. Their study mirrored the conceivable danger; out of 30 patients (not necessarily riders who participated in therapeutic programmes) aged from 3 to 64 years, five died and two suffered permanent paralysis. There were 24 head injuries and 9 spinal injuries. A horse kicked 12 patients, 4 patients sustained crush injuries and 6 patients underwent craniotomy. Eleven of these riders were professional riders. Twenty-four of these patients, including all fatalities and craniotomy patients did not wear a helmet (Kriss & Kriss, 1997). Thus efficient safety precautions can be taken; wearing a helmet, use tack that fits the horse and rider, and use correct riding skills. The power, size, speed and unpredictability of a horse should not be underestimated.

Conclusion

It is impossible to deny that there may be significant obstacles when researching therapeutic horseback riding. Later in this study a brief overview on future research and problems in therapeutic riding research will be given.

CHAPTER 4

AN ECOSYSTEMIC EXPLORATION

An inevitable dualism bisects nature, so that each thing is a half, and suggests another thing to make it whole....Whilst the world is thus dual, so is everyone of its parts. The entire system of things gets represented in every particle... The same dualism underlies the nature and condition of man. Every excess causes a defect; every defect an excess. Every sweet hath its sour, every evil its good.

Ralph Waldo Emerson

Introduction

For more than 200 years the Newtonian-Cartesian epistemology, with its roots in logical positivism, based on Newtonian physics and Cartesian thought, where the tenets of reductionistic thinking, the idea of an objective reality and the concept of linear causality ruled, was the only way of thinking. Until " Planck and Einstein stepping through the cracks into the contextual space outside the realm of classical Newtonian physics and by seeding that space with ideas, created a transformation of the entire world of physics " (Auerswald, 1985, p.3). Although the Newtonian epistemology is no longer looked at as a source of truth or as the only reality, it is still viewed as a heuristically useful paradigm. In the light of this study a brief view on the Newtonian epistemology and on the ecosystemic (cybernetic) epistemology will follow as building blocks for the methods used by the researcher in exploring the meanings attributed to therapeutic horseback riding.

With the one side of the epistemological coin being Newtonian-Cartesian thinking, the other side will be a Cybernetic epistemology (Keeney, 1983). Cybernetics emerged out of the events of World War II. A group of scientists gathered to improve war technology. They were mathematicians John Von Neumann, Norbert Wiener and Walter Pitts ; physiologists Warren McCulloch and Lorente de No ; physician Julian Bigelow ; psychologist Kurt Lewin ; anthropologists Gregory Bateson and Margaret Mead ; economist Oskar Morgenstern and a few others from the fields of anatomy, neurophysiology, psychology and sociology. They met in 1946 at the Macy Conference, it was the first in a series of ten small conferences held during the next seven years, and their final conference was in April 1953. The science

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of cybernetics concerned itself with pattern, organisation and process rather than with matter, material and content. This new way of thinking encompassed ecology, relationships, language, meanings, complexities, context and a multiverse of realities. In this study the researcher will explore the relationships and patterns that may evolve in the ecology of therapeutic riding and investigate the meanings portrayed in language by the participants in the specific research context.

In this chapter a theoretical model will evolve which constitutes the foundation of this study. A view of ecosystemic epistemology based on second-order cybernetic principles will be given, followed by the operasionalisation of these principles in the theory of social constructionism. But what is an epistemology?

Epistemology

There are various definitions of epistemology. "Epistemology is the study or a theory of the nature and grounds of knowledge" (Auerswald, 1985, p.1). According to Bateson (1979) epistemology is concerned with the rules of operation that govern cognition, it attempts to indicate how specific organisms know, think and decide. With reference to the social domain, epistemology becomes a study of how people or systems of people know things and how they think they know things – thinking about their thinking (Auerswald, 1985; Keeney, 1983). Fundamentally epistemology shows how people construct their worldview and indicates the basic premises underlying action and cognition. One's underlying epistemology guides the way in which one perceives, thinks and acts in the course of conversation, therapy or research. It is through the lenses of one's epistemology that one sees the world, experiences it and attempts to make sense of it. One's way of perceiving becomes only a way of making sense of something, and not the only way. Keeney maintains "that any position, perspective, conceptual frame of reference, or idea is a partial embodiment of a whole we can never completely grasp" (Keeney, 1983, p.3).

The distinction between lineal, and non-lineal or recursive epistemologies brings about an either / or duality in which only one side of a distinction is held to be correct, true or more useful. Keeney states that "many of the distinctions therapists argue about are actually the two sides of a complementary relationship" (Keeney, 1983, p.3). It is impossible to be either lineal or nonlineal, as both are embodied at once. Lineal thinking can be seen as

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approximations of more encompassing recursive patterns. Both lineal and recursive thinking are partial arcs of a more encompassing whole (Keeney, 1983). Apparently what may have appeared as incompatible opposites becomes a pattern of interaction that may stabilise the organisation of a whole system (Keeney & Ross, 1992). Keeney (1983) makes use of the concept of 'partial arc' – he describes a tennis court as being flat, or as being necessarily constructed with a flat earth hypothesis in mind. However, should one build a series of 'flat' tennis courts adjacent to each other around the world, one would end up constructing a circle. Therefore even though each tennis court could be punctuated as 'lineal', the pattern that connects all the tennis courts would be 'circular'. In this study there will be a search for patterns that connect both sides of this distinction in launching the search within the frame of an ecosystemic exploration. The lineal lens will view the results of the questionnaires and the circular lens will view the co-constructed meanings that will evolve from the four case studies. The researcher's binocular view will be self-referential and will encompass the either / or duality between the lineal and circular views. In the light of this, the assumptions underlying an ecosystemic epistemology will be discussed and contrasted with the Cartesian-Newtonian epistemology, which still has a major influence for many equine therapy studies that are undertaken today. The basic principles of an ecosystemic epistemology will be applied to the research context, as this formed the major part of the writer's epistemology.

The Cartesian-Newtonian Approach

This approach is based on Newtonian physics and Cartesian thought. According to Keeney (1983) the traditional lineal (Newtonian-Cartesian) epistemology is reductionistic, atomistic and anti-contextual and follows an analytical logic concerned with combinations of discrete elements. Central to modern science is the notion of empiricism; rather rely on experience than on logic, authority or common sense. According to McBurney (1994) the most important characteristic of modern science is its objective stance when obtaining knowledge. Some of the key characteristics of this epistemology are:

- The lineal way of thinking orients the observer to focus on discrete cause-effect relations and to hypothesise about causal connections – From this perspective event A causes event B (A → B) in a lineal way. Thus A causes B, this is called determinism, meaning that all events happen because of preceding causes, thus A is responsible for the

existence of B in an external reality. But the laws of behaviour and the possibility of free will cannot be ruled out, with concern to causality, some events may be considered probabilistic ; some events may be considered causes for other events even if the relationship between them is less constant. In previous studies horseriding is a probabilistic cause of the children's improved self-concept, well being and improvement in balance. There is a statistical association between horseriding and various aspects in children with CP, but it is beyond the time and financial scope of the present study.

- It is a causal view based on an external reality that can be observed objectively. According to this epistemology all events and objects are viewed as independent, and so too the observer is seen as independent of that which he/she is observing at that time. A (subject) can view B (object) without imposing A's values or beliefs on B. Therefore there is a belief in an objective measurement and a value-free science. In this study the researcher compiled a questionnaire together with two experts in the field of therapeutic riding in order to have a value-free and objective stance with regard to the quantitative method used.

- The notion of discoverability gives credence to the idea that it is possible to learn solutions to questions posed, and that a person using ordinary means can solve the research puzzles. In most of the previous studies concerning the current research topic empirical studies were used to solve the puzzle. However, in the current study the researcher's aim is not to 'discover' but to describe and explore the meanings attributed to therapeutic horseback riding.

- Objectivity refers to the idea that any person having normal perception and being in the same place at the same time as the researcher would arrive at the same objective observation had he or she been looking over the observer's shoulder at the observed. With the questionnaires, by being objective and attempting to isolate all subjective impact from what is observed, the researcher aimed at obtaining a true and accurate view of the horseriding reality. Findings from the questionnaires will be generalized beyond the context in which they are identified and therefore another researcher may find the questionnaire useful in another study.

- From empiricism follows the notion that science is self-correcting, there is a willingness to let new evidence correct previous beliefs, therefore there is an opportunity to contribute to the research community.

- One of the fundamental assumptions based on the philosophy of objectivity or realism is the one reality of the world. This concerns the notion that the objects of scientific study in the world exist apart from their being perceived by observers.

- Newtonian science holds that there is one reality, in this epistemology scientists and lay people differ in their way of thinking as to what that reality is.

- The notion of regularity refers to a belief that phenomena exist in recurring patterns that conform with universal laws, thus the world follows the same laws at all times and in all places, indicating one external universe.

- Reductionism refers to the assumption that phenomena can be broken into parts, these constitutive parts can be studied in isolation and then added together to gain understanding of the whole again. In contrast, this study will take into account the notion of relationships between variables and the patterns of recurring interaction between variables with regard to the quantitative and qualitative methods that will be used.

Problems in previous therapeutic horseriding studies centered on difficulties concerning heterogeneity of subjects regarding variables like age and the severity of the handicap. Various other therapies, like physiotherapy, occupational therapy and external influences like swimming which occur with riding therapy, made it difficult to measure the true effect of riding therapy. Pauw (1998) also mentioned the lack of standardization of riding therapy methods and measurements. There are differences regarding the duration of riding sessions, length of the riding programs, confusion in the categories of riding therapies and the use of different scales to measure physical and psychological variables. Other research difficulties according to MacKinnon, Noh, Laliberte, Lariviere, & Allan (1995, p.13) are: "the lack of control groups; the failure to measure and control for potential confounders; the use of instruments with unknown psychometric properties; and the use of small samples. There is also a tendency to rely on non-standardised, subjective observations, especially when attempting to assess psychosocial variables". In the light of this, the researcher cannot deny the manifold stumbling blocks in the way of therapeutic horseback riding research. However, the researcher's goal is to collect the various meanings that are derived from the questionnaires and reflect on them descriptively. Information from the lineal view will be a 'partial arc' of a more encompassing triangulated whole, with an ecological view being the other 'partial arc'. (Becvar & Becvar, 1996; Bopp & Weeks, 1984; Keeney, 1983; McBurney, 1994; Pauw, 1998).

Contrary to the Newtonian epistemology is the ecosystemic epistemology that emphasises relationship, ecology and whole systems. It encompasses interrelation, complexity and context. It is monistic, centrifugal, creative, relativistic, connectionist and evolutionary (Auerswald, 1985). Fourie and Lifschitz (1989) state that an ecosystemic epistemology adopts an ecological way of thinking, an a-causal view of life and interaction, and a constructionistic view of reality. Synergy is taken into account within this holistic view. This means that the whole is considered to be greater than the sum of its parts and the relationship within and between different elements and levels of systems is given emphasis in order to stress the achievement of a common aim. These result in the possibility of having a binocular view of the meanings attributed to therapeutic horseriding (Becvar & Becvar, 1996). Ecosystemic epistemology was defined as the frame representing ecology, cybernetics, and systems theory (Capra, 1987; Keeney, 1982; 1983; 1984). 'Ecology' is taken from Bateson's (1972) and Bogdan's (1984) view of a system as an 'ecology of ideas' and 'systems' are taken from Von Bertalanffy's (1968) general system theory. It is a holistic perspective, which rests largely on the concept of complementarity wherein part behaviours are considered to be distinctions drawn, or punctuations made by the observer. In the current study the researcher aims at drawing distinctions from a lineal view (questionnaires in this case) and from a circular view (in this case, case studies) within the meta-theory of the ecosystemic epistemology that encompasses both approaches. Fourie (1991a, p.475) expands on the idea: "an ecosystemic approach focuses on people's interlinked ideas, beliefs, and attributions". This attribution of meaning encompasses all the possible ideas of all participants regarding the situation and the definition of the situation, as well as regarding the defined problem and specific behaviours within the situation (Fourie, 1991b).

According to Keeney (1983) it is through distinguishing one pattern from another that we are able to know our world. Any action, decision, thought, perception, description, theory and epistemology begin with drawing a distinction. Language is a tool for imposing distinctions upon our world. Through language we make choices regarding the patterns we discern (Keeney, 1983). Heidegger wrote, "Language is the house of being. Man dwells in this house" (Efran, Lukens & Lukens, 1990, p. 29). It is within the realm of language that an observing self is created and experience evaluated, which recursively influence the experience and observation. It is in language that these particular concepts relating to the

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aforementioned epistemologies have been described, discussed and evolved in the literature. A repetition of the documentation has been avoided in this study. However, in order to clarify some of the key ideas a brief highlighting of the terms used in systems theory, cybernetics and constructivism follows together with pertinent references.

General System Theory

During World War II, innovative ideas evolved from various disciplines in both the physical and social sciences. The delegates at the Macy Conference did not only focus on feedback mechanisms but also on information processing and patterns of communication. They began to study and compare inanimate machines with living organisms in an effort to understand and control complex systems. Since 1950 the focus shifted from elements to organised wholes, these wholes were considered as systems made up of elements that are in a patterned relation to each other. The parts of a system were seen as continuously interconnected and a change in one component of a system inevitably changed the other components with which it was interrelated (Becvar & Becvar, 1996; Bloch, 1984; Hall & Fagan, 1956; Von Bertalanffy, 1950; 1968; 1974).

Some characteristics of general systems and cybernetics are the following:

- Systems can be divided into subsystems, but they too form part of a larger supra-system. With regard to this study there is a child subsystem, within a family system, but also part of a larger suprasystem encompassing other families, which have children with cerebral palsy.

- Systems have invisible boundaries, all elements of the system exist within these boundaries and everything else is extended to it. These boundaries divide systems, subsystems and suprasystems. Although restricted by certain degrees of permeability there is a constant flow of information across these boundaries. Human systems are by nature always open systems, unlike physical system boundaries that can be impermeable and closed.

- In a system behaviour tends to remain within certain limits, this created balance is referred to as 'homeostasis'

- Homeostasis is reached through negative feedback. Feedback is when information regarding the output of a system is channeled back to the system by other systems in an environment or by the environment itself.

- Negative feedback refers to information that leads the behaviour within a system to remain within the limits or to return to the set limits. Positive feedback is information that is change promoting, it causes the behaviour within a system to exceed its limits.

- The principle of equifinality refers to a state in human functioning that can be reached in different ways. Different states of functioning can result from similar initial states of functioning, and similar states of functioning can result from totally different initial states of functioning (Becvar & Becvar, 1996; Bloch, 1984; Fourie, 1998; Hall & Fagan, 1956; Von Bertalanffy, 1950; 1974). General system theory links closely with the science of cybernetics.

First-Order Cybernetics

Feedback is fundamental to first order cybernetics. The term 'cybernetics' was first used by Wiener in 1954; he described it as the science of control and information feedback in systems, it was a theory of interaction between open systems and subsystems (Keeney, 1983). According to Keeney cybernetics is part of a general science of pattern and organisation where the focus is on the patterns of organisation, overshadowing the importance of an object. There is a shift away from general systems theory, where the focus is the change of emphasis from parts to wholes. The development of cybernetics was coherent with the study by Bateson, Jackson, Haley and Weakland (1956) into the communicational context of schizophrenia. The role of language was gaining ground, at this time the use of war terminology was common in therapy. The ideas of 'power' and 'control' inspired some of the maneuvers and techniques used by some therapists. Prominent views for treatment evolved from the structural and strategic approaches (Haley, 1963; 1976; Hoffman, 1985; 1990; Madanes, 1980; Minuchin, 1974; Watzlawick, Weakland & Fisch, 1974). Central to first-order cybernetics is the emphasis on that which is observed rather than with the observer and his or her influence on that which is observed. Cybernetics and general systems theory furnished a way to describe systems and their functioning. These descriptions were considered to be objective, irrespective of the observer that drew the distinctions and made the descriptions (Bateson, 1972; Becvar & Becvar, 1996; Hoffman, 1985). This has paved the way for a worldview that constitutes a radically different world of

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description and second-order cybernetics, which is a higher order of abstraction in which the observer becomes part of or a participant in that which is observed.

Second-Order Cybernetics

From the level of cybernetics of cybernetics one no longer views systems only in the context of inputs and outputs or interrelationship with other systems. One now moves to a higher order of abstraction that includes the observer in that which is observed. First-and second-order cybernetics are related in a complementary fashion. The moment a researcher chooses a workable reality in which to address the research question, he or she necessarily enters the realm of first-order cybernetics in which a single reality is worked with. However second-order cybernetics becomes an integral part of the research process in that it regulates the thinking of the researcher. In the qualitative section of this study the researcher becomes part of the stories told by the parents of the children with cerebral palsy, the observer becomes part of the observed, and in a mutual process of co-construction unfold richer descriptions. It is also important to notice that the research process cannot not be influenced by the researcher's epistemology. However, according to the second-order cybernetic view everything is entirely self-referential. The system is closed, with no reference to an outside environment. The focus shifts to the internal structure of the system and to the mutual connectedness of the observer and the observed (the mutual connectedness of the researcher and co-researchers). A system is seen as autonomous, it creates its own reality, which is a domain specified by the operations of the observer. From this perspective one can no longer refer to a universe but instead the conclusion can be made that we live in a multiverse of many equally valid observer-dependent realities. One cannot distinguish a norm or an absolute truth within one reality. The four case studies' realities will become a reality together with the reality created from the questionnaires. By means of the process of triangulation, especially during the data analysis phase, the researcher will of necessity make use of self-referential thought and action processes to ensure maximum creation of meaning from the current study (Atkinson & Heath, 1989; Becvar & Becvar, 1996; Hoffman, 1985; Keeney, 1982; Kenny, 1989).

Two biologists, Maturana, (1975) and Varela (Maturana & Varela, 1980; 1987) demonstrated through their work that it is impossible for an observer to be objective. According to them, perception is determined by the perceiver, and not by the perceived.

They found that the way in which a frog catches a fly is determined by the structure of its eye and not only by the presence of the fly. This classical experiment led to the conceptualisation that it is not possible for one system to have a lineal influence on another system. One system can be perturbed by another system; thus the therapist can perturb the system of which he or she is essentially a part; and vice versa - the concept of an ultimately closed system. The act of observation by an observer influences that which is observed as well as the way of observing. The observer therefore colours the observation with his or her 'lenses', his or her epistemology. "Objectivity within parentheses entails accepting that existence is brought forth by the distinction the observer performs" (Maturana & Varela, 1987, p.332). According to Maturana and Varela "objectivity" entails the multiversa, entails that existence is dependent on the observer and there are many domains of truth as domains of existence are brought forth by the observer's distinctions. Therefore any description or distinction reflects the observer as much as it accounts for the observed. This higher order of observation, in which the observer observes himself or herself as part of that which is observed - observation of observation - refers to cybernetics of cybernetics. Central to this perspective is a contructivist view (Becvar & Becvar, 1996; Dell, 1985; Fourie, 1991a; Hoffman, 1990; Kenny, 1989).

Constructivism

Central to second-order cybernetics is the idea of a participant observer, implying that objective perception is impossible. From a constructivistic view any observation is partially constructed by the observer. When two observers agree on their observation it is said that they co-constructed a particular reality in a linguistic process. Shared meanings connect the various co-constructed realities, Bateson (1972) referred to this an "ecology of ideas" and Maturana (1975) called it a "domain of consensus" (Anderson & Goolishian, 1988; Hoffman, 1990; Kenny, 1989; Von Glasersfeld, 1984). This brought a classical question forth "Does the tree exist without the observer?" Land (in Keeney, 1979, p.124) states that "the tree exists as part of the cosmos and our part of the cosmos, namely 'we' which has evolved over many centuries to be a partner with the tree". Rollo May said that in a study of nature, we investigate only the investigator's relationship to nature (Keeney, 1979). Some of the more modern constructivists like Sargent and Speed (in Fourie, 1997) view observation as partly constructed by the observer and partly by the observed, to them perception is seen as

an interaction between the observer's idiosyncratic way of observing and that which is really there.

According to Von Glasersfeld (1984) constructivism holds that which is known, knowledge, cannot be the result of a passive receiving, but originates from an active subject's activity. "All communication and all understanding are a matter of interpretive construction on the part of the experiencing subject" (Von Glasersfeld, 1984, p.19). But a system's structure determines its action, therefore perception is partly based on the structure of the observer. (Structure refers to the way a person is at a specific moment, it embodies the person's existing knowledge of, or ideas about the perceived events or objects (Kenny, 1988). From a constructivistic perspective one can only come to know a system by interacting with it. Varela (in Keeney, 1979) states that one interacts with a system by poking it or throwing things at it, or do things in various degrees of sophistication – these are called perturbations or constraints on the stability of a system and will result in the system either compensating or not compensating. When two systems connect or couple there is a perturbation, the system's reaction to the perturbation is based on the structure of the system, which totally relies on previous knowledge and attributions of meaning. Structural coupling implies an exchange of ideas and may or may not result in a fit between systems, this 'fit' will indicate a domain of consensus. Structural coupling takes place in the realm of verbal and non-verbal language, dialogue or narrative. Central to this constructivistic view is the idea that the outside environment or other systems in the environment can not lineally impose themselves on the autonomous system, but can only perturb it. Constructivism clarifies the importance of both therapist and client or researcher and co-researchers to accept full responsibility for the consequences of their association with one another disregarding the unpredictability at the outset (Anderson & Goolishian, 1988; Dell, 1985; Efran, Lukens & Lukens, 1988; Kenny, 1989; Maturana, 1975; Varela, 1979).

With regard to research, constructivists hold that research takes place in a social context and a particular reality is narratively co-constructed. The researcher can not avoid influencing the research process and in turn being influenced by the process. Constructivists acknowledge their active role in creating a worldview and that they interpret their observations in terms of that view. The researcher becomes a choreographer of context. In this context self-referentiality plays an important role, it enables a higher level of

metacommunication on the observations of observations. This activity furnishes a way to be more flexible in co-constructing new meanings. In this multiverse of realities the clients become co-researchers and help to unfold the events that create their story. The research results are embodied in the research reality and therefore they are not 'found' but created or co-constructed. "Constructivism refers to the notion that, to a greater or lesser extent, reality is constructed rather than discovered i.e. it can never be proved whether the glass is really half empty of half full" (De Shazer & Berg, 1988, p.43). From a constructivist view horseriding is a framework of activity and interpretation made possible by the shared language system in which we all operate. Therefore even experiences that some people consider purely physical are language dependent. Also a lot of different interpretations of surrounding sensations create colourful experiences. In conversation with the parents and children as co-researchers the meaning of horseriding may evolve in the fit between the researcher's and co-researchers' co-constructed stories. Constructivism holds that human lives become conversations, therapy and research involves the inventing, shaping and reformulating of codes of living together (Efran, Lukens & Lukens, 1988; Fourie, 1995; McNamee & Gergen, 1995; Snyders; 1990; Von Glasersfeld, 1984). Like constructivism, constructionism also differs from the modernist idea of a real world existing and known with objective certainty (Gergen, 1985).

Social Constructionism

Anderson and Goolishian (1988) shift from a cybernetic view to hermeneutics. Some refer to hermeneutics as the 'interpretive turn' ; it is a recently revived branch of linguistic textual interpretation. One can say that in this shift from cybernetics to hermeneutics, feedback loops are replaced by the intersubjective loops of dialogue. Social constructionism sees ideas, concepts, beliefs and memories arising from social interchange and mediated through language. Knowledge evolves in the space between people, with conversation as the most basic core medium in this common dance. From a constructionist view it is believed that through conversation an individual can develop a sense of an inner voice and self (Anderson & Goolishian, 1988; Hoffman, 1995).

Talking with oneself and / or others is a way of defining oneself. In his sense the language we use makes us who we are in the moment we use it... The search for new meanings, which often comprises searching for new language, is a search for us

to be the selves with which we feel the most comfortable. So -called "therapeutic" talk might be regarded as a form of search; a search for new descriptions, new understandings, new meanings, new nuances of the words, and ultimately for new definitions of oneself. (Anderson in Becvar & Becvar, 1996, p.275)

The social constructionist's view is part of the postmodern flow, following deconstructionistic views of Foucault, Gergen and Harre (Hoffman, 1995). Post-modernism implies that something new is in the making, and that modernism is dead. Post-modern approaches expose modern concepts of holism and empiricism as illusions, and proposes in turn that the study of 'culture' can only be 'conducted from within culture' which therefore also renders external theory as inappropriate, while promoting process as a means by which the ideas and resources can be understand. According to Hoffman (1995) "post-structuralism" is sometimes synonymously used with postmodernism, these ideas originated from semiotics and literary criticism, and it became more common to use the analogy of a text or narrative in the social fields of study, like psychology. Gergen (1991) holds that traditional narrative therapists went into conversations seeking for a certain essence that must be captured. Postmodernism view knowledge as ever-changing and renewing itself in each moment of social interaction, therefore there is no reference to prior meanings hiding, or searching for 'essence' that has to be captured. The story that surfaces in any conversation is seen as spontaneous and not predictable, therefore conversation and not the therapist / researcher becomes the author. "Social constructionists hold firmly to the idea that there are no incontrovertible social truths, only stories about the world that we tell ourselves and others" (Hoffman, 1995, p.13). The reflexive loop between researcher and co-researchers encompasses the researcher's own epistemology.

The term "reflexive" is used in the communication theory as reflexive discourse. Karl Tomm (1987) makes use of the term in reflexive questioning. Reflexive means to refer back to a subject, or bending or folding back onto itself (English Dictionary & Thesaurus, 1997). Hoffman (1995) metaphorically relates constructionism to the figure 8, symbol of infinity, it symbolises a space where inner dialogue as well as an intersection that represents the forum where conversationalists meet and speak, can exist. When placed in the social context of discourse this figure 8, as a moving trajectory highlights the idea of narrative in human disciplines. Reflexivity in relationships mirrors equity in regard to participation, it is not one-sided but a dance between the inquirer and the people in conversation with the

inquirer. The prevalence of 'co'-prefixes are functional in describing conversations – 'co-construct', 'co-evolve', 'co-researcher', it indicates a preference for a mutually influenced process between the researcher and the people in conversation. Research becomes a collaborative process with a communal basis of knowledge. (Becvar & Becvar, 1996; Hoffman, 1995; Snyders, 1990).

Some other key ideas flowing from social constructionism are that objective social research is in doubt; the self changes as people's ideas about the self shifts. Social constructionism argues about the danger involved in assuming that there is any universal standard by which humans can measure their functioning, they hold that the developmental lifespan trajectory is deficient. Species developed discontinuously and not progressively. There is thus, no absolute 'normal' or only one truth. Although there is a special dance between the environment and a species' genepool, Any nature element may hit earth, causing tremendous damage resulting in some species' extinction and the evolution of other species. Therefore an optimal predetermined developmental path becomes in doubt and deviance from this path does not inadvertly lead to poor outcome. In the context of this study the uniqueness of each child's story will be embraced through various attributions of meanings. Meanings and context are as in hermeneutics, reflexively emergent. "Context is linked to another undefined notion called meaning. Without context words and actions have no meaning at all" (Bateson, 1979, p.24). According to Bateson context refers to pattern through time. It is the recursive interrelated networks between systems that change through time. Context is about the relationship and the various recursive relational processes through time. Meaning evolves in relation to context and time. Nothing has meaning unless it evolves in a context at a specific time in which a specific meaning is attributed to it (Bateson, 1979; Keeney, 1983; Lincoln & Guba, 1985). Becvar and Becvar (1996) state that language encompasses meaning and perception, it becomes the vehicle for change as reflected in the vocabulary used; language mirrors one's epistemology. The nature of explanatory language used both in the process of conversation and in post-hoc description inevitably leads to some dualism as its basic structure reduces the world into nameable parts. Ecosystemic thinking inspires the researcher because it embraces complete circuits and whole ecologies, implying a non-dualistic conceptualisation. In the dualistic frame everything has meaning in terms of its opposite. Ecosystemic epistemology attempts to translate these reified nouns into forms of language that describe relationship and process, challenging its own assumptions which are inevitably cast in dualistic explanatory language.

A more holistic picture results from the use of metaphor, text, imagery, narrative and story telling. It unfolds a more circular perspective and it highlights the patterns that connect these complementarities. From the constructionist perspective research evolves in stories, text and narrative. Ideas and meanings are constantly changing and floating in time and influenced by social fit and process. Goolishian (in Becvar & Becvar, 1996) holds that the narrative changes through telling and retelling, the therapist is a participant narrative artist engaged in the co-construction of new meaning, therefore the therapist is a narrative editor, with conversation as the author. In this study stories reflect the relationships and interaction between people; within the therapeutic relationship between the researcher and co-researchers new stories evolve, new meanings and ideas unfold in the context of mutual shaping. (Anderson & Goolishian, 1988; Becvar & Becvar, 1996; De Shazer & Berg, 1988; Gergen, 1985; Hoffman, 1995; Keeney, 1983; White & Epston, 1990).

Isomorphic to this epistemology, the researcher will be referred to in the first person. The present study adopts a social constructionist approach as the tenets of this approach formed part of my training and fitted with my constructions of reality. Mutual shaping occurs in the therapeutic relationship between the co-researchers and myself. Our meaning systems were subjected to shifts in the co-creating process of dialogue. In the present study I will make use of different levels of context, based on the idea that within new context new meanings can be created. Different contexts allow different dialogues to emerge, new context can also shift the relationship between a researcher and the co-researchers because new elements form part of the recursive process. Two research methods may create more complexity and it may result in richer meanings. I will make use of a descriptive questionnaire and four stories from the lives of children with cerebral palsy. The questionnaires are used as tools that bring forth meaning on a different level to the therapeutic encounters, which will be over periods of six months. The use of questionnaires was not seen as delivering reified meanings, but as meanings complementary to those co-created in language. From a metacontext I will be able to observe myself, the observer being in interaction with the co-researchers. The constructionist position emphasises the need to gain multiple descriptions of events so that different views can be juxtaposed to yield a higher order of description of relationship between events in a greater system. "It is useful to have the freedom to change lenses from time to time, first considering one level of analysis and then shifting to a larger, smaller or different unit of study. Each analysis opens up new possibilities" (Efran et al., 1988, p.30). According to Fourie (1997) these different

lenses do not exclude traditional research methods like statistical analysis. Like a good detective also has to rely on laboratory and forensic results it may be useful to view the data in a wider more encompassing context of meaning. Lineal thinking and interventions are approximations of more encompassing recursive patterns, its advantages are often pragmatic as is the case in the present study.

The researcher found a triangulated study useful. Through the questionnaires more than four people could be reached with relative ease. This allowed for different perspectives, from different therapeutic riding divisions to evolve. The questions encompass different meanings attributed to horseriding with regard to the time span in which the child participates in riding, his or her age and the severity of his or her ability, as well the unique meanings that connect a special child and a horse. With the questionnaires " meaningful noise " (Keeney, 1983) may evolve based on questions asked by two experts in the field of riding therapy and myself. The information from the questionnaires did not deliberately inform the conversations with the co-researchers in the case studies, therefore the co-constructed stories and the results from the questionnaires may construe a rich description on the meaning of therapeutic riding. I found my participating as co-conversationalist in the co-constructing of the four stories very congruent with my training and my own epistemology. I will self-reflexively and self-referentially triangulate the results from the questionnaires and share the co-constructed stories with the reader in order to mirror the evolved meanings and unfold the patterns that may connect the descriptions from both lineal and circular perspectives.

Conclusion

The study was embedded within an ecosystemic approach, as discussed above and operasionalised in the social constuctionist theory. On this journey lineal and circular thinking, first-order and second-order cybernetics, pragmatics and aesthetics accompanied the therapist. Consistent road markers feature in the fact that the researcher influenced the context, and was part of the context, and that she was recursively influenced by the context and process of conversation. The concepts of an ecosystemic epistemology had not necessarily negated traditional Newtonian views, but it widely expanded the way of thinking about the world. It caused a shift in the approach to research and guided the way to a more

encompassing whole. The choice of a particular methodology was determined by the requirements of the study concerned and not only prescribed by one way of thinking.

Horseriding as a medium did not exist objectively but its meaning evolved from a social constructionistic process between the researcher and the co-researcher. The meaning attributed to horseriding became part of the pattern that connected the co-researchers and the therapist in a social constructionistic process where other meanings could be generated.

In a further progression of the epistemology presented to this point, the following chapter discusses different 'tools' that were used in a complementary fashion in this study. In conclusion:

When therapy is seen as a vehicle for epistemological change...a therapist who is part of such a learning context will eventually experience his world in a profoundly different way – he will have learned to discern and construct patterns that connect. (Keeney, 1983, p.195)

CHAPTER 5

RESEARCH DESIGN

I fell asleep, and while sleeping, I dreamed that I was a butterfly. But when I awoke, I was uncertain whether I was a man dreaming that I was a butterfly, or whether I was a butterfly, dreaming that I was a man, dreaming that I was a butterfly

Old Chinese Paradox

Introduction

The focus in this chapter is on the way in which the researcher draws distinctions. This includes an overview of the debate about the use of qualitative and quantitative methods as well as the research design followed in this study. The nature of the research process and the multiverse of realities that unfold in this study will be discussed, paving the way towards the case descriptions and questionnaire findings in the following chapter.

Constructed Realities

Struggles with the concept of reality are as old as humankind. The ecosystemic epistemology with its roots in constructivism and constructionism enables the co-construction of a multiverse of realities. The researcher becomes part of the observed and is influenced by the observed. The co-construction of reality and meaning occurs in dialogue. Our experiences are shaped and can be reshaped through the meanings we attribute, the stories we tell and the questions we ask about the experiences.

This study followed the question: *What does horseriding mean in the lives of children with cerebral palsy?* This question conducts a search for circular connections and descriptions regarding the child with horse interaction, thus moving away from a causal view of therapeutic riding. The researcher does not want to prove that horseriding has a definite effect on the functioning of the child with CP, although a lineal description of these children's experiences and the meanings attached to the experiences was encompassed. The research question follows the distinction that there may be a connection or a relation

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between horseriding and therapy. The researcher draws a distinction regarding a possible connection between horseriding and therapy but from a second-order perspective this reveals more about the researcher and her way of observing, than about the distinction. The researcher draws the distinction from a context in which she cherishes horseriding as sacred and as a therapeutic experience with profound meaning. The following two paragraphs will be in the first person as the researcher self-referentially unfolds her way of drawing distinctions. The researcher chose to write in first person rather than third person. This format is coherent with her epistemology and creates a more 'reader-friendly' dialogue. This encompasses the collaborative stance, which the researcher adopted.

Since childhood I have treasured the idea of having my own horse, of being able to ride and befriend such a remarkable creature. Twelve months ago I became the proud owner of a 13-year-old gelding, Fleur. This was a crossroad on my own therapeutic journey. Horseriding has a sacred meaning for me – I experience horseriding bodily, in my thoughts and sense it touches my emotions, almost as if the three-dimensional movement of the horse energizes my body, lifting my spirit and giving my emotions free rein. Although schooling (training between self and horse) requires a lot of attention and concentration I experience an euphoric feeling and relief from all stress while I am with my horse. Due to the extremely sensitive nature of horses, I am acutely aware of my own emotions and feelings too and have to explore them either on or off horseback to prevent unnecessary falls. Being with my horse, when grooming or while riding, creates a space in which my thoughts can creatively expand.

Horseriding is an art that requires technique, skill, concentration, focussed attention, and emotional connection with your horse in order to co-create an esthetic wonder. It is a dance between thoughts and emotions, surrounded with a patterned relationship. Therefore I attribute therapeutic value and meanings to horseriding. My personal experience and love for horses created and inspired the idea that horseriding may have therapeutic value within a therapeutic context. This paved the way to unexplored territory, meeting people I would never have known. My experience of horseriding and the meanings I attribute to it are constructions. These constructions and other constructions that will inevitably follow may lead to new experiences and ideas about the connection between horseriding and therapy. Keeney (1983) states "What one knows leads to a construction and what one constructs to knowing. One's knowing is recycled in constant reconstruction of the world" (p.55). This is a

recursive process - my enthusiasm about the therapeutic value of horseriding influenced my choice in search of a research topic. This process can be described as one of being influenced by my perception of horseriding; in itself it will bring about a new perception of horseriding and the meanings attributed to it in the lives of children with CP. This will recursively flow back to stimulate new perceptions and behavior and may colour my own perceptions and future distinctions. Not only my own perceptions but also ideas, meanings and constructions of the co-researchers and participants are needed to mirror the experience of this journey. According to Keeney (1983, p.55) "You are always participating in the construction of experience". Central to this idea is self-referentiality.

This dissertation will reveal bridges crossing to three fields of study close to the researcher's heart; children, horses and therapy. In doing this study the researcher has not only been searching for meaning but has also attempted to explore the patterns that connect therapeutic riding and children with special needs, more specifically, CP. Before the researcher embarks on this journey she would like to glimpse over the research map, viewing the fundamentals of some research principles and the debate on combining qualitative and quantitative methods through triangulation.

Triangulation

When exploring a research question, triangulation in psychological research allows for different methodological perspectives, which may reveal different aspects of the research topic. Like a kaleidoscope, depending on the angle at which it is held, it will reveal different colours and configurations of objects to the viewer. When used together two methodologies can build upon each other to offer "meaningful noise" that neither one could have provided alone. The term "Triangulation" probably had its origins in the metaphor of radio triangulation, that is, determining the point of origin of a radio broadcast by using directional antennas set up at the two ends of a known baseline. Through simple geometry and measuring of the angle at which each of the antennas receives the most powerful signal, a triangle can be drawn. Then the source of the broadcast can be located at the vertex of the triangle opposite the baseline (Lincoln & Guba, 1985). Triangulation leads to credibility by using four different modes: the use of multiple sources of data (time, person, space), methods (interviews, observations, documents, photographs, and questionnaires), investigators (single or multiple) or different theories. In this study the different modes of

triangulation will be the use of multiple sources of data (mother, father, grandmother, riding instructor), methods (interviews, observations, video materials, thematic analysis and questionnaires), and investigators (co-constructors of reality). Because all methods have biases, only by using multiple techniques can the researcher triangulate on the underlying meaning. Each method can potentially teach the other new ways of detecting, and they can share knowledge and experiences. (Cook & Reichardt, 1979; Denzin, 1978; Erlandson et al., 1993; Lincoln & Guba, 1985). In order to understand a phenomenon in greater complexity one must consider the phenomenon within its larger context, implying that one takes the whole context and system around the phenomenon into account (Keeney, 1979).

The researcher concludes that the attributes of a paradigm are not inherently linked to either qualitative or quantitative methods. But method types can be associated with the attributes of either qualitative or quantitative paradigms. One's paradigmatic stance is not unimportant when choosing a research method. Also, some methods are more frequently associated with certain paradigms. But these paradigms are not the sole determinants of the choice of methods. Methods also partly depend on the demands of the research situation. Therefore both quantitative and qualitative methods can be used to map the territory. In this study case studies will be used as the qualitative part of the research and a questionnaire as the quantitative part of the research. An overview on these methodologies follows later in this chapter. Qualitative and quantitative methods may explore different meanings attributed to horseriding. Triangulation may enhance meaning through multiple sources and provide for rich descriptions of relevant information (Erlandson et al., 1993). The researcher is aware of the throes of a methodological and epistemological controversy (Guba & Lincoln, 1988; Keeney & Morris, 1985; Lincoln & Guba, 1985; Reichardt & Cook, 1979; Sells et al., 1995; Wassenaar, 1986). It is generally believed that there are three debates concerning the integration of qualitative and quantitative methods in the research fraternity. One is the more traditional debate in which the conflict is between quantitative and qualitative research as two extreme methodologies and between critical and deconstruction science. The second debate is between the more theoretical or purist philosophers versus the more pragmatically inclined researchers in their debate about the integration of the two methodologies. The third debate is the 'synthesist' position. According to this view methods and paradigms are mutually underdetermined – the aim of the study determines the methods used to expand on the research question (Moon, Dillon & Sprenkle, 1990; Smaling, 1992).

The Traditional Debate

Traditionally, quantitative and qualitative methodologies have been presented as diametrically opposed to one another, with a forced choice between one methodology or the other (Atkinson & Heath, 1987). Critics of traditional quantitative research have argued that qualitative research methods are to be preferred because they are epistemologically congruent with the theoretical underpinnings of family systems theory (Atkinson & Heath, 1989; Moon et al., 1990). At the other extreme, quantitative researchers argue that explanation without measurement is empty and that theory yields no knowledge until its concepts are operationally measured and empirically tested (Sells et al., 1995). The debate is not merely a disagreement over the relative advantages of qualitative and quantitative methods, but is seen as a fundamental clash between methodological paradigms. According to this view, each method type is associated with a separate and unique paradigmatic perspective and it is these two perspectives which are in conflict. In this polarised expression, the different paradigms are seen as two extremes on a continuum. Qualitative research is usually located closer to the constructivistic inquiry paradigm, idealistic ontology and subjective epistemology. Quantitative research typically is found toward the opposite end of the continuum where it embraces a positivistic inquiry paradigm, a realistic ontology and an objective epistemology. According to Reichardt and Cook (1979) some researchers; Rist (1977), Patton (1980) and Guba (1978), give prominent attributes to distinguish the qualitative and quantitative world views:

> the quantitative paradigm is said to have a positivistic, hypothetico-deductive, particularistic, objective, outcome-orientated, and natural science world view. In contrast, the qualitative paradigm is said to subscribe to a phenomenological, inductive, holistic, subjective, process-orientated, and social- anthropological world view. (Reichardt & Cook, 1979, p.9)

The two paradigms imply different views of reality and how this reality is to be known.

The Current Debate

Currently the debate centres on the question whether these two paradigms, and their associated methods, are compatible. The debate is between the Purists and the Pragmatists as described by Moon et al. (1990). Purists argue that qualitative and quantitative paradigms are incompatible because they make different assumptions about the nature of reality and

have different research objectives (Lincoln & Guba, 1985). They believe that the two paradigms can, and must be kept separate because each methodology is inextricably bound up in the assumptions that define its paradigm. Each methodology consists of a synergistic set of elements that supports one another internally as well as determines what can emerge as findings or outcomes. Lincoln and Guba propose that the quantitative paradigm rests on a realist ontology that assumes the existence of an objective reality 'out there' that is independent of human perception. This reality is then divisible into parts that can be studied separately from the whole. They state that the qualitative paradigm on the other hand, rests on relativist ontology. Reality is regarded as multiple and each 'reality' is seen as a co-construction made by the researcher and the co-researchers. These realities exist only in the minds of their constructors, thus they cannot be broken apart but must be examined holistically. Research methods can not be separated from their underlying epistemologies, and because these epistemologies are seen as mutually exclusive, the methods of the two paradigms may not be used together.

Pragmatists on the other hand, are more concerned with answering their research questions using the best methods possible. For the pragmatist, methods are paradigm-independent, " The attributes of a paradigm are not inherently linked to either qualitative or quantitative methods. Both method-types can be associated with the attributes of either the quantitative or qualitative paradigm " (Reichardt & Cook, 1979, p.16).

The Synthesist Position

Rather than participating in this debate, synthesists attempt to resolve it by stating that the two methodologies are neither incompatible nor compatible, but rather complementary (Moon et al., 1990). This is congruent with the second-order cybernetic perspective in which the researcher is not required to make either / or choices, but can rather conceptualise in terms of both / and. In line with this perspective, both quantitative and qualitative research methodologies can be understood as an integral part of a complementarity comprising a larger whole (Becvar & Becvar, 1996). Keeney and Morris (1985) argue that our view of science is too narrow, and that there is room in science for multiple methods of exploration. Moon, Dillon and Sprenkle (1991) suggest that the field might benefit from additional research paradigms and that qualitative studies might complement quantitative studies, thus enriching the field. Qualitative and quantitative methodologies, positivistic and naturalistic paradigms represent two different faces of the

same systemic coin, they are part of more encompassing recursive patterns. " The broader patterns of organisation are indeed recursive. All lineal acts and notions are actually 'partial arcs', to borrow an early phrase of Bateson's, of more encompassing patterns of circularity " (Keeney, 1983, p.56).

In Smaling's (1992) view paradigms and methods are mutually underdetermined. Smaling differentiates between methodology and epistemology. Although they are strongly connected and intertwined, they are not equated. Epistemology concerns more than methodology, philosophy of science, its history and the sociology of science. Methodology concerns the development and the justification of techniques, methods and norms for the scientific research process (Smaling, 1992; 1994). According to Smaling (1994) several pragmatic factors influence the choice of a research method, hence not only paradigmatic and methodological factors. The eight pragmatic factors are ; researcher, concrete object of study, research situation, research question, research goal, relevant audiences, conditions and circumstances and the time dimension. Smaling's argument enlightens the debate on triangulation of qualitative and quantitative methods in research, using both methods in one study, with one informing the other reciprocally. Pragmatists also assert that no incompatibility between qualitative and quantitative methods exist at either the level of practice or that of epistemology (Moon et al., 1990). This perspective thus allows researchers to mix and match the methods from the two different epistemologies as they see fit to meet their research requirements optimally.

A Dance between Qualitative and Quantitative Methods

On the one side of the coin, the researcher aims at working with people and their communicated attributions of meaning within a particular context, and through ongoing exchange of ideas which are significant and important, the researcher may bridge reductionism (Fourie, 1995, 1997). On the other side of the coin the researcher wants to incorporate a quantitative description to draw alternative distinctions which may inform the research with 'news of difference', thus gathering more information, from a larger community, that may enrich this study (Bateson, 1979; Cook & Reichardt, 1979). According to Keeney (1983, p.58), "Occasionally it is useful to unwind a recursive process and pin it on a structure of logical types...This linear perspective provides a difference that enables us to discern previously inaccessible patterns". To Bateson (1972) the map is not the territory,

thus the whole can never be fully known. A problem may have different meanings. One can find these different meanings by "putting the map down long enough to look at the passing scenery, thereby recognising its wholeness and entirety" (McClure, Merril & Russo, 1994, p.53). Used separately, qualitative and quantitative methods provide different kinds of information. Fundamentally, qualitative methods provide personal understanding, common sense and introspection, whereas quantitative methods could be defined as techniques of abstract reasoning, counting and scaling. The different meanings clearly reveal how each method type complements the other.

It is the researcher's belief that that the two 'maps' (quantitative and qualitative research methodologies) may inform each other, that the two paradigms, positivistic and naturalistic, may inform each other, and both are partial arcs of a bigger cybernetic complementarity. "I maintain that any position, perspective, conceptual frame of reference, or idea is a partial embodiment of a whole we can never completely grasp" (Keeney, 1983, p.3). According to Keeney (1983), there are two incomplete ways of viewing an experiential universe.

It is only partially true that there exists a 'real' physical world outside of our skins that we are capable of perceiving. The notion that an external world lineally acts 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. Such a belief, called 'solipsism' is a reverse punctuation of the previous lineal view... what cybernetics pushes us toward is a way of joining both of these views. (Keeney, 1983, p.50)

The researcher agrees with Keeney that

many of the distinctions therapists argue about are actually the two sides of a complementary relationship... my purpose is to uncover patterns that connect both sides of these distinctions. The thread that weaves my ideas together is one that attempts to bridge dichotomies too long considered opposites. (Keeney, 1983, p.3)

In this study ethnographic research was triangulated with ecosystemic research by means of a descriptive questionnaire and four case studies. By researching the culture (CP and

therapeutic riding cultures) and learning from participants, the researcher was enabled to act in a more informed manner in the situation, keeping in mind that the personality, perspectives and presence of the researcher reciprocally influenced the research process.

Ethnographic Research

"Ethnography is the work of describing a culture. The essential core of this activity aims to understand another way of life from the native point of view" (Spradley, 1979, p.3). In this study the researcher explored the culture of cerebral palsy, therapeutic horseriding and a possible connection between them. Rather than studying people, ethnography means learning from people. This stance seems to have an extraordinary fit with the ecosystemic epistemology that encompasses the idea of co-researchers, co-construction and co-evolving of new meanings that derive from the stories within the research context. Basically ethnography involves an initial exploratory and open-ended approach to the research problem, as well as an intensive involvement of the researcher as an observer and a participant in the social setting being studied. Furthermore multiple intensive research techniques are used, focussing on participant observation and key informant interviewing. Observation should be contextualised in all phases of the research, and an attempt is made to understand events in terms of the meanings held by the co-researchers. Ethnography must have an interpretive framework, which emphasises the importance of context in determining behaviour and the ecological interrelationship of events and behaviour within a functional system. Lastly, ethnography results in a research product in written form, revealing vivid detail so that the reader knows what it feels like to be in the described culture (Cook & Reichardt, 1979; Spradley, 1979).

Qualitative Research in an Ecosystemic Epistemology

An important shift from traditional quantitative research to qualitative research is found in the second-order cybernetic perspective, with the researcher or observer being seen as participant in that which is observed. In this perspective the emphasis is on a closer relationship between the researcher and co-researchers than is traditional between researcher and subjects. Any descriptions of the research findings are coloured with the researcher's bias, perceptions and attributions of meaning at a specific time and in a specific context. This paradigm is congruent with the second-order cybernetic and social-

constructionistic theoretical assumptions, that we co-construct reality in the dialogue between people. Through naturalistic research the researcher may be able to explore the process, patterns and context which exist within the wider system, while being part of the observed system. Qualitative research does not set out to prove observations but to generate new theoretical principles (Keeney & Morris, 1985). Research is considered to create, rather than discover meaning (Fourie, 1997). In this interpretive hermeneutic paradigm the actual words of the co-researchers are thought to be critical to the process of conveying the meaning system of the participants which eventually becomes the description of the results of the research. It is through language that human beings know; it is through this knowing that they are able to construct their world. The social-constructionist theory posits that what we know, evolves in the languaged give-and-take between people. This approach embodies the view that research takes place in a social context, and that a particular 'reality' is narratively co-constructed in research. Meaning changes with context, and the construction of meaning is a constant, changing, creative and dynamic process.

As a pattern of interaction emerges through a negotiated and interpretive process, the focus is on the importance of understanding situations from the perspectives of the co-researchers in the context. This focus on social meanings within a specific context of individuals interacting, distinguishes this paradigm from the natural sciences. The individual personal aspect of each co-researcher in his or her interaction with the researcher has value and it is the description of this experience, which forms the meaningfulness of this study. The researcher does not search for proof, solutions, cause-effect relations or generalisations concerning horseriding in the lives of children with cerebral palsy. What assumes importance is the co-researchers' idiosyncratic and co-constructed personal offering of their experiences and stories of therapeutic riding in their children's lives. This goes together with their attributions of meaning to their situation and experiences, and also with the recursive interaction with all people involved in this unique experience. The recursive interaction and co-evolvement of meaning and ideas will result in what Maturana termed a 'consensual domain'. Within this consensual domain, there may be a fit between the researcher and co-researchers (Maturana, 1975). From a second-order perspective the two separate systems comprising the researcher and co-researchers come together to form a new and larger composite system. This describes and becomes the 'meaningfulness' of the experience for each child with cerebral palsy (Anderson & Goolishian, 1988; Cook &

Reichardt, 1979; Fourie, 1995, 1997; Hoffman, 1981, 1985, 1990; Lincoln & Guba, 1985; Mason, 1993; Moon, et al., 1990; Reason & Rowan, 1988).

The Design

The nature of the information to be presented in this study will be descriptive; descriptive statistics, case studies and self-reflexivity. The researcher will partly use principles of ethnography and as a result of the inherent openness of a qualitative approach the researcher will learn constantly and thus make use of an emergent design. In such a design the researcher allows the research design to emerge, flow and unfold, rather than to construct it pre-ordinately. This emphasises the unpredictability of the dance between the researcher and co-researchers, and creates a context in which a multitude of realities may evolve. The inquirer cannot know sufficiently well the patterns of connection that are likely to exist. The different value systems that exist and interact in the context may have different influences on the outcome of the study. This study is not ethnography in the classical sense of the word, but it is in many aspects 'ethnographic'. It is exploratory, derived from multiple intensive data sources, reflecting an empathic understanding of participants, experiences and striving for a holistic and ecological view of therapeutic horseriding in the lives of children with cerebral palsy. In this approach there is great emphasis on developing adequate rapport with the participants, the information will be reflected descriptively and the focus of the co-constructor will be on understanding the meaning attached to the field of study. An interpretive ethnographer is interested in exploring questions of culture and immerses him or herself in the culture and context over a long period; the researcher is the primary information-gathering tool. Guba and Lincoln (1988, p.175) explain the motivation for the use of an emergent design as follows:

> ... constructivists are unwilling to assume that they know enough about the
> time/context frame a priori to know what questions to ask. That is, it is not possible to
> pursue someone else's emic construction with a set of predetermined questions
> based solely on the enquirer's emic construction... Another way to say this is that,
> whereas positivists begin an enquiry 'knowing' what they don't know, constructivists
> typically face the prospect of not knowing what it is they don't know... But as the
> design proceeds, the constructivist seeks continually to refine and extend the design
> to help it unfold.

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Qualitative research is time and context dependent and the researcher enters the context as a learner and not as an expert. The researcher is the main information-gathering instrument, thus a human instrument, making use of his or her extension of senses ; observing, reading documents and talking to people. The purpose of the qualitative study will be to generate rich descriptions and emergent themes. According to Denzin (1989, p.83):

> Description is the art of describing or giving an account of something in words. In interpretive studies, thick descriptions are deep, dense, detailed accounts of problematic experiences. These accounts often state the meanings and intentions that organise an action. Thin descriptions, by contrast, lack detail, and simply report facts.

Rich or thick descriptions are embedded in case studies. Case studies are intensive investigations they have also been defined as the detailed account of an individual person (Lincoln & Guba, 1985). Because of the uniqueness and in-depth examination throughout a case study, one can also refer to this approach as idiographic. This approach aims at understanding the pattern of relationships that evolves between the components that are being studied. An idiographic approach becomes a key element in the researcher's understanding of the meaning that evolves in a specific situation. Through the case reports in this study the researcher will share the journeys travelled with the families respectively. Unlike conventional forms of research, it is a function of the case study to provide audiences with a revelation of a specific context, situation, community, person, experiences or system. The researcher wants to invite the reader to experience, relive and co-explore the meaning attributed to therapeutic horseriding in the lives of children with cerebral palsy. The research design is discovery orientated. The participants' detailed descriptions generated descriptive categories and theoretical concepts. These detailed descriptions evolved through open-ended questions, unstructured interviews and observations. This gathered information generated core categories or emergent theme across the interviews and observations collected in this study (Sells et al., 1995). The data analysis is inductive and recursively linked with the information gathering process. Throughout the information gathering process the researcher has to reflect on the information from field notes and initial interviews to enable co-constructed themes and patterns throughout the study. Therefore a set format

and rigid demarcations cannot be indicated at the outset (Moon et al., 1990). Through inductive data analysis multiple realities may evolve, making the inquirer or participant – relationship more overt, explicit and descriptive. In this process a 'grounded theory' may develop; it is not based on previous assumptions, it is more responsive to contextual values and creates a space in which recursive patterns of relationships can unfold. Grounded theory emerged from inductive exploration with regard to a specific phenomenon under study. This process gives a thick description of the context and identifies the recursive patterns of interaction. Therefore new ideas, insights and hypotheses evolve as the inquirer seeks to reconstruct the constructions of reality provided by the participants. The inquirer and participants collaborate in qualitative research, they mutually influence each other so that the information gathering process that takes place at a particular moment is influenced by the different ways of drawing distinctions respectively, and based on previous experience and meaning attached to these experiences. According to Reason and Rowan (1981) one can build a holistic model, (draw a map) that describes the phenomena under study based on all the co-constructed ideas, mutual shaping between inquirer and participants, meanings and patterns that evolved on the research journey.

Establishing Trustworthiness

With regard to validity and reliability in qualitative research many critical questions have been asked from the viewpoint of conventional researchers' concerning objectivity, internal and external validity and reliability. According to Lincoln and Guba (1985, p.290) the basic issue in relation to trustworthiness is very simple: "How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of?". They state that "the outcome of naturalistic inquiry is reconstruction of the multiple constructions that various respondents have made" (Lincoln & Guba, 1985, p.212). Four criteria that will be of value in the current study with regards to trustworthiness will be; credibility, transferability, dependability and confirmability. These are the naturalistic equivalents for the conventional terms; internal validity, external validity, reliability and objectivity. See Table 5.1.

Table 5.1

A summary of Techniques for Establishing Trustworthiness (Lincoln & Guba, 1985, p. 328)

Criterion Area	Technique
Credibility	1. Activities in the field that increase the probability Of high credibility
	a. prolonged engagement
	b. persistent observation
	c. triangulation (sources, methods and investigators
	2. peer debriefing
	3. negative case analysis
	4. refential adequacy
	5. member checks (in process and terminal)
Transferability	6. Thick description
Dependability	7. a. the dependability audit, including the audit trail
Confirmability	b. confirmability audit, including the audit trail
All of the above	8. The reflexive journal

Three activities that may increase credibility are prolonged engagement, persistent observation and triangulation. Sufficient time has to be spent with the culture under study, this is a time for trust building and testing misinterpretations by either the researcher or co-researchers. Triangulation can reduce the uncertainty surrounding interpretation. Triangulation may imply either different data collection modes or different designs. Peer debriefing involves the researcher and an experienced protagonist who plays devil's advocate. Through peer debriefing the inquirer's biases, meanings and ways of thinking can be perturbed. Negative case analysis is a process of refining a hypothesis "until it accounts for all known cases without exception" (Lincoln & Guba, 1985, p.309). Referential adequacy refers to materials, like videotaped material that can be used as a matter of reliability and to test the validity of the conclusions. Member checks are the most crucial technique for establishing credibility, it is co-construction with the co-researchers. Transferability is established through setout of a working hypothesis together with a thorough description of the research context and time period. When examining the process of the inquiry, and in

determining its acceptability one looks at the dependability of the inquiry. Conformability of the inquiry is established when the product of the study, the data interpretations and recommendations are supported by the data, and it is internally coherent. Firstly the researcher established a trustworthy relationship with the co-researchers. The researcher triangulated sources (child, parents, grandparent, and therapist), had a prolonged engagement, did persistent observation, and participated in peer debriefing in order to establish credibility. Transferability unfolds through thick descriptions. Dependability and confirmability were based on the following audit trail categories: Raw data, including electronically recorded materials such as videotapes from the child's early riding experiences compared with more recent raw material, audio-taped conversations between researcher and participants, written field notes, survey results, condensed notes, structure of categories (themes, relationships), process notes and a final report. The researcher also self-referentially included her experiences on this journey with regard to her epistemology and the triangulation of qualitative and quantitative methods. One's epistemology determines the methods used and the way in which the researcher organised data in order to generate that which is called knowledge. According to Wassenaar (1986) this is assumed as reality. This reality unfolds through naturalistic inquiry. The data collection and analysis are guided by the research question, which may also change in the process of conversation (Lincoln & Guba, 1985).

Case Studies

The inquirer wanted to explore and describe the meanings attributed to horseriding in the lives of children with CP. Within the three exploratory-descriptive case studies the inquirer attempted to arrive at an in-depth understanding that mirrors a rich and co-constructed description on each case. This type of case study can be referred to as 'configurative-idiographic' because it encompasses meaning, experiences and details with regard to one case in a specific context and cannot be generalised to other cases. Due to the exploratory nature of these case studies they may have limited influence on developing theory, nonetheless it cannot be devoid of a theoretical perspective since the language and descriptive concepts used in the descriptions unfold certain theoretical assumptions concerning the experiences. Investigators tend to provide a reconstruction of the respondent's meanings and those are appropriately represented through a case report. Contextual information sketches a background for the research dance between the

researcher and respondents. This interaction plays an intricate role in influencing the data interpretation and reporting. Through a vivid description of the respondents' stories the researcher invites the reader to achieve a personal understanding of the unfolding meaning with regard to therapeutic horseriding. According to Lincoln and Guba (1985) the reader is able to judge the extent of bias of the inquirer, whether for or against the respondents.

The Context

Initially the researcher started at the two different riding schools where the four children respectively undergo their therapeutic riding. This was isomorphic with the idea of doing research in a natural setting or context where the participants interacted, and congruent with the naturalistic ontology that suggest that reality, as a whole cannot be understood in isolation from its context. Due to time constrictions, 30-minute lessons, the researcher and co-researchers collaboratively decided to shift the research interaction to each participant's home environment. The researcher continued field observation and participant-observation at the riding schools on separate occasions.

Co-researchers/Informants/Participants

The researcher based the selection of the participants on 'convenience'. Two of the participants were at the same riding school as the researcher at that time, the other two were met during the researcher's fieldwork period during which she visited various therapeutic riding environments. The only criteria were that the child must either be diagnosed with CP or present with some features that are characteristics of CP. The child should have participated in some form of horseriding for at least one year. Consistent with the ecosystemic approach this study did not distinguish between CP subtypes, for instance, athetosis or spasticity, neither were subjects excluded on the basis of the severity of symptoms. Therefore CP was not reified as an entity with causal attributes. The parent's idiosyncratic way of describing, and experiencing of 'cerebral palsy' were of greater importance. Similarly, a child was not excluded from the study when he or she could not express himself or herself in verbal language. To do so would be to revert to a reductionistic dichotomy.

Due to the fact that two of the four children used no verbal language, except sounds, the researcher used all four mothers as informants. In some cases the fathers or a grandmother participated too. The mothers became the guides that led the researcher on this journeys of exploration, they were the co-researchers; it is mostly their descriptions that were used to mirror the meanings attributed to horseriding in their children's lives. Questions relating to this study's criteria were only put to the mother and other family members of the child. Confirmation was not sought form their medical practioner. The collaborators met over a period of six months, the exploratory conversations were held twice or three times monthly for sessions of at least two hours. At times this varied depending on the convenience to all concerned. The conversations were audiotaped; from these evolved verbatim distinctions drawn by the particular co-researcher. The researcher could expand on these distinctions through co-construction with the participants and pave the way towards a rich description. Fieldwork in two case studies was conducted from November 1998 to May 1999, and in the other two cases from May 1999 to November 1999. Questionnaire data was gathered throughout the period November 1998 to November 1999.

The Human as Instrument

The researcher elected herself as primary information gathering tool in this part of the study together with the mothers of the four children that presented with cerebral palsy features. According to Lincoln and Guba (1985) it is only the human being that has the ability to sense and respond to all personal and environmental cues that may exist. This inevitably leads to mutual influencing and interaction between the researcher and the participants. Because of the natural setting of doing qualitative research, only the human instrument is prepared to cope with the unpredictability of the research situation and reciprocity. The human being is adaptable and can collect information about multiple factors and at multiple levels simultaneously. Compared to other information gathering tools, the human being is the only instrument capable of grasping the interaction processes and patterns that evolve in a specific context at once, therefore it is competent in dealing with propositional and tacit knowledge at the same time. Tacit knowledge is what one 'knows' but finds difficult or impossible to describe in language, it has to be experienced to be understood. Furthermore the human being has the unique capability of summarising information on the spot, to test hypotheses and to co-construct with the co-researcher specific meanings attributed to an experience (Lincoln & Guba, 1985). Being open to

comments from the participants provide some form of validation for the constructs drawn by the human being. The human being as instrument plays a key role in the triangulation process, being the one that mirrors the final case report to the reader, making recommendations and comments, being in a position to self-reflexively explore what the research process meant for the research.

Data Collection Techniques

Information was gathered over a time period of one year; (November 1998 to November 1999) by means of

- Participant observation – through this method the researcher became known to the participants and participated in some of the activities being researched. In this study the researcher occasionally assisted as a helper during some of the therapeutic horseriding lessons. Indirect observation occurred during some of the other lessons when the researcher unobtrusively observed the children from the side, while taking field notes.

- Informal unstructured interviews with four children that either have been diagnosed with CP (two boys and two girls respectively), or when the child presented with some characteristics of CP, their parents, the therapeutic riding instructor or therapist. Almost all interviews were audiotaped after permission was obtained for this. These were transcribed verbatim and the information then analysed. The researcher together with the co-researchers co-constructed the stories, which evolved on this journey, when reflecting on different meanings and experiences. It was impossible to specify at the outset the number of interviews respectively for each case, although practical considerations and the limited time available dictated a shorter time frame than the researcher would have preferred. The researcher decided to cease data collection once redundancy occurred. At the onset the researcher told the respondents that they would be co-researchers and that the interviews would span over six to seven months per case. The length of the sessions varied between 30 minutes and 2 hours and 30 minutes.

- Informants. The researcher made use of the mothers, fathers or grandmother of the four children with CP as the informants. Babbie (1989, p.5) postulates that an informant should be "someone well versed in the social phenomenon that you wish to study and

who is willing to tell you what he or she knows". In this study informants may play an important role with regard to voicing their children's stories.

The researcher wanted to learn from the mothers of the children with CP. Firstly the researcher wanted to learn what it means to have a child with CP, and following this, the researcher could start to explore the meaning of therapeutic horseriding in their children's lives. Allowing the research to emerge was thus facilitated in this context. The interviews were flexible and flowed in whatever direction the co-constructed conversations took. The researcher searched for themes and patterns after each session and made it overt in the following session. This allowed for richer descriptions to unfold. Data analysis and collection were intertwined throughout the process; it occurred simultaneously and stimulated new ideas and questions. The focus of each session was on the here and now and not planned a priori. In the first session the researcher invited the respondents on the journey, and shared in the introduction of their children's stories. Good rapport was established and paved a way enriched with different themes and patterns. In the one case study the conversations connected not only the family system but unmasked the rivalry between husband and wife. After a few sessions, the respondents and researcher collaboratively decided to refer them to an external marital counsellor and focussed on the scope of this study only. The researcher would have preferred to walk this personal journey with the couple, but due to the limited time available and hectic schedule the decision was made in the best interests of everybody.

While the four case studies were undertaken, the researcher handed out a descriptive questionnaire to 196 participants. The researcher was curious to see how these two method types could inform each other and how meanings may evolve from this methodological cross-fertilising in the process of triangulation.

Descriptive Questionnaire

Descriptive studies aim at describing the social phenomenon in detail. It does not set out with the idea of testing hypotheses about relationships, but is primarily concerned with the nature and degree of existing situations and conditions (Bailey, 1982; Landman, 1988). The researcher, together with two therapists in the field of study, Sharon Rufus (Hippotherapist) and Engela Young (Occupational therapist) constructed a questionnaire

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based on their experience and partly informed by information taken from the case studies. The researcher distributed 196 copies at ten different stables.

A descriptive method, namely a quantitative questionnaire was used to inform the study. A questionnaire may collect a broader array of opinion than can be obtained from a few interviews, provided the questionnaire items are grounded in local data and not devised a priori. Information from the descriptive questionnaire does not represent reified realities, but is used as punctuation in a stream of ongoing meaning-creating events. The poles or dualities (agree 1 2 3 4 5 disagree) in the questionnaire are used to describe the relative positions of the interactants along five dimensions of meaning in order to describe the relationships between the interactants in a complementary manner. Yielding a higher order of description, namely that of relationship, this is isomorphic to an ecosystemic model, which rests at large on the concept of complementarity wherein a part of the behaviour is considered to be the observer's punctuation or the distinctions drawn by the observer. The distinctions drawn by the researcher through the questions will only be partial distinctions of a more encompassing whole.

Data Analysis and Interpretation

There are many possible ways of analysing qualitative data. A common thread throughout all the analytical approaches is their involvement with meaningful talk and action. Data analysis should not be seen as a distinct and last phase of the research process, it is a reflexive activity that should inform further data gathering, writing, etc. It is part of the research design and data collection. Dey (1995) describes qualitative data analysis in terms of identifying and linking analytic categories. Analysis becomes "a process of resolving data into its constituent components to reveal their characteristics, themes and patterns" (Coffey & Atkinson, 1996, p.8). Dey (1995) breaks the process into three related processes; describing, classifying and connecting. Firstly, the analysis offers thorough and comprehensive descriptions, it includes the context of action, intentions of the researcher and the processes surrounding the social action. The data should be classified in order to give meaning. In the second process the data are categorised and assigned to themes and codes. Thirdly the coded data can be analysed in terms of the patterns and connections that evolved. Connecting concepts is the analytic equivalent of putting mortar between building blocks. Analysis is a cyclical process and a reflexive activity. According to Tesch (in Coffey

& Atkinson, 1996) the process should be systematic and comprehensive. Although the data are segmented into meaningful units the connection of these units to a bigger whole are remanifested. Qualitative data analysis can be described as imaginative, artful, flexible, reflexive, methodological, scholarly and intellectually rigorous. Different analytic strategies explore different facets of the data, and lead to different constructions of the world. Through triangulation different views of the data reveal more complexity, and lead to thicker descriptions. In terms of this study it seems sensible to include thematic content of the interviews as well as the narration of the respondents' stories.

Most of the data gathering was in the form of conversations, in which various questions were explored in a fairly open-ended way. This information was transcribed, and coded according to different themes. Codes were used to identify and reorder information, allowing new perspectives on the information. Codes were also used to simplify, expand, transform and reconceptualise data. It can be seen as essentially heuristic, providing orthogonal ways of thinking about the data. Codes are organising principles and are not set in stone. The researcher and respondents co-created the codes by identifying and selecting them. They are tools, derived from a bottom-up approach, informed by the content of the interviews. The data was then analysed partially and written up from a thematic perspective, and a parallel consideration of narrative. This encompasses the research story.

From the process of coding one has to move one level up to explore the relation between the codes and categories and its relation with previous studies, theoretical ideas and the relation with themes from the questionnaire. Congruent with the ecosystemic epistemology is the idea that the codes are not facts representing a fixed reality, rather they are merely constructions by the researcher and co-researchers in the flow of an evolving conversation.

Conclusion

In this chapter the researcher wanted to colour the reader's way of drawing distinctions with both qualitative and quantitative methods that have been used in this exploratory study. The researcher's epistemology encompasses both method types and therefore paved the way to a thicker description of the meanings that evolved on this journey. This study aimed to create a conversational context in which both the exploration

and the evaluation of ideas and meanings surrounding the use of horseriding in the lives of children with CP would unfold.

In the following chapter the researcher will share the information that was generated through the questionnaire. A copy of the questionnaire is included as Addendum A.

CHAPTER 6

A DESCRIPTIVE QUANTITATIVE EXPLORATION

Data is the substance of things hoped for, the evidence of things not seen

with apologies to King James

Introduction

There are few psychological studies done on therapeutic riding in South Africa. This field has boundless exploratory possibilities and creates a space for multidisciplinary connection between medical doctors, occupational therapists, parents, physiotherapists, psychologists, remedial teachers and speech therapists. This study encompassed both a qualitative and a quantitative dimension. The qualitative information follows in Chapter 7. The quantitative part of this study created a space in which manifold descriptions and perceptions could unfold in a relatively short time period. Through the quantitative endavour different people became key informants on the divisions of therapeutic riding, and the meanings they attributed to therapeutic horseback riding enabled other patterns of interaction to evolve. With each shift in the riding contexts there was a shift in the way in which therapeutic horseriding could present itself. These provided glimpses of the different disciplinaries' ways of encountering children with CP and how they combined it with therapeutic horseback riding. For the purpose of this study a questionnaire was compiled with the help of two experts in the therapeutic riding fraternity; Sharon Rufus and Engela Young, (see Addendum A).

This descriptive exploration started with background on the children. This was followed by summaries of the data in the form of frequency distribution and graphs. The research question: ' What does therapeutic riding mean in the lives of a child with cerebral palsy?' was very broad. The question was asked to reflect on the parents' perceptions of therapeutic riding. To unfold the possible descriptions, this question was divided into different themes with regard to therapeutic riding. These themes were portrayed in statements and evaluated on five-point scales; the respondents had to either agree or disagree with the statements made in the questionnaire. The statements were framed in the

positive and negative, this enhanced reliability and validity. This allowed for the respondents to read and think about the statements so as not to select answers randomly. A single index was calculated to reconnect the different themes. The purpose of the index is to mirror the perception of the respondents on therapeutic horseback riding.

Background

One hundred and ninety-six questionnaires were distributed at eight different riding schools. Of these questionnaires 31% were completed. The respondents included 46 mothers of the children with cerebral palsy, six fathers, one grandmother and 11 therapists. Of the 64 children who participated in therapeutic horseback riding 42 were boys and 22 girls.

Breakdown of children by gender
n = 64

girls
(34.38%)

boys
(65.63%)
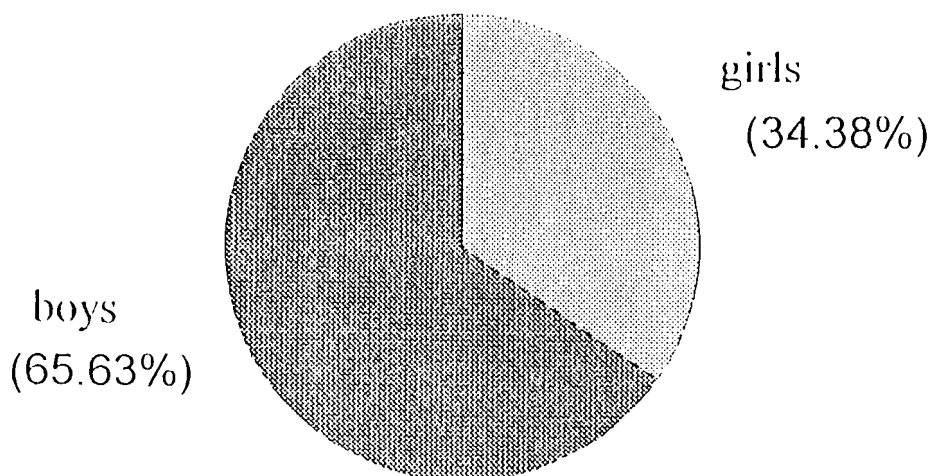
Figure 6 1. Breakdown of children by gender

The mean age of the children was 10,5 years with a standard deviation of 6,94 years. The youngest child was two years old and the oldest "child" was 41 years old. The range is therefore extremely large and has a definite effect on the mean. The children were included irrespective of their age because they fit all the other criteria when describing a child; like dependent on their parents for care, nurture, providing in their needs and being looked after

by their parents. The mode for the childrens' age was 8 years. Because of the large standard deviation, the mode is a better descriptive statistic for age than mean. The mean age at which children in the sample commenced with their horseriding was 8,7 years with a standard deviation of 7,2 years. The minimum age at which a child started to participate in therapeutic horseback riding was 1 year and the eldest age to start was 40,5 years. Therefore there is again a very large range, with a mode of eight years. Most of the children were 'experienced' riders; 20 children already participated in therapeutic riding for more than 24 months; 12 children for a period between 13 to 24 months, 13 children for 7 to 12 months, 13 children between 4 and 6 months and only six children for 3 months or less than 3 months. The division of therapeutic riding that was used was hippotherapy, riding for disabled, developmental riding and psycho-educational vaulting. Only one child participated in psycho-educational vaulting and this was classified together with developmental riding. There were 16 children participating in hippotherapy; 20 in riding for disabled and 28 in developmental riding. Table 6.1 displays the data concerning the classification of CP of the children who participated in this study.

Table 6.1

Children's Classification

CLASSIFICATION	FREQUENCY
Spasticity	32
Ataxia	7
Athetosis	4
Mixed	18
Other	3
TOTAL	64

* "Mixed" includes the combined category of spasticity and athetosis.

Most of the children fell in the spastic category, this is congruent with the findings in the literature. The second largest was the mixed category, which comprised of children who have both spasticity and athetosis. The three children in the 'other' category were either

autistic or had Down's syndrome. All the respondents who participated in this study were included in the results. Even though the children in the "Other" category were strictly speaking not diagnosed with cerebral palsy the respondents found enough similarities with the children with CP's features and wanted to take part in this study.

Index Estimation

The research question: ' What does therapeutic riding mean in the lives of children with cerebral palsy?' is too broad. It was difficult to give one answer that will satisfactorily depict what therapeutic riding meant. Therefore the question was fragmented; it was divided into statements that depicted certain themes with regard to therapeutic riding; like balance, eye contact, motivation etcetera. The statements in the questionnaire mirrored themes that related to therapeutic riding. The statements were either positively or negatively framed in the original questionnaire in order to avoid redundancies. This allowed the respondents to read and think about the statements so as not to select answers randomly. To compare the information all the statements were framed positively, therefore the values on the Lickert scale depicted the same value. The researcher framed all the questions in a positive way, it was estimated through the following calculation: 6-(original value). For example; on the third page of the questionnaire, the first question:

"I have not noticed any positive changes in my child's emotions since he/she started therapeutic riding"

Agree

| 1 | 2 | 3 | 4 | 5 |

Disagree

If a respondent chose number 5, the converted statement into a positive statement will be scored with a 1, this was through the calculation (6-original value (5)=1). Thus " I have noticed positive changes ...".

This calculation rests on the *assumption* that the distances between categories ('Agree 1 2 3 4 5 Disagree') were the same. That is, the distance between 1 and 2 is the same as the distance between 4 and 5. In the end an index was computed to reconnect the themes from the questionnaire and to mirror the perceptions and descriptions that evolved from this part of the study in a percentage value. It was much easier to get an overall idea of

the perceptions of the respondents on therapeutic riding if a single index was associated with a respondent. The index undid fragmentation and portrayed a more holistic view.

The index was based on 18 of the original questions in the questionnaire. The question on activity level was in some cases interpreted as two questions, therefore the mean was taken in the relevant cases. And the question on motivation and on schoolwork was not taken into account for the index, since not all the children were school going.

On the index the maximum was 90, that is (18 x 5), this is the total of 18 questions times the maximum of five on the Likert Scale, and the minimum 18, that is (18 x 1). The minimum of 18 was subtracted from the index, to get an index with minimum 0, and maximum (90 − 18 = 72), 72. The values were transformed to percentages to present the index in a more reader-friendly manner. In order to present the index in percentage form the following calculation was used:

(Total- 18)÷72 x 100 = ___%

The mean of the index was 79,12 and the standard deviation was 13,99, with a minimum of 40,27 and a maximum of 100. The mode was 87,5. Overall 79% of the respondents perceived therapeutic horseback riding in a very positive light. This is a very high representative percentage and is coherent with the respondents' perceptions on the open-ended question.

In Table 6.2 follows the responses to the positive statements and in Table 6.3 the responses to the negative statements. The researcher refers the reader back to the original questionnaire in Addendum A. A strong positive statement in Table 6.2 implies the respondents perception of 'improvement' and a strong negative statement in Table 6.3 implies the respondents' perception of improvement by the child. In Table 6.2 the frequencies were much higher in column 1 and 2, (Definitely agree; agree) in contrast with the lower frequencies (Disagree; Definitely disagree) in the last two columns. Therefore most of the respondents reacted very positive on the positive statements, they attached a positive meaning to the influence of horseriding on various aspects in their children's' lives, similarly they reacted very negatively on the negative statements that were depicted in Table 6.3. In Table 6.3 there was higher frequencies on column 4 and 5 in contrast with the lower frequencies on column 1 and 2. This means that the respondents disagree with the statements that portrayed therapeutic horseback riding in a negative way.

Table 6.2

Frequencies of Responses to Positive Questions

AGREE	1	2	3	4	5	DISAGREE
Body awareness	29	19	6	5	5	
Interpersonal Relationships	32	14	8	4	6	
Child: Reason to be Proud	47	9	3	0	5	
Better Concentration	29	16	9	1	9	
Balance on horseback	51	6	3	1	3	
Balance off horseback	43	15	3	0	3	
Improved Eye contact	25	20	10	4	5	
Busy activity level: more calm	38	8	12	2	4	
Passive activity Level: more alert	45	10	7	0	2	
Relationship between parent and child	37	15	7	0	5	

Table 6.3

Frequencies of Responses to Negative Questions

AGREE	1	2	3	4	5	DISAGREE
No Emotional growth	7	2	5	8	42	
No effect on Body language	6	1	8	18	31	
Barrier - Socialisation	3	2	1	8	50	
Not a space for Friends	5	3	4	10	42	
No Motivation	6	1	5	5	47	
Horses are not a theme	18	3	13	5	25	

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The following assumptions could be distinguished from Table 6.2 and Table 6.3 based on the parents' or respondents' perceptions.

Bodily Changes

The perception portrayed in the respondents' responses mirror positive perceptions of the way that they perceived awareness by the child of his or her own body in space. Children became more aware of the position of their legs and arms while doing specific exercises. According to some of the respondents therapeutic riding had an effect on the child's body language. The child started to realise that his or her body posture has an effect on the horse's emotional state. Most of the respondents portrayed an improvement in the child's balance on and off horseback. According to them therapeutic horseback riding gave the child a reason to be proud.

Emotional Changes

The respondents perceived positive changes in the child's emotions since he or she started therapeutic riding. According to the respondents the children who had a very passive activity level before horseriding became more alert and children who had a very active activity level became more relaxed after riding.

Relational Changes

According to the respondents' perception therapeutic riding has enhanced the child's interpersonal relationship. Thirty-seven of the respondents perceived an enhancement in their relationship with the child since he or she started therapeutic riding. The respondents disagree with the idea that therapeutic riding had become a barrier in the child's socialising with other children. In fact, they perceived therapeutic riding as a space in which the child connected with other children.

Other Changes

Some of the respondents perceived an improvement in the child's concentration since he or she started with therapeutic riding. In the case of children who have had difficulty in

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maintaining eye contact, the respondents' perception was that those children showed improved eye contact. Therapeutic riding has become a motivational factor in the child's life and a significant theme in play and conversation.

When asked to choose one word to describe the meaning of therapeutic horseback riding four respondents described therapeutic riding as a "hobby"; four as a "sport"; 17 as fun; 31 described it as "therapy", six described it as "recreation" and two respondents were unable to choose between the categories and picked all five.

The meaning respondents attribute to therapeutic riding   n = 64
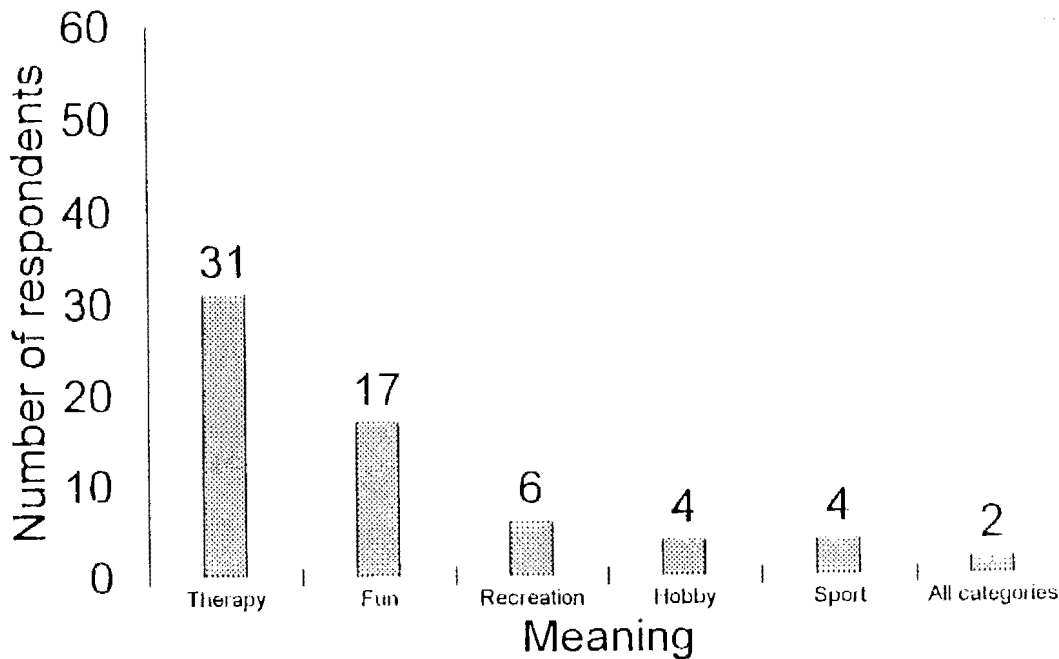
Figure 6.2 The meaning respondents attribute to therapeutic riding

It was interesting to note that six respondents perceived therapeutic riding as the single most important therapy the child received. Five respondents said that it can be a

substitute for all other conventional therapies and 53 responded with therapeutic riding as being complementary to other therapies.

The position of therapeutic riding in relation to other therapies   n=64
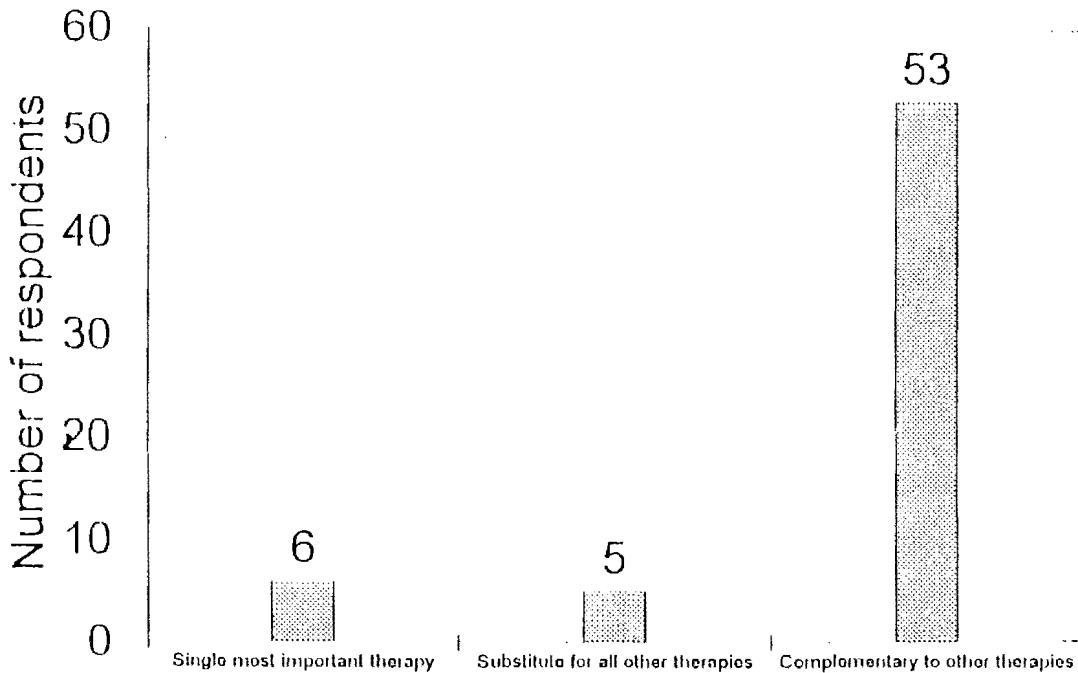
Figure 6.3 The position of therapeutic riding in relation to other therapies

Up to now, the tables represented the frequency distributions of single variables. The two-way contingency tables of the children classified according to the classifications of CP and the other variables like age, gender, divisions of therapeutic horseback riding etcetera showed that their were no significant relationship between any two of the variables. It cannot be ignored that the cell frequencies were small, in a bigger sample other results may be obtained.

The ratio between boys and girls was 2:1, it was interesting to see that in the spasticity category there were almost one third girls and two thirds boys. The ataxia category that involves coordination and balance was dominantly boys, this reflection could

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have been different in a bigger cell frequency. There were almost an equal distribution between the boys and girls in the mixed category, the children with athetosis and spasticity. The three respondents in the 'other' category were either diagnosed with Down syndrome our Autism, without clearCP characteristics or features.

It seems as if the divisions of therapeutic riding are not really influenced by the classification of the child. Some factors that may have an influence on this result are:

- Parents are not always equipped with significant information on the divisions
- There are not clear cut definitions on the definitions internationally
- The medical aids do not support all the above mentioned divisions
- Convenience and distance from a specific riding school may have an influence on the division.

Conclusion

It was interesting to note that almost two thirds of the children were boys and only one third, girls. This relation needs further exploration because there is no reference to the ratio boys: girls in previous literature. Overall it seemed as if the respondents attributed very positive meanings to therapeutic riding, no matter what the classification of the child or the division of therapeutic riding. Some of the parents really wanted to be part of the study and were more than willing to become respondents.

In an open question on the meaning the respondent would attribute to therapeutic riding some themes occurred. The themes connect with the themes that co-evolved in the conversations that follow in the next chapter.

Themes:
- Valuable: The experience is worth more than money can buy, the respondents portrayed therapeutic horseback riding as an event that they cherished.
- Improved self-confidence: It was the respondents' perception that the child's self-confidence improved. The child has more confidence when he or she presents himself or herself in a situation.

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- As if child achieved something: The perception of achievement connected with the perception on improved self-confidence and selfworth. This was perceived as a celebration of the child's uniqueness, the respondents attributed a lot of meaning to achievement when the child experience a feeling of success in something his or her siblings do not participate in.

- Gave child control over body: Not only over body but it meant also less dependance on aids and his or her parents which also have a possible influence on the child's perception of himself or herself.

- Muscles relax: they perceived the child with more bodily freedom, being without spasms and tense muscles.

- Very positive, motivation: Therapeutic riding was perceived as a therapy where the child is motivated to do exercises. The respondents also isomorphically connected this spirit of motivation with other areas in the child's life.

- Fun and enjoyment: According to the respondents' perception the children's faces depicted the fun and laughter they experienced when participating in therapeutic riding. The respondents connected a different experience to therapeutic riding in comparison to other compulsory therapies, like occupational therapy or physiotherapy

- Important for child: The respondents portrayed that therapeutic riding was very high on the child's priority list. The children would ask when their lessons were, and became very sad and tearful when they had to miss out on a lesson. According to the respondents therapeutic riding meant a lot to the child.

- Fine movement improvement: The respondents perceived an improvement in fine motor co-ordination, eye contact and touching with the fingers.

- Discipline: Horseriding is an art form, it needs skill and knowledge, which are required through discipline, and there is specific ways of mounting, dismounting and holding the reins, etcetera. Some of the respondents depict the child as being more obedient since riding.

- Loss of fears: Some children have become less tactile defensive since they have been introduced to a relationship with a horse, this shift is isomorphic to the child's new relationship with other animals since riding.

- Something to do: Therapeutic horseriding is perceived as the child's hobby, horses became a theme in the child's play and created an adventurous spirit in the child's life.

- Less frustration: According to the respondent's perception is therapeutic riding good therapy, the child is more at ease, they perceive an improvement in the way a child interacts with the fellow riders and

- Wider range of emotional response: It is the respondent's perception that the children will smile more. They perceive the child's love for horses.

The meanings that evolved from the quantitative inquiry reflected the perceptions of 64 respondents who participated in this study. The relationship between the child and therapist seemed to be very special. In the following chapter the qualitative information will be presented. This will reveal other relationships and connect the themes and patterns that may evolve in that inquiry.

CHAPTER 7

QUALITATIVE RESEARCH RESULTS

Circumstances alter cases

"Sam Slick" aka Thomas Chandler Haliburton

Introduction

In this chapter follows a detailed narrative description of three case studies undertaken for this study. (The researcher was informed by four case studies on this journey, but due to mutual time difficulties it has been impossible to have the feedback conversation with one case study's co-researchers, before finalising the report. Therefore the researcher will shortly reflect on their relationship.) A narrative description mirrors the "communicated meanings" (Fourie, 1995, p.304) that unfolded in this study and depicts the researcher as an insider, being a participant observer (Moon et al., 1990). The researcher chose to write the case reports in the first person, rather than in the third person. She believes the more informal style is congruent with her epistemology and connects the reader with the humanness of each unique story. This format encompasses the collaborative stance she adopted. Her embeddedness in the contexts and participation in the co-constructions are coherent with ethnographic research practices (Lincoln & Guba, 1985). The observations and descriptions portrayed in this study do not represent objective statements on the respondents or on the meanings they ascribe to their child's experience of therapeutic horseback riding, they are 'partial arcs' (Keeney, 1983) of a more encompassing whole. Both the participants' stories and the researcher's value system are reflected through these narrative descriptions.

In this chapter the researcher reveals the unique meaningfulness of each story while at the same time elucidating similarities between the stories. These similarities are reflected in the co-constructed themes that evolved on the journeys. All the names and other identifying data were changed to secure confidentiality.

Due to time restriction and convenience the researcher envisaged only the involvement of the mothers of the children with CP in this study. But in the end two fathers and two grandmothers respectively participated in the co-construction of the meanings surrounding therapeutic horseback riding. One of the case studies was done in Afrikaans. The researcher will portray the quotations from this case report in Afrikaans to ensure a reflection on the meanings that were co-constructed in the specific contexts. Each quotation will be translated. Each case report will be followed by a meta-perspective; the researcher concludes this chapter with a self-referential reflection on her experience of the research process.

True to an ecosystemic exploration the researcher realised that one primarily has to explore the meaning of having a child with a disability before one can explore the meaning of therapeutic horseback riding in this child's life. The researcher will include a description on each story as it unfolded, intertwined with selfreferentiality and quotations from the sessions. These descriptions will depict an overview of the co-constructed themes and the researcher's observations on the riding lessons and her impressions of the research context.

Japie and Elsa: Paul

Background and Context

I met Paul one Saturday afternoon at the stable yard where I had a riding lesson. I was curious to see what the instructor would do in the following remedial lesson. Paul was one of the children who participated in that lesson. There were six children in the lesson; some of them presented with more visible characteristics of a child with a disability. I could not detect any reason for Paul to participate in that specific group. The instructor is an eccentric woman in her early fifties; she has a diamond stud through her nose and wears a fairy necklace. She has a radiant personality and it looked to me as if the parents and riders were very fond of her. The parents sat on chairs in the left outer corner of the arena. I met Paul's mother, Elsa. Elsa came across as a person who is very dynamic; she is a mother of three children and a lecturer at a university. I asked her the reason for Paul's participation in that lesson. She explained that he has low muscle tone, (therefore underdevelopment of muscles), we spoke a little about him and then she invited me to contact her whenever I

wanted more information. I was curious to explore the meaning of horseback riding in his life. Due to the fact that I ascribe a therapeutic meaning to my own horseriding encounters, I instinctively wanted to explore the meanings he and other children like him may attribute to horseback riding.

We met for ten consecutive sessions. Five sessions were marital therapy sessions and therefore the content of those conversations will not be reflected in this study. I had one play therapy session with Paul and was privileged to participate in four of his therapeutic riding lessons; my observations on the lessons will be portrayed as "Fieldnotes".

My first meeting with Elsa and Japie, Paul's father, was very informal. We met at their house, they were barefoot and very relaxed. I took my shoes off and joined Elsa on the carpet in their living room. They were busy with renovations to the interior and paintwork to the interior and exterior of their home. It seemed to be a big embarrassment to Japie; he made excuses for the chaos and came across as a person who is precise. Elsa sounded frustrated and tired from the discomfort and the idea that Japie is personally responsible for this project. While we were having a conversation she was easily irritated by Japie's occasional interruptions and 'over'-involvement with the children. It seems as if Japie's overprotective relationship with the children may be complementary to her more relaxed style. Congruent with ethnographic and ecosystemic research principles, I shared with them that I wanted to learn from them and explore the meaning of horseback riding in Paul's life. I explained that I wanted to do the research 'with' them and not as an expert from outside 'on' them. Furthermore I made it overt that it maybe possible that our story would connect with more than just Paul's experience, therefore I needed them as informants on our journey. Congruent with an ecosystemic approach, we would focus on their "interlinked ideas, beliefs and attributions" (Fourie, 1991a, p.475). Japie was very excited and said that he would do anything to help Paul. Moreover it would be a privilege for him to share some information with other parents because they also did not have any significant information in the beginning.

Medical Background

Paul was the eldest of three children, he was eight years old. He was tall for an eight-year old; I experienced him as a child who is friendly, considerate and well mannered. His speech was developed, his movements were slower than his younger brother's was and sister's and he did not always maintain eye contact when he communicated. He would rather look up but will concentrate on his actions whenever his mother or father made him attended to it.

In an individual conversation with Elsa, she shared her experience of the time before and after Paul's birth with me. According to Elsa she had a 'normal pregnancy' and 'normal birth'. She described the time before Paul's birth as rather stressful. They were in a process of moving to a new town and she had to start working at a new university. Paul was born with an eye infection, which lasted for three weeks. In addition she experienced difficulty with breast-feeding and was advised by the nursing staff to discontinue breast-feeding. Elsa expressed her concern of a possible disconnection between Paul and herself, she said that she felt a sense of guilt. (Guilt became a theme in our present conversation). She said that he was a colic prone baby who was also overweight. She became more concerned when he was three months old and still did not accomplish any 'normal developmental goals' (Louw, 1985) or show any muscle tone development. She depicted him as floppy like a new-born baby. She said that it felt to her as if she was a worthless mother, because her naivety concerning his colic and weight made her postpone action with regard to his 'problem'.

I construe from Elsa's conversation that the first themes evolved around 'guilt and ignorance'. These themes evolved through our conversation and co-constructions and connect with the themes of normal development versus a possible fault or problem.

When Paul was three months old a clinic sister informed them that Paul might have a 'possible fault'. Elsa said she was extremely upset, however Japie rejected this opinion. Both the doctor and paediatrician supported Japie's perspective at that time. Elsa explained that she was not satisfied and took Paul for a second opinion. A physiotherapist diagnosed low muscle tone. But Japie still did not conform to the idea.

The following quotation portrays the multiverse of realities (Maturana, 1975) that unfolded within their marital system, which became perturbations along our journey.

"Ek was nie tevrede nie en ek het Paul na die fisioterapeut geneem wat dadelik lae spiertonus gediagnoseer het. Intussen het Japie nie erken dat Paul 'n probleem het nie. Hy het net harder gewerk. Volgens hom is hy en ek normaal; dus kan die kind nie 'n probleem hê nie. Hy voel ek mag nie daaroor praat asof Paul 'n probleem het nie. Hy't my belet om daaroor te praat. Tot vandag toe word daar nie van Paul se probleem gepraat voor my skoonouers nie. Ek vermoed die een oom weet, maar niemand vra of sê iets nie. Ek kon met my ma en die fisioterapeut deel en met 'n vriendin. Verder het ek glad nie daaroor gepraat nie, ek was altyd bang dat ek sou huil. Japie het steeds gevoel dis onsin en gesê dat hy nie gaan geld mors op terapeute en toetse nie. Dit was vir my baie sleg, dit was moeilik om nie met hom dit te kon deel nie".

Translation:
"I was unhappy and took Paul to a physiotherapist, she diagnosed him with low muscle tone. Japie did not admit that Paul has a problem. Japie considered Paul to be normal because we are normal. He felt that it would have been best if I did not speak about Paul as if he had a problem. He did not allow me to speak about Paul's problem. Up to this day his family participates in this open secret, nobody says or asks about anything. I could only share with my mother, the physiotherapist and a friend. I did not want to dwell on it because I was afraid that I would cry. It was horrible. It was extremely difficult not to have been able to share it with Japie".

I was curious about their pattern of interaction, how Japie's theme of denial with regard to Paul's 'problem', reciprocally influenced Elsa's denial of her emotions and pain, and how that pattern is isomorphic to their pattern of interaction today. The interconnectedness of systems and the mutual influence between them unfolded. I hypothesised by myself about the connection between her short temper and "haastige geaardheid" and his escape route from home via work. I kept the hypothesis until later in our conversations.

Elsa said that she was constantly aware of her own tension. She realised that she had to perform and work harder than some of the other mothers, to accomplish the same tasks

with Paul. She experienced Japie as "ontoereikend en onbeskikbaar"/"not available to her and distant". She said he has been a dedicated person ever since but he was not a workaholic.

Elsa remarked that he is even worse today. This portrays a pattern of disconnection. This pattern evolved through the unfolding of the themes that surrounded their encounter with the medical profession, and how the awareness of Paul's problem became a shift in their relationship. The next collaboratively construed themes are 'Problem definition and the doctor's final judgement'.

The Problem / Final Judgement

Elsa's conversation surrounding the time of Paul's birth, her perception of the lack of support from Japie's side, and her need to share some of the responsibilities with Japie seems to be isomorphic with their current relational dance. As if the themes of the past eight years became redundancies in their story line, perturbing the autonomy of their system (Kenny, 1989).

Elsa said that she had to take Paul to a neuropaediatrician, Doctor X, he diagnosed Paul with "oppertuose gigantisme"/"gigantism". She depicted a lot of sadness in the following quotation:

"Op tien maande het ek Paul na Dokter X geneem. Ek was onder die indruk dat Paul goeie vordering getoon het, aangesien sy nekkie al stywer was en hy met 'n bietjie hulp kon sit. Dokter X se diagnose was "opportuose gigantisme". Hy kon vir my geen agtergrond of verdere agtergrond insake die diagnose gee nie. Hy het gesê dat daar nog baie min navorsing oor gedoen is, volgens hom is dit een of ander reussiekte; die prognose is baie swak, Paul sal nie ouer word as vyf jaar nie, hy sal nie loop, sit of staan nie. Boonop sal sy ontwikkeling swak wees en hy sal seksueel onderonwikkeld wees".

Translation:
"When Paul was ten months old I took him to a neuro- paediatrician, doctor X, he diagnosed Paul with "gigantism". He could not provide me with any substantial literature on the illness. He said the prognosis was poor. Paul would only live until five years, he will not

walk, sit or stand. He won't reach his developmental goals and he will show poor sexual development".

In the flow of our conversation the retelling of this doctor's message awakened a sense of sadness in Elsa. I realised the impact of language and experienced how professional jargon may have encouraged this doctor to reify and treat abstract concepts rather than his clients (Efran et al., 1990). I disclosed my annoyance and disbelief in his action and created a space in which Elsa felt safe to cry about her sadness.

She said that Japie was furious and shocked. They took Paul to see another specialist. She diagnosed him with Prader-Willi syndrome, because he was still overweight. (According to Kaplan, Sadock and Grebb (1994) Prader-Willi syndrome's prevalence is less than 1 in 10,000 and persons with the syndrome exhibit compulsive eating behaviour and often obesity.) In the mean time she started to take Paul to physiotherapy and occupational therapy. (The theme of support started to unfold at that time.) Elsa experienced a lot of support from her mother and a friend. She recalled the harshness of some people and was struggling to cope without Japie's support. The pattern of isolation and her perception of deprived support from Japie are mirrored in the following words:

"Dit is groot genade dat Paul eerste was, anders weet ek nie. Daar gebeur soms ontstellende goed wanneer mens so 'n kind het. By 'n opvoedkundige speelgoed partytjie was die een vrou se opmerking: ' wat's fout met jou kind, is hy serebraal?' Op daardie stadium, ek het eers tot baie onlangs uitgevind dat serebraal nie spasties beteken nie, die dokters was bekommerd dat Paul nie self gedrag inisieer nie en slegs aangeleerde gedrag doen. Paul wil gedurig net al die aandag op hom hê. Ek het besluit tot hiertoe en nie verder nie. Ek moes sy oë laat toets en hy moes meer oefeninge doen. Ek het besluit hiertoe en nie verder nie, ek het die taak aan Japie gedeligeer, met die gevolg die oefeninge is nie gedoen nie.... Ek was die moedelooste in die tyd wat Japie dit nie wou glo nie. Eers tot onlangs het hy erken dat hy nie geglo het dat Paul 'n probleem het nie".

Translation:
"It's a blessing to have Paul as our first born, otherwise I don't know. Sometimes a lot of upsetting incidences occur when you have a child like him. Once at an educational toy display the one mother wanted to know whether Paul has cerebral palsy, I did not know

cerebral palsy encompasses more than spasticity. The doctors were worried about Paul's ability to initiate behaviour. And Paul demands a lot of attention. I also had to take him for eye tests, these showed that he needed more eye exercise, I couldn't cope with everything. Therefore I asked Japie to take responsibility for the exercises and consequently nothing happened".

This depicts circularity, and mirrors the mutual influence between Japie and Elsa. The way each one of them interacted was influenced by and influenced the other one's interaction. This conveys the complexly interwoven ideas in human systems and portrays how these ideas constantly influence each other in a reciprocal and mutual way (Fourie, 1991a). I was perturbed by the way in which she perceived her struggle in isolation, I reflected on my perception of their relationship. This has been a perturbation of the stability of their system and eventually it will result in the system either compensating or not compensating. Their marriage took strain from their recent interactional and communication style. Our conversations encompassed their ideas on their relationship and created a space in which they could redefine and metacommunicate on their marital relationship and its influence on their family system (Keeney, 1979). The interconnectedness of systems and the mutual influence on each other connected the perceptions of their relationship patterns.

Elsa was very concerned about Japie's long working hours that highlighted his absence at home. She ascribed a shift after Paul had to start with horseback riding:

"Dis waar perdry 'n verskil gemaak het, ek het gesê dat Paul se sensoriese integrasie gestimuleer moet word, maar dat ek nie kans sien om hom nog perd ry toe te vat ook nie. Ons het toe 'n reëling gemaak dat Japie hom sal vat. Dit is nie aldag vir Japie 'n plesier nie maar Paul geniet dit baie".

Translation:
"Horseriding made a difference. I was supposed to stimulate Paul's sensory integration. But I could not face another responsibility and arranged with Japie to take him to horseriding. Although Japie does not always enjoy taking him there, it is a wonderful experience for Paul".

Elsa expressed her gratitude towards an occupational therapist who gave her some hope. According to the occupational therapist Paul did not have difficulty with planning, consequently he could attend a school in their area. His acceptance into that school was to Elsa some proof that Paul is not brain damaged. She said that it is difficult to talk about it. I reflected on our relationship and asked if it was ok for her to talk about it now. According to her it became easier to express her feelings into words. She said that she wanted to give me the facts on Paul's riding experience and eventually she exposed herself and her relationship with her husband. We reflected on the mutual influence of their relationship on the relationship with Paul. I depicted the interrelationships as part of the context in which the different meanings may evolve.

In retrospect I remembered myself being a little anxious about the content up to that part of our conversation and was perturbed by the unpredictability of the outcome of our journey. However being embedded in an ecosystemic epistemology, I trusted the unfolding relationship between myself and their family.

'Field Notes'

Paul fell from the one horse, as a result he appeared to be very cautious during a following lesson. He wanted constant assurance of his safety and capability of riding the horse. I assisted as a helper during his lessons. I did not personally lead Paul but I assisted one of the children with severe characteristics of athetosis in front of Paul's horse. Paul wanted to know from me whether his horse would run off with him, and he rhetorically stated that the horse would not do such a thing. I was curious to explore the meaning of horseback riding through Paul's own description. Paul told me that he really like horses a lot, he said that he love horses. I perceived Paul as a little scared to touch the horses in the beginning, probably due to his fall during the week. Nevertheless when he mounted his horse his face portrayed a smile of happiness and confidence.

I went to his lessons on three other occasions. Paul's position and posture showed improvement, his previous fear vanished and he displayed adventurous courage. He did not hesitate to trot when it was asked of him and even did some jumps. During one of our lessons Elsa mentioned that she really feels sorry for some of the other children, when she looks at them, she realises that Paul actually has nothing wrong with him.

I met Paul for one play therapy session. He initiated all the themes in our conversations. We built a farm with many horses, each horse was named after one of the horses at Paul's riding school. The themes evolved around caring for the horses, taking precautions to ensure their safety and providing in the horses' needs. Paul told me again that he loves horses and that he is able to ride alone. Paul told me that he is not afraid of horseriding.

We had a special connection; Paul wanted to know whether I would come to his horseriding lesson again. After our session Elsa showed me Paul's birthday cake; a galloping chestnut, with separate chocolate horseshoes for each child. I drew the distinction that horses must be significant in Paul's life to choose a horsey theme for his birthday cake and the main theme in our play activities.

Therapeutic Horseback Riding

I met Elsa in the actual riding context during one of Paul's lessons. I shared with her my shift in research focus and inclusion of a questionnaire to reach more meanings in a short period of time. True to ecosystemic principles I wanted to be transparent with Elsa because I respect her as a co-researcher. The context immediately led the conversation into the domain of Paul's horseriding experience. Elsa remarked that she has also gained a lot from being at horseriding, she said:

"Dit is die enigste plek waar ek voel dat ek tussen mense is wat in dieselfde bootjie is as ek en wat werklik verstaan en begrip toon dat my kind iets vreemd makeer, ek weier om te sê dat my kind gestremd is, ek sê hy het lae spiertonus, hy is nie gestremd nie. Miskien weet ek nie wat is die betekenis van die woord nie. Ek dink die daar wees het my oë oopgemaak vir ander se omstandighede wat dalk baie moeiliker as my eie is"

Translation:
"At horseriding I experience a sense of cohesion, there they realise that my child is different, I don't say my child is disabled, he has low muscle tone. I think I became more aware of other people's circumstances and their struggles and realised that I am not alone".

Elsa said that Japie initially felt very proud of Paul's participation in horseback riding but she perceived a shift in his attitude because his own needs had to be satisfied too. According to Elsa, Japie blamed her for putting Paul's needs and activities central in their family, at expense of the others. She denied it. This conversation brought the theme of 'centrality of a child with special needs' to the front. This theme evokes a multiverse of realities in our domain of consensus. Later in the co-construction Japie reciprocally portrays the possible centrality of Paul in his life.

I probed for the meaning she attributes to therapeutic riding

Y: "Hoe weet jy dat perdry iets vir Paul beteken?"

E: "Wel, hy sal my gedurig vra of herinner aan sy ry les. Laas week met die bure se dogtertjie se verjaarsdag het hy haar oortuig om ook 'n perde koek te hê. Verder is daar baie geleenthede waar hy en sy boetie en sussie mekaar inspan as perde binne hulle fantasie spel".

Y: "mm"

E: "En wanneer hy blokkies bou is perde 'n definitiewe tema. Perdry is anders as ander terapie. Aangesien dit meer tydloos is, dit is iets wat hy geniet en altyd eendag weer sal kan doen. 'n Ruimte wat vir hom geskep word waarbinne hy kan ontspan. Dit is amper 'n gewone sport waar hy geen 'ball sense' nodig het nie. Dit is iets wat hy alleen doen. Sy sussie raak baie opgewonde as hy ry. Sy broer het nog nooit daaroor gepraat nie, moontlik omrede hy vroeg daarmee opgehou het. 'n Definitiewe motivering vir Paul is die feit dat hy dit alleen doen en dat hy nie in kompetisie is daarmee met sy broer nie. Dit is vir my gerusstellend dat hy so 'n goeie verhouding met Sue het".

Translation:
Y: "How do you know that horseriding does mean something to Paul?"

E: "He would constantly ask me when will he ride again and then remind me of his lesson. He convinced the neighbour's daughter to have a horse-birthday cake too. Other times he and his brother and sister will pretend they are horses".

Y: "mm m"

E: "When he plays with his 'Legos' horses are usually a theme. Horseriding is different to other therapies, it is more timeless, something he enjoys and something he will be able to do for many years to come. Horseriding created a space in which Paul can relax, it is almost a normal sport, and he doesn't need ball sense to participate. It is something he does on his own. His sister gets very excited about his horseriding but his brother has no response to his riding. Maybe because his brother gave riding up quite early. The idea that Paul does horseriding alone is definitely a tremendous motivation to Paul".

The story unfolded and mirrored the shift in meaning Elsa experienced with regards to 'therapeutic riding'. We co-constructed riding as a therapeutic encounter. Elsa said that her initial meaning was rather coloured with neutrality, horseriding was yet another responsibility and something she had to do. This meaning unfolded in rich descriptions throughout our conversations. The meaning she ascribed to the horseback riding was influenced by her perception of Paul' s experience of riding. She said that Paul enjoyed every lesson, she could sense that he has a relationship with the horses, he became more cuddly and affectionate among the horses. Furthermore she felt happy about the connection between Paul and his trainer, Sue.

The natural flow of our conversations invited Japie to voice the meanings he ascribes to therapeutic riding. I was aware of the discrepancy in connection between the three of us and careful not to form a coalition with Elsa. Elsa and myself were sitting on the living room carpet, Japie joined us, and he sat on a chair. Japie used professional jargon and it sounded to me as if he mainly functions on a cognitive level and very remotely on an emotional level. He shared his thoughts, how he saw things but he did not say how he felt about things or elaborated on any emotional experience. I wanted to know how he feels about his relationship with Paul?

"Dit is 100% beter as wat dit was, aanvanklik het ek dit nie kon geglo het nie, en ek het dit 'deny'. Elsa is vinnig daardeur, jy weet mos die stappe van aanvaarding. Maar ek het baie langer gevat, dit is eers nou wat ek dit begin aanvaar. Dit was vir my 'n bekommernis

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dat hy so normaal sal lyk, en deur baie wonderwerke, Elsa se familie se gebede en Elsa se harde werk dat alles so mooi uitgedraai het. Ek sal graag meer tyd wil spandeer saam Paul".

Translation:

"I think there is a 100% improvement. I could not believe or accept it at first; I was in the stage of denial. Elsa quickly recovered, you know the steps of acceptance, and well I slowly progressed. Now for the fist time I have started to accept it. I was concerned about his normal appearance. I think Paul's remarkable recovery was only through Elsa's family's prayers and her hard work. I really want to spent more time with Paul".

I reflected on some of the themes and patterns that evolved from the previous conversations between Elsa and me. We co-constructed their interactional style, we explored some of the covert rules in their relationship and connected some of the themes with isomorphic patterns in their families of origin. Japie wanted to know in what way will their marriage and marital issues be of significance for this study. I depicted the interconnectedness of systems and their mutual influences on each other (Becvar & Becvar, 1996). Japie acknowledged that he has to make more time for all of them. He said:

"As ek met my hart oor Paul moes dink sal ek aan niks of niemand anders kan dink nie, ek sal 99% van die tyd dan aan Paul gee en nie tyd hê vir Elsa en vir die ander twee nie".

Translation:

"If my heart has to rule my thoughts, 99% of all my time would have been taken up by Paul, I would not be able to share my time with Elsa or the other two".

We spoke about their concerns. The theme of concern encompasses Paul's future, his ability to work, to find a loved one and to function independently. Through this conversation the multiverse of realities are portrayed in the contrasting ideas and meanings each one depicts. Their contrasting ideas emphasised the current disequilibruim in their marital system, it seems as if the system needed to change its structure in order to preserve the autonomy of the system (Keeney, 1983; Kenny, 1989).

The following five sessions were centred on themes and patterns in their marital relationship. These sessions were therapy sessions and the content of the sessions are not of relevance to this study. The process brought significant shifts in the meaning they ascribed to therapeutic riding. We collaboratively decided that they would continue their couple sessions with another therapist because Japie wished to walk an individual therapeutic road and our time was restricted by the scope of this study and external compliance. Self referentially I found it sad to not be able to continue on this route with them too but found it a realistic choice in the current time space of this research context.

After three weeks Elsa remarked that they were working on their relationship and she experienced Japie as much more supportive and committed to making a difference. According to her, the building project is nearly finished. She describes herself as having more patience and still being a little sceptical about the sudden change.

I sketched a scenario in which she had to write me a little letter to portray the meaning of therapeutic riding in her child's life:

"Ek sou dit baie sterk aanbeveel vir enige kind. Dit is iets wat 'n normale bedrywigheid is. En by my huis omdat hulle drie is en Paul die enigste een is wat dit doen, gee dit hom baie selfvertroue. Veral omdat sy broer nie ook ry nie. Gewoontlik is Paul stadiger met enige iets wat hy en sy broer doen. Ja , hy is defnitief baie trots dat hy kan perd ry en sy broer nie".

Translation:

"I would recommend it! It is a normal activity. In our house with three children, because Paul does it on his own, I think it enhances his self-confidence, especially without his brother's competition. Usually his brother excels in everything. Paul is much slower than his brother. Yes, I think Paul is very proud of being a rider".

I sketched the same scenario to Japie, he wrote:

"Die kind het baatgevind. Totaal en al 'n gedaanteverwisseling ondergaan in terme van 'self confidence'. Sy verhouding met die diere is ongelooflik. As hy op die perd gaan sit

weet die perd dit. Perde is ongelooflik. Ek kan dit amper nie in woorde beskryf nie. EK het nie woorde om dit te beskryf nie. Sy selfbeeld en selfvertroue het verbeter".

Translation:

"The child gained something from it. I would say he is a total new person with regards to his enhanced self-confidence. Paul's relationship with animals is remarkable. The moment he sits on a horse, it is as if the horse knows it. Horses are remarkable creatures. I can't depict it in words. I don't have words to describe it. He definitely showed improvement in his self-confidence and self esteem".

I asked them to picture themselves for one moment in Paul's position, then take their pens in their left hands and write down their perceptions of Paul's personal experience of therapeutic riding.

E:"Dit is vir my baie lekker. Ek is baie lief vir diere".

Translation:

E: "I enjoy it. I truly love animals".

J: " Ek is baie hartseer as ek nie kan gaan nie, perdry maak my baie opgewonde. Ek vat vir Trudy saam om my te lei. Ek is baie lief vir perde".

Translation:

J: "I am very sad when I can't go to horseriding. Horses excite me. I take my friend, Trudy to lead me during my lesson. I love horses".

The process during our past conversation was remarkable. I perceived a small shift in their way of interacting with each other. According to Elsa it would take time but she perceives a difference in Japie's interest and care for them. I realised the importance of our final co-construction of the themes during our feedback conversation.

Feedback

Congruent with the ecosystemic epistemology, I found it useful to reflect with Japie and Elsa on the themes that evolved from our conversations or from the distinctions I drew. I want to reiterate that the themes and patterns reflect the perceptions and epistemology of the co-researchers and researcher and are not objective facts and final conclusions. The researcher can not avoid influencing the research process and in turn being influenced by the process. Therefore the results are embodied in the research reality; the meanings, ideas and attributions evolved through co-constructions and perturbations in a domain of consensus.

According to Elsa and Japie, there is a tremendous shift in meaning with regard to their marital relationship. They expressed the significance of the co-construction to them, Japie said the story would have had something missing on the last few pages if we did not have this conversation. I reflected that the story we portrayed is bound to time and context, and that various meanings and attributions may evolve in this ongoing flow of events.

Elsa said that she regrets the interruptions in Paul's riding therapy throughout the year. He had to terminate while he was treated for his asthma and then he had an operation, which deprived him of horseriding for six weeks. Elsa said horseriding has been an intuitive decision three years ago, and she was perturbed by the themes we co-constructed. She still thinks riding is good for Paul. Japie said that therapeutic riding assisted with Paul's balance. He shared their experience on camel rides, and how Paul's self-confidence at horseriding influenced him to mirror the same self-confidence on camelback.
I was curious whether this process shifted anything else. Elsa replied:

"Ek dink ek gee 'n klomp inligting altyd vir mense met wie jy praat, daars altyd iets wat jy vir mense deurgee. Maar as iemand vir jou met belangstelling luister en jy ryg uit en ryg uit en ryg uit, al die feite, dan kom jy by die emosie uit. En ek dink dit is goed vir mens om partykeer al daai feite net te bekyk van 'n kant af en besef daar gaan emosie daarmee saam".

Translation:

"I think I usually give a lot of information to anybody that asks. But when some one, like you, starts to actively listen to what I say, all the facts soon vanish in the end and unmask the emotions. I think it was a good thing, one has to take a step outside and observe what is going on and allow yourself to feel the emotions".

Japie replied:

"Ja, beslis, ek dink tog dat my insig rondom perdry verander het want ek het in die begin geweet dit is baie goed vir terapie. Maar ek het nie die kant van die emosionele band tussen Paul en die perd raakgesien nie. Dit was soos OT toe gaan vir terapie, swem as terapie, was perdry net nog 'n terapie. So vir my was dit terapie die heel tyd. En ek dink wat vir my verander het is die dat ek begin anders kyk het na die opset. EK kyk daarna in die geval dat Paul het perdry nodig, nie net vir ontwikkeling en sy spiere nie, maar ook omdat hy hierdie ontsagtelike liefdesband met 'n perd het. Jy moet sien as hy daar is, al die perde waarna toe hy loop buig af na hom en laat hom hulle koppe vryf. En ek meen Paul se vryf is baie anders as wat ons 'n perd streel. Dis totaal verskillend, ek weet nie, dis nie woorde wat jy kan hê nie, dis emosie".

Translation:

"I think my perception with regard to horseriding has shifted, however I knew from the start that it was therapy. But I have never acknowledged the emotional connection between Paul and a horse. I thought it was like any other therapy, similar to occupational therapy or swimming. I think I perceive horseriding differently now. I think Paul needs therapeutic riding, not only for his muscle development but also to embrace this special connection with a horse. I wish you could see how the horses react in Paul's presence. They bow their heads and invite him to touch them. I don't have words to describe it , its different, its about emotion".

Through Japie's rich description, I perceived an emotional shift in the words he used to portray Paul's relationship with a horse. Japie's awareness, and perception of Paul's emotional connection with the horse, and the emotionally loaded meanings he attributes to therapeutic horseback riding may be isomorphic to his own self-referential experience and changes within his personal relationships. This reciprocally influences his relationship with

Elsa and all the children. There is a shift in the meaning he ascribes to the time he has to spend at therapeutic riding. Japie said it became a time during which he can relax, he enjoys Paul's excitement and joy. I commented on the meaningful noise. Therefore on the idea that an adoptive change requires some source of the new from which alternative choices, behaviours, structures and patterns may be drawn (Keeney & Ross, 1992). Elsa commented on their introspection she said:

"Ek moet darem sê vandat jy ons die eerste keer gesien het tot nou het ons 'n ver pad gekom. So ons storie sal anders klink".

Y: "Hoe lyk die andersheid vir jou?".

E: "Ek dink die feit dat ek, ek karring nog maar aan met die kinders elkeen doen sy ding, Japie werk, maar die feit dat jy begin vrae vra het, het ons met mekaar laat begin praat. Wat doen ons met hierdie kind en wat beteken dit, en ek dink dit is baie goed".

J: "Ek dink daar is baie waarde in die hele opset van die saak, en as ek vat net rondom die kind en my rol as pa, ek het net gewerk werk werk, ek dink ek is besig om 'n totale 'paradigm shift' te maak".

Translation:
E:"Since we met you there have been a lot of alterations in our story. We've come a far way, I think our story will sound different".

Y: "How do you perceive the alterations?".

E: "I continue with my responsibilities regarding the children and Japie still works a lot, but your questions and interest helped us to start talking to each other. We are aware of our whereabouts with this child, the different meanings, I think it is very good".

J: "I think this process has a lot of value. Look for instance at my relationship with the child and my role as father, previously I have been caught in all my work. I think I am busy with a whole paradigm shift".

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This quotation mirrors a perturbation within our domain of consensus. However each system is 'structure determined' and therefore I did not have a lineal influence on their behaviour. Through structural coupling a domain of experience formed in which we shared in a common language (Kenny, 1989). This is coherent with the ecosystemic approach 's co-construction of meaning through a shared language.

Some similar themes occurred in the co-construction of the three case studies, however the multiverse of realities depicted through each case study intensifies the uniqueness of each story.

Normal Versus Not-Normal

Some parents draw no distinction between a child with special needs and other children. They believe in a 'normal' upbringing. I reflected on this phenomenon, Elsa replied:

E: "Ek dink dit is belangrik want ons praat gedurig daaroor dat ons nie 'n onderskeid maak tussen hom en die ander kinders nie. Maar dat dit moeilik is, ek dink in die sin dat hy veral met allergieë stoei, dit pla my nogal. Daar is voortdurend aandag op hom, wat mag hy eet, wat mag hy doen of nie doen nie".

Y: "Vir jou Japie ".

J: "Natuurlik want hy moet in 'n normale omgewing eendag aanpas, ek bedoel hy kan nie in 'n omgewing gaan werk as hy nie, ek meen daar is voorsiening gemaak vir persone in party werke. Maar in Paul se geval gaan mense na hom kyk en dink maar hy makeer niks nie, hoekom moet daar spesiale voorsiening vir hom gemaak word. Daar kan baie diskriminasie teenoor hom wees, totdat mense dit weet".

Y: "Omdat hy so 'normaal' lyk?".

J: "So lyk en optree. Ek meen Paul loop nie mank nie, hy't nie bewegings wat hom gestremd laat lyk nie. As jy na Paul kyk dan sal jy voor jou geestesoog 'n normale kind sien. Party mense kom dit nie eers agter nie, eers waar jy begin praat oor die probleem en vir mense wys, kyk jou kind doen goed so en Paul doen dit net stadiger. Hy doen dit net baie

stadig. So vir mense wat dit nie gewoond is nie, hulle sal dink hy sukkel maar met die werk. So dit kan wees dat sy lae spiertonus hom kan strem. So dit is belangrik dat mens die tipe goed identifiseer en fisies regmaak sodat sy emosionele kant; selfvertroue reg is, normaal kan optree en normaal dinge kan doen".

E: "Wat ek net, ek dink ek het dit al gesê maar net hy lyk so normaal dat mense van hom verwag om normaal op te tree en dit gebeur nie altyd nie.Dit maak dit half moeilik om hom so normaal moontlik te hanteer. Ek kan byvoorbeeld nie vir Paul sê om alleen oor die straat te loop nie, en vir sy broer wat drie jaar jonger is, kan ek, ek meen dit is nie normaal nie. So al probeer jy hoe hard om alles normaal te hanteer, sekere dinge dwing jou van normaal af".

Translation:
E: "I think it is important, we do not want to make a distinction between Paul and the other children. But sometimes it is difficult. I think all his allergies complicate the situation, all activities centre on his allergies, it controls what he eats and what he may or may not do".

Y: "To you, Japie?".

J: "It is important with regards to a future perspective. He has to work in an environment, some working environments do accommodate people like him, but in a normal environment people will not be able to understand the reasoning behind justifying Paul's behaviour".

Y: "Because he looks so normal?".

J: "He looks normal and his behaviour is normal. He doesn't walk funny, he doesn't have any movements that will present him as a person with a mental or physical handicap. He looks normal. He can do everything compared to his peer group, but he is just slower. It may be then that his low muscle tone becomes a handicap. It's important that we do our best to correct the physical problems, to ensure that his emotional side, his self-confidence is not affected in a negative way. And to give him an opportunity to behave normal and do things in a normal way".

E:"Paul looks normal therefore people expect normal behaviour from him. But it is not always that easy. One can not expect the same behaviour from him in all situations. I can't send Paul to cross the street on his own. Whereas I feel comfortable sending his brother, who is three years younger, and that is not normal. There are certain things that make it difficult to do everything normally. So even if one really tries hard, some things are different and not normal".

The theme and dichotomy of normal versus not-normal became a perturbation to Elsa. She reflected back to the theme and allowed a multiverse of realities to unfold.

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E: "Nee, dit bring my terug by normaal teenoor nie-normaal, dis nogal vir my 'n ding waaroor ons baie dink. Dit maak half jou perke baie wyer van wat normaal is. Normaal is nou nie meer doodgewoon 'n presteerder op skool nie. Ek twyfel nie oor my ander kinders se vermoëns nie. Dit was vir Japie op 'n stadium baie erg dat die kind net wou kos maak. Maar hy't al begin aanvaar, en gesien dat hierdie kind moontlik so 'n lewe vir homself sal kan maak. Dis in elkgeval belaglik om nou al daaroor te bekommer".

Translation:
E: "No, that's emphasising normal versus not normal, I dwell on it. The term becomes relative, normal doesn't only mean an achiever at school. I do not doubt that my other two will be achievers. But at one stage Japie could not accept that Paul loves to cook. Now he realises that cooking may become his career one-day. I think it is ridiculous to worry about that now!".

Defining the Problem

I reflected on our previous conversations of the time before and after Paul's birth. Japie immediately said that he feels different about it.

J: "ek voel anders daaroor, kyk mens gaan deur daai fases van rou, die een is nou verwerping. En ek het baie lank, ek het lank verwerp, voor ek kon 'acknowledge".

Y: "Kwaad?".

J: "O natuurllik! Vir God en myself. Hoe kon ek dit dan toelaat dat dit gebeur? Dit was 'n lang pad wat ek moes loop om myself weer te vind, en net weer die lewe in die oë kon kyk.Ek weet nie, dis moeilik, jy kyk na hom en jy sien iemand wat normaal lyk wat nie soos iemand lyk wat spasties is nie. En as jy uit omstandighede kom waar uit ek kom weet jy niks van spraak, arbeid of fisioterapeute nie, en sielkundige is 'n taboe woord!".

Translation:

J: "I feel different now. One does go through all phases of mourning, like denial. I was in that phase forever! It took a long time before I could start accepting and acknowledging".

Y: "Anger feelings?".

J: "Definitely! Against God and myself. How could I allow this to happen to us? I struggled to find myself again and to feel capable of facing responsibilities.I don't know it's difficult. If somebody looks normal and not spastic its difficult to accept when you look at him. And my background history portrays a community where occupational therapy, physiotherapy speechtherapy did not feature, and psychologists was a taboo".

Elsa remarked that she said that she still feels the same about the time before and after Paul's birth. I was curious to explore the meaning Japie would ascribe to the "Final Judgement" (a theme Elsa and I co-constructed in earlier conversations).

J: "Dit was die begin van verwerping, nie ek of Elsa is mal nie, of nie nie een in ons families het 'n probleem nie. Dit was wat die verwerpingsdrang verskriklik versterk het. Ek het by daai tyd toe dokter X die slegte nuus gegee het, ek het gedink hy is die grootste aap wat leef. Want ek het hom probeer vra met watse statistiek of wetenskaplike fundering kan hy sy gevolgtrekkings staaf en hy kon nie. Op daai stadium het ek dit bly verwerp vir 'n baie lang tyd. Miskien ook omdat ek nie wou glo wat hy gesê het nie. Dis moeilik gewees om dit te aanvaar. Ek wonder partydae nog, hoekom het daai man God probeer speel? Wat gee hom die reg om mense sulke slegte nuus te gee waarvoor hy geen bepaling van die toekoms het nie.Hy mag die wêreld se grootste kinderarts wees, maar hy's die wêreld se grootste swakkeling, geen mens ken die Raadsplan van God nie. Dis vir my partydae dink ek nog daaraan, ek deel dit nie eers met Elsa nie, partykeer ry ek in die kar dan wonder ek ,hoe kon iemand so onnosel gewees het?"

Translation:

J: "My journey with denial started there. It was difficult to accept, coming from a family with no 'problems'. I thought when that doctor X broke the news to us, I thought he was a fool. I asked him for statistical and scientific background on the diagnosis, he couldn't give us anything. I was in denial for a long period, I did not want to accept his final ruling. I couldn't accept the fact that Doctor X wanted to play God over my child's future. He may be the best specialist working with children, but he is a weakling, nobody knows God's plan. I do not even share it with Elsa, but many times I wonder by myself, how could one man be so stupid?".

Isomorphic to ecosystemic thought, Elsa replied with the other side of the coin. She said:

E: "Ek dink aan die eenkant was die enigste wat dalk goed was van wat hy gesê het, hy kon dit op 'n ander manier gesê het, maar wat goed was, is dat hy vir mens die ergste moontlik voorspel het. Met ander woorde dit het my onmiddelik laat verstaan dat ek moet roer. As hy dit nie so erg gestel het nie, het ek dalk gewag om te sien of dit nie verander nie. Hy 't vuur onder my gemaak wat miskien goed is. Ek het begin, en prop alles in hierdie kind se lewe in, hy het nie vyf minute tyd vir ontspan nie, alhoewel ek darem nou begin afskaal het".

Translation:

E: "I think something good came from his terrible message, I still think he could have done it differently, but his harsh words immediately activated me. That was perhaps not such a bad thing. By sketching the worst possible scenario, I felt an urgency to start with therapy. I have not stopped since. That child doesn't have five minutes of relaxation. But I am busy easing the pace".

This is an example of their system's autonomy, although this one reality was a perturbation to them, a multiverse of realities allows for new meanings to evolve. Japie stated that he has accepted it, especially when he sees that Paul turned out to be ok, he realises that Paul will always have some restrictions but he accepted it. He praised Elsa for being very realistic and courageous during the time after Paul's birth. However in reflecting on their encounter with Doctor X, it became visible that the experience portrayed a lot of

pain. But their system conserved its autonomy. Despite the hopeless picture the doctor painted and the hurt and anger they connected to their relationship with the doctor, they have been resilient. They believe in Paul's ability to gain from therapy and their love.

Acceptance and Support

I explored the possible connection between their willingness to share information and support as a complementary theme to the lack of information and support from Doctor X. Japie replied:

J: "Ek sal deel met ander ouers as hulle werklik belangstel. Ek dink dit is soms beter om nie te praat daaroor nie, ter wille van Paul. Want soms lok dit 'n abnormale reaksie teenoor Paul uit. Maar as die mense belangstel, vertel ek alles, maar as hulle nie belangstel nie , dan los ek dit, en hulle hanteer Paul dan normaal".

E: "Ek sê omtrent vir enige iemand, kyk dis baie erg, maar as jy iets daaraan doen, is daar 'n positiewe pad vorentoe. Ek vertel wat hulle van hierdie kind gesê het en wys dat dit anders kan wees.Jy kan nie laat slap lê nie. Jy moet iets doen as jy iets doen, dan kan dit beter gaan. Tot so 'n mate sal ek deel. En my ervaring is dat jy praat nie met ouers wat net normale kinders het nie. Hulle raak in elkgeval net geïrriteerd, hulle verstaan nie waaroor dit gaan nie. Ek sou sê, dit verveel hulle bloot".

J: "Ek dink mense wat nie 'n kind soos Paul en sy maatjies het nie het nie baie behoefte om kennis te versamel oor wat om te doen om moontlikhede vir jou kind te genereer nie.Wie kruip sy eie knieë deur om sy kind te leer kruip?".

Translation:
J: "I will share with parents that are really interested. I don't like to talk about it; sometimes one creates a space in which people act abnormally because they know he is different. If people are sincerely interested I will share with them, but otherwise I would keep quiet and find them behaving normally towards Paul".

E: "I tell everybody that although it is difficult one has to do something about it. I shared the news we got and compare it to Paul and what he is doing today. One cannot

relax; you must work constantly to see results. I would easily share with parents, but I refuse to share with people who only have experience with normal children. They get irritated and do not understand the underlying meanings. I would say talking to those parents would bore them".

J: "I don't think that people, who do not have a child like Paul and his friends, have a need to gather information on child development. I mean, who crawls with his own child until that child crawls on his own?".

We elaborated on our previous conversation regarding the influence of parents' perceptions of their children. This brought us to the unfolding of richer descriptions regarding Japie's mother' perception of Paul's 'problem'. According to Elsa the grandmother finally found out the whole story while overhearing a conversation Elsa had with one of the teachers in her presence. Japie commented on his own psychological growth and said that he wants to portray a more congruent story to his family in the coming festive season.

I perceived a shift in the meanings that evolved since our previous conversations. We co-constructed the connection and interrelatedness of the systems. I commented on the mutual influence of systems within this domain of consensus.

Therapeutic Horseback Riding

J: "Ek weet nou nie of hy eendag Gymkana sal doen nie, maar as hy so oor 'n paar hindernisse sal spring, wat nie te hoog is nie, is ek gelukkig. Ek dink dit sal vir hom ook goed doen, maak nie saak hoe hoog hy spring nie, hy geniet dit. Dit is vir hom lekker om met die perd oor die hindernisse te spring".

E: "Ek het vrede of hy kan spring of wat hy doen, wat ek vir 'n langtermyn in gedagte het is dat hy, wanneer hy groter is, 'n plek kan hê waar hy enige tyd kan gaan perdry wanneer hy wil. Dat hy kan sê dat hy op sy perd kan gaan ry vir ontspanning".

J: "Ek het dit nou nog nie vir Elsa gesê nie, maar in my agterkop is ek reeds besig met sommetjies om eendag in daardie behoefte te kan voorsien. Dat as Paul eendag reg is sal ek daai uitgawe moet aangaan".

Translation:

J: "I don't know whether Paul would one day be a Gymkana rider. Nevertheless I would be happy if he could do a few jumps. It doesn't have to be high jumps, but Paul loves to do jumps".

E: "I don't care whether he jumps or hack or whatever, I envisage a place where he can go whenever he wants to ride. I want for him to be able to say, that he is going to ride on his horse".

J: "I have not told Elsa before but in the back of my head I am already making provision to enable us to provide for Paul's needs. Whenever he is ready I would like to enable Elsa's vision".

Japie and Elsa wanted to know how I experienced the other riding schools, whether they do similar therapy on horseback compared to the stables where Paul rides. I honestly told them that I feel there is room for improvement at that stable. I shared with them my frustration with regards to Sue's responsibility in running the classes. I said one could never underestimate the emotional value underlying horseback riding, this portrays the therapeutic meaning of horseriding. We shared our ideas on Paul's experience of joy and happiness when he is on horseback. Elsa said that she feels that horseriding is Paul's relaxation. Her perception is that Paul's self-confidence is enhanced. She draws this distinction based on the fact that Paul's brother does not participate in horseback riding. She said it means a lot to Paul that he is the only one that does riding. Furthermore he is much more relaxed when mounting a horse and more willing to take risks, like walking without a helper. Japie expressed his fascination with Paul's connection with the horses:

J: "Ek dink daar is 'n band tussen hom en 'n perd. Vir my is daar 'n, ek weet nie, ek dink ek het dit al gesê; in 'n vorige sessie kan 'n perd wild wees, maar as Paul op die perd se rug klim dan is dit vir my asof daai perd doelbewus rustig raak, ek kan dit nie beskryf nie. Dis 'n ongelooflike gesig om te sien, en as hy afval van die perd af, kan jy sien dat die perd nie daarvan hou nie. Sue het die perd hom laat soen om askies te sê. Hy was mal daaroor. Paul is lief vir enige diere. Maar daar is 'n baie spesiale band tussen hom en 'n perd ".

E: "So jy dink dis emosioneel goed vir hom om te ry?".

J: "Ek dink tog so, ek kan dit nie beskryf nie, daar moet 'n mate van emosie wees. Hy het 'n doelbewuste hunkering na 'n perd".

Translation:

J: "I think there is a connection between Paul and horses. I don't know, I may have said it before, but even though a horse came across as unpredictable in a previous lesson, there is a shift when Paul mounts that horse. The horse will submit, I can't describe it. It is unbelievable. The previous time when he had a fall, Sue made the horse kiss him; he was crazy about it. Although Paul loves all animals, I think there is a special connection between him and a horse".

E: " Would you describe horseriding as an emotional experience?".

J: "I think so, I can't describe it. There has to be an emotional component. He has this passion to be with a horse".

Through this rich description one may have a glimpse of the unfolding meanings that attributed to the co-construction of this ongoing story. Japie's final quotation portrays the underlying need for tacit knowledge (Lincoln & Guba, 1985). One has to participate in the context to draw your own perceptions on the children's attributions of meaning, and being in the saddle of self-referentially discloses the therapeutic value of horseback riding.

Meta-Perspective

The themes evolved and unfolded richer descriptions on the research journey. The exploration into the meaning of therapeutic horseback riding co-evolved in a fit between the researcher, as a participant observer, and the co-researchers, as informants. Inherent in this concept is the viewpoint of structural coupling and a consensus domain of experience (Maturana, 1975). According to Fourie (1995) a person's structure encompasses his or her present or current knowledge. Structure i.e. the components and the relations between the components in living systems, can and do alter with each interaction that occurs (Dell, 1985). This indicates why each person will respond idiosyncratically to the same external information and perturbations thus furnish the ground for a multiverse of realities.

The themes reciprocally connected with each other:

- Feelings of guilt and ignorance
- Normal versus not-normal
- Defining the problem, 'Final judgement'
- Acceptance and support
- Therapeutic horseback riding

The parent's ideas about therapeutic riding have been perturbed by the impact of the impingement of the external ideas and messages. This led to a subsequent reconstruction of their attributions of meaning pertaining to their marital relationship and their perception on therapeutic riding at that moment in time. Alterations of the original attributed meanings within their marital system parallel the ongoing alterations and changes in the couple's thinking. As their original ideas evolve and change, so do the meanings for them evolve and change. This shift may be seen as a perturbation of their ideas and may have made them more amenable for the conversations on therapeutic horseback riding.

The researcher encountered a fit with the research context. Congruent with ecosystemic principles and social constructionism, the relationship between the researcher, co-researcher and child was of great importance in the research context. The meanings evolved and changed in the process of social construction. The researcher portrayed how knowledge evolved in the space between them, and how conversation was the basic core medium in this common dance. The conversations became the author of the story. In this case the narrative changed through telling and retelling. Mutual shaping occurred in the therapeutic relationship and the researcher experienced that the different contexts allowed the emergence of different dialogues that formed part of a recursive process.

Initially the focus was more on the family system, which encompasses the couple's marital system and the therapeutic riding system. Shifts and changes in the couple's perception of their relationship have isomorphic changes and shifts in all other interrelationships. There was a shift from the realm of facts and thoughts into a realm of emotions and feelings that connected with the facts and thoughts. This shift was portrayed through the language used in the conversations.

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A long the research journey the attributed meaning to therapeutic riding evolved into a rich description. The parents draw a distinction that depicts therapeutic riding as therapeutic in Paul's life. Within this co-constructed reality the relationship and connection between Paul and the horses portrayed a therapeutic encounter.

Julie and Len: Nadia

Background and Context

I met Nadia and her mother, Julie on one of my visits to a professional therapeutic riding venue. The riding school was situated in a picturesque milieu. Many horses gazing in grass paddocks surrounding the arenas depicted its tranquillity. Sandy, the therapist and instructor, introduced Julie and Nadia to me. Nadia was a six-year old girl with smiling blue eyes and long blond hair. She sat in a wheelchair and communicates only with facial expressions and vocal sounds. She was very friendly, maintains constant eye contact and was acutely aware of any stimuli in her immediate space. Her arm and leg movements were uncoordinated. Sometimes she performed floppy sizzor movements, Julie reminded her constantly not to do it. Julie supported Nadia when lifting her out of the wheelchair and carries her to the horse and puts her on the horse's back. Julie was not only Nadia's mother but she was also her nanny, teacher and full time companion. Julie came across as a person who was kind hearted, friendly and relaxed. She was dressed in a casual way and appeared to be very talkative.

I shared with her my wish to learn from them, to explore with her the meaning of therapeutic horseback riding in Nadia's life. Julie was very responsive and she too, like Japie and Elsa said that she would do anything to help other parents, especially after the struggles she experienced in her effort to help Nadia. Julie described her struggles in raising Nadia as a matter of " trial and error" because she did not get any guidance from the medical professionals.

We met for six consecutive sessions. The first two conversations unfolded within the therapeutic riding context. Julie assisted Sandy as a facilitator therefore I walked all the way with them and audiotaped our conversations. Through out all our conversations we took time to pay special attention to Nadia. She was very receptive and attuned to our

conversation. We had four other conversations at Julie's house. Unfortunately I did not have a conversation with Nadia's father, and conversely I co-constructed two of the four conversations at home with Nadia's grandmother, Julie's mother.

Julie's mother lived with them for the past six years. She spent a lot of time with Nadia and is therefore an important informant when sharing in Nadia's story. Nadia 's father, Len had a very hectic work schedule and was therefore not able to be practically involved, to the same extent as Julie in Nadia's busy programme.

Again it is important to reiterate that the distinctions I drew are only perceptions and it does not portray objective facts. July, her mother and I were voicing our perceptions on the possible meaning of therapeutic horseback riding in Nadia's life through language.

Medical Background

Julie described her case as a little different. According to Julie, Nadia had a normal birth and she only got sick at five months with Meningitis. She said that Nadia was in hospital for three days. She was responding well on the treatment and Julie was mentally preparing to fetch her from hospital. The hospital phoned her that night saying that Nadia was busy convulsing, from there she slipped into a coma that lasted for four weeks. She said it was then that the doctor started to prepare them that she may be severely brain damaged, or she may not make it. At that time the grand mother (Ouma) was helping July to cope with the newly born. Eventually Julie's mother stayed. Julie said she chose not to have more children. According to her too many people neglect their first borne. Julie said that she did not want to be confronted with any choice that may result in a different relationship with Nadia.

It seems as if Julie devoted her life to her child. She was a person who was very dedicated and positive in her views on life. According to her the first four years were very frustrating and she did a lot of travelling between the various therapists. The themes of guilt, when feeling that she did not do enough and the theme of ignorance or inexperience, for not knowing enough, were relevant. According to July:

J: "I do not blame the unhelpfulness of doctors and therapists, it took me four years of trial and error to find a balance, what works for her or what does not work for her. And in a way they've been a bit dishonest, they don't want you to know the truth. She's seven years old and still can't talk. Things like that, what they tried to calm you with, you are supposedly not to worry about a thing. I mean, in your heart you know that you have to worry, because you don't know when it's the true answer. I know and it took me like four or five years before I realised it's the mother that does the work at home".

Y: "mm m".

J: "They haven't got the heart to tell you this is what you should do, they're scared you are going to take their work away from them. And that is for me not so much that the doctor said she was becoming brain damaged, but I got over it. I just feel her life could have been different if we had the right help from the start. It could have been different".

Y: "That's frustrating".

J: "The whole time you look for somebody where you can get the proper help. But you don't know how to take that step over, and you don't know what to do".

In retrospect we established rapport early in our relationship. I was curious to explore the meaning her husband attributed to Nadia's illness. Julie remarked that he still has difficulty in accepting and dealing with the idea.

J: "He doesn't talk about his emotions, you know, when she like struggles with something or she has to work hard, he doesn't talk about his emotions. Some ways he accepted her more for what she is than I have. Because I still kept pushing her to reach her full potential. He accepts her for what she is. So in that way he accepts her more like she is than I have. He doesn't talk about it, that part of him dealt with it easier. I don't dwell in what happened, how things could have been different. But I think he still dwells a lot there".

A different theme evolved from this distinction, as if Len and Julie have some resentment. We explored the complementary theme of acceptance. The starting of the

lesson interrupted our conversation. Consequently the dialogue changed with the alteration of context (Anderson & Goolishian, 1988).

Therapeutic Horseback Riding

Up to this part of our conversation we were sitting on the grass in the stable yard, then Sandy arrived and we were preparing to get Nadia ready for her lesson. I walked with Nadia, Julie and Sandy, while audiotaping our conversations. Our conversation naturally flowed into themes regarding therapeutic riding.

According to Julie, this is Nadia's forth year at this specific riding school. She took Nadia for one other lesson when she was eighteen months old. Unfortunately the women was inexperienced and therefore that lesson ended as an unpleasant experience. She told me that the mothers at Nadia's school told her about Sandy. The first lesson was filled with apprehension but Nadia soon realised that Sandy was great fun to be with. Sandy told me that Nadia used to be incredibly tactile defensive. She was scared of the strange smell of horses, noises and the feeling of the horse's coat. Julie agreed with Sandy and said that there has been a lot of improvement. Nadia still does not really like all animals but she is fond of her horse, Ruby. This theme of the relationship between Nadia and the horse evolved and revealed rich descriptions.

Julie perceives Nadia's relationship with a horse as a trusting relationship. She remarked that Nadia cherishes the one horse's way of caressing. According to her Nadia is not the same with the other horses, she does not want to touch them. I probed for July's perception on the meaning that Nadia ascribes to therapeutic riding. She said:

J: "We started at speech therapy with an alphatalker, it is an electronic device, with which we explore the different meanings. We started off with horseriding as our first theme. We chose several sub themes like; 'I move fast or I move slow on Ruby', I would for instance ask her whether she does exercises on Ruby, then she could pick a theme like ' No, I do horseriding' or 'Yes, I love it'".

Julie recalled the one day in class when Nadia's teacher wanted to know the name of any other significant person except their mothers, Nadia chose the name of her helper at

therapeutic riding. Furthermore it means a lot to Nadia, because she participates in the annual competition. Julie proudly conveyed that Nadia has won several rosettes and that participating in that event has enhanced her self-confidence. Julie perceives therapeutic riding as Nadia's extracurricular activity. She said:

J: "I think Nadia sees horseriding like any other child sees ballet, music or netball. I think that is what it means to her".

Y: "Recreational?".

J: "Not as exercise or therapy. Her sport or activity she participates in. I think that's how she sees it".

We spoke about the complementary value of therapeutic riding. Julie explained:

J: "She had sublixation on the right hip, horseriding really helped with that. She also had her adductor down. Last year the doctor considered a hip operation but he said the previous time that it has improved to such an extent that it was not necessary! I think in the beginning I just pushed for therapeutic value. And once there was improvement, it became pure enjoyment. So whether they prove that there is therapeutic value or not, I will carry on for the fact that she finds so much enjoyment out of it".

I reflected on her participation as co-facilitator as meaningful noise, the ways she describes her own experiences at therapeutic riding differs from the other depicted descriptions (Keeney & Ross, 1992). Her ideas and experience at horseriding attribute a new possible meaning to therapeutic riding. She said:

J: "Since I helped Sandy facilitate it is very therapeutic for me too. I said to just come here, if I could have the opportunity I'll come and help for a whole day. I like walking with them, you learn a lot, when you're on the side you don't really realise what they are working it's when you get involved you see what they do".

Y: "What did you learn from Nadia?".

J: "Patience, lots of patience. You can't rush things, you have to let things take its course, way it's meant to happen".

Julie said she gets a lot of support from her husband, according to her he is very open-minded and he gives her a lot of mind judgement. Therefore he supports her decisions in what is best for Nadia.

Througout our conversation Sandy shared her experience of Nadia's improvement over the years. I was curious to explore her feeling towards having the parents as co-facilitators. She remarked:

S: "They are better motivated, I see an improvement in their relationship with the child and they learn from the situation".

J: "It's a positive experience, not all parents are open for a positive experience. Its lovely to come outdoors".

We spoke about the pros and cons of an outdoor arena, reflecting on the safety precautions and Sandy elaborated on the unique qualities of horses.

Our next conversation followed after a two-week delay due to Nadia's health. She was in bed with flu. We met at their house. As one enters the front door the living room is to the left, Nadia lies on a couch facing the door, she was excited to see me. I found myself sitting on the carpet again. I sat against Nadia's couch and was able to keep sufficient eye contact with her. Nadia sporadically interrupted our conversation with either a smile or a sigh and allowed us afterwards to continue our conversation.

Julie told me about Nadia's swimming classes, and said that she perceives it to be similar to horseriding as complementary. Richer descriptions on the complementarity of horseriding unfolded;

J: "Because her arms and shoulder function are so bad, (she can't voluntarily use them, she can not hold anything in her arms by herself) the physiotherapist said only way to overcome that is to take her through all the baby developmental phases again. We must

carry on with the tummy exercises until she improves and she did. We've sorted her arms out, but now she flops like this".

Y: "I see".

J: "We started with weight bearing, like if she rolls she has to learn to take her arm out, once she can get that I think we'll get more functioning".

Y: "When you said, 'I take from physio to horseriding' what do you mean?".

J: "Well, they don't really have contact, only through me. I think through me that works with Nadia, that's how I carry over to Sandy from the physio, if she wants us to lie lots on her stomach to lift her legs and she must bend her bottom down, or she must not role and she must get.... Well, Sandy knew, but we didn't know how badly Nadia's spinal was affected, because one had to loosen her vertebra. The physio has given us exercises. I said Nadia lie back on the horse so we found out that when Nadia lies back on the horse with her legs up, you actually stimulate the vertebra. The vertebra is coming loose; things like that carried over. When she lies forward with her arms around the horse's neck you get her to flatten her stomach muscles. On the right side she use to pull her muscles spastic like this. Now with the movement of the horse, she is relaxing, and she is getting her body straight and we worked on her midline crossing, that's practically fine!".

Julie's perception and experiences with her child reveals a different relationship with her child, whereas other mothers have nannies or chose not to be as involved as Julie. Julie's words mirror her enthusiasm, her struggles, her obtained knowledge from the various therapies and her compassion.

I reflected on the progress that they have made over the past four years. We co-constructed that it happened through a combination of various therapies. The theme of progress links with the theme of endurance and consistency. Julie uttered her perception on the reason why many parents quit horseriding therapy. She said it is hard work and long term. According to her it may take a year before one sees any improvement or progress. And the road is filled with constant ups and downs, with in between plains where nothing

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happens. Julie depicts herself as a person who can be stubborn and persistent in her effort to gain the best for Nadia.

Julie brought Nadia's alphatalker, she picked her up from the couch and positioned her between her own legs with the alphatalker on Nadia's lap. Julie asked her questions on horseriding, and by supporting the movement of Nadia's hands, Nadia was able to communicate with us through her alphatalker. I experienced a glimpse of Julie's patience and dedication. She paced Nadia's movement and adopted accordingly. She would not become impatient, she would support Nadia's hand and follows it in the same slow movements Nadia made. Some of the themes portrayed Nadia's self-confidence and others provide factual information on the horse and horseriding.

I felt free to ask Julie what goals she has for her and Nadia. She said that the doctors did not give a definite prognosis, therefore she wont give up on Nadia, it may be that Nadia will walk or talk, they don't know.

Our next session started off with great excitement. Apparently Nadia recognised some of the flash cards at speechtherapy. Julie was very thrilled and framed it as reading. Julie cherished the moment, she said:

J: "Luckily we have got a speech therapist who believe in us. Because we've been through a lot of negative, you know, any way. I think it's because of the inexperience in working with a physically disabled child. When they see the child cannot say or actually really point to something, they don't always believe what they see in the child. They don't believe the child is really doing it, also her dad, if I say 'look what she is doing' then he will ask ' does she do it every time or is it not just coincidence?".

Y: "That must be frustrating".

J: "I have given up on trying to convince people. I don't do that any more. Not because there are some people that are so narrow minded in what their beliefs are, no matter what you can show or prove to them. They won't change in their minds, because it's not how they view a disabled child or a child that can't speak, especially non-verbal kids. In a way they think that if the child can't speak the child has to be dumb and stupid, that's how they view them".

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I became aware of my own ignorance and reflected on the pain she mirrored. She wiped away a tear and reframed her situation in a more positive light. I made her resilience overt and said that she became a master in reframing. Julie expressed her annoyance with dwelling on negative thoughts.

I sketched a scenario in which she has to write me a little letter to portray the meaning of therapeutic riding in her child's life:

J: "The horseriding is a very relaxing time for me, in one way we are achieving the progress needed. But one can be your self, because Nadia enjoys it so much. It is something a mother and daughter can do together".

I asked her to picture herself for one moment in Nadia's position, then take her pen in her left hand and write down her perception of Nadia's personal experience of therapeutic riding.

J: "I am very good at horseriding. Ruby helps me walk and sometimes talk. I can ride as fast as a bird".

The above letters intensify the importance attributed to the relationship between mother and daughter, and daughter and horse respectively. We reflected on our journey. Julie wanted to know whether she doesn't talk too much. I assured her that there is no right or wrong way of depicting the story, and stressed the unpredictability of the outcome of our co-constructions. I reflected on the distinctions that she drew in the letter with regards to her own feelings of unwinding at therapeutic riding. Julie replied:

J: "It's a great feeling that I don't feel needed too. I am needed in that I help to facilitate, but Sandy doesn't depend on me all the time, you know. Like I said before, the horse is doing or controlling the therapy. I mean, I walk there and my mind wonders, I am not totally responsible".

J: "Driving to horseriding is without apprehension. Someday children perform and others not. With horseriding its ok, it is as if she does not want to do something, they work around it, and she has to be on the horse in any way. It's not about performance".

This perception portrays meaningful noise (Keeney & Ross, 1992). We co-constructed how therapeutic riding excels above performance issues. According to Julie the therapeutic riding therapist is totally orthogonal to other conventional therapists. She doesn't experience pressure from horseriding because she can't give feedback on the week's exercising. They don't have a horse at home to practice on.

It seemed to me as if the theme of progress linked with the theme of performance. These two themes depicted a pattern of fun in therapeutic riding and a pattern of work in the other therapeutic encounters. It sounded as if therapeutic riding created a space filled with difference. Unlike other therapies, Julie depicts therapeutic riding as a therapeutic encounter to her as well. Julie learnt to reframe her perceptions of other people's expectations of her and Nadia. She said that she felt that everybody was against her in the beginning. But she soon realised that progress and responsibility rest with her and Nadia.

J: "I became less dependant on doctors, therapists and things that they say to me, I have made up my mind of what goals we want to achieve and what she is capable of doing. Obviously I'll take advice from doctors, but I am not going to depend on what they say, like 'your child will never be able to sit on her own'. I won't accept, I am not going to be dependent on that. They don't know it for a fact that's what they've seen over years. Each child is individual and unique. What you put into each child, is what you are going to get out of it. I feel I don't have to prove what she can do. I can say that she can do it and its up to them if they want to believe it or not, it doesn't concern me".

According to Julie her idiosyncratic beliefs were supported by Len and her mother. She metaphorically described Len as her sounding board. She said that she had her sad moments, especially when people were unable to look past her disability. She remarked that her husband was a good listener and that they discussed and shared in the pain and happiness. She voiced again her preference for positives and said that she doesn't dwell on negatives.

We spoke about the unpredictability of Nadia's prognosis. Julie used the following metaphor:

J: " you think you have a map when you go along the journey, but you see you've got the wrong map. Because I mean, like the alphatalker, when we bought it, we thought she'd soon sit on her own and communicate with us. It is now two years down the line, she still cant sit on her own and can not communicate ".

Y: "That's disappointing".

J: "You never realised all the steps to take to get there. Nobody told you, this is the right thing and she'll be able to communicate with you. You get home, you've got no clue how to start, where, when, she can't work her arm properly, can't work her scan properly. All these steps you've got to have to get where we are now. You've got to work through it, and that's with everything they do. There is no map. I think their progress is individually. It's not so much that they can't do it. But if they are not ready to take the next step, I think in their minds they also have a lot of fears and emotional things to work through. They may not be ready to work through the next thing. I think you have to be led by them, they lead you. If they are not there yet, you can try your best but it won't work. They won't achieve it because they're not ready yet. They're individual, not like a robot".

A more holistic picture resulted from the use of metaphor, text, imagery, narrative and story telling (Anderson & Goolishian, 1988). We co-constructed ideas about the necessity of pacing the child. Julie expressed her concern that parents may have a negative effect on their child's perception of his or her selfworth. Julie's compassion and wisdom overwhelmed me, I reflected on her resilience, she replied:

J: "I praise the Lord, He helped me to accept that you can't change the situation or wish it away, and maybe that time when doctors told me she might be severely brain damaged, if she survived. I decided however she's going to survive it, I'll deal with it one step at a time. So maybe I looked what Nadia wanted to achieve, she's now six years old, she must get some form of schooling. I focus on what we can do now, not on the future".

Y: "your husband?".

J: "I don't think he is so much forthcoming with tears or what he wants for Nadia. I think he is still learning to cope with it. I think what helps me is all the people I came in contact with. He has nobody that he can talk to except me. I think it would have been good if he could go wherever other men could deal with it. Men and women don't really discuss anything, one needs like a therapy situation".

I reflected on their mutual and reciprocal support. I drew the distinction that to me there is a connection between the themes of support, acceptance, performance and the relational patterns that form as a result of the process. The relational pattern of acceptance and support that she has with Len is isomorphic to the relational pattern at therapeutic riding between her and Sandy and between Nadia and Ruby.

Nadia's Grandmother: 'Ouma'

In my conversation with Nadia's grandmother, I experienced a very special relationship between them. She decided to prolong her stay at Julie's house after 'seeing what Nadia was like'. She uttered that she felt needed and useful. She said:

Ouma: "Like I am old now, you know, and I've got other grandchildren that are bigger and older. But now with her, its something special, you know, I can sit and I can talk to her. I can play, I play the fool, you know, and she reacts to me, you know. I read to her and it is something that comes to my life that I can like treasure. I can not do what I could but I can do it for her to brighten her life a bit".

We spoke about her role in the house, she expressed her sensitivity of not being intrusive versus her need to feel needed. She embroidered on the special times she has with Nadia. I reflected on her intense involvement in her family and with Nadia. We co-constructed some ideas and meanings that evolved with regards to therapeutic riding.

Therapeutic Horseback Riding

Nadia's grandmother apologetically remarked that she used to more often in the past go to horseriding. She proudly said that she still attended all the competitions. But

unfortunately she has to take it easier now that she is getting older. She said that Nadia definitely enjoys horseriding. She recalled a time when the arenas did not have fences. She used to stand nearby in the field and watch Nadia's responses when Sandy spoke to her in a gentle manner. According to her, when Nadia was on horseback, her smiles portrayed the enjoyment and fun she gained from each lesson.

Ouma depicts horseriding therapy as orthogonal to other therapies, she said that horseriding is not an outspoken exercise, and Nadia does not feel threatened by the situation, whereas she has to struggle through difficult, ruthless sessions at occupational therapy or physiotherapy.

Y: " How is horseriding different? ".

O: "Nice and soft, and her mother is there, everybody talks to her. They motivate her. I tell you, I've experienced with Sandy, I think she is a wonderful person with a child, because I've seen her with other children too. If someone asks me what does it mean, I'll say 'go for it!' because I think its wonderful therapy to have for a child to ride on a horse".

Y: "What makes it wonderful?".

O: "Outside, because Nadia loves to be outside and then it is different experience to the therapies she get at school and all that. There they sit on the horse when they get used to it, take a few lessons to get use to it. They sit and can look around and see and these people talking to them and telling them what to do. Like 'Pick up your head'; I would say ' Go for it!' I know there is very few children that stop riding that I know of, I know she enjoys riding. Nadia got use to it very quickly. I 'd say ' Do it!' no I would say ' Go and try it!'".

The themes in the grandmother's telling of the story evolved around her relationship with Nadia, her perception of therapeutic riding as being orthogonal to other therapies and our co-construction on ideas on therapeutic riding. The grandmother also depicted therapeutic riding as a special relationship between Nadia and her horse and she furthermore commented on the physical improvement in Nadia's balance.

Feedback

I met Julie and Ouma for our last conversation. 'Last' conversation that will be mirrored in this study. I have not seen them for a while. I sadly responded to the news that Ouma had a slight stroke, she said that she is feeling better and would like to be part of the conversation. Nadia was protective over Ouma, every time Ouma started to participate in the conversation she would shift the focus back to her. In this conversation I shared with them some of the themes that we co-constructed over time, and also touched on those themes that evolved from the other conversations in the other cases. Julie said that she had not thought about their whereabouts before. She said that our journey had made her more aware and she thought more about the meanings she attributes to things, like the reasons for doing therapy, and what about therapy makes it important.

Normal versus 'Not-Normal'

I summarised some of the other parents' ideas on normality, Julie replied:

J: "I don't think I've ever met a child that is normal. That's what I've discovered. I've never met a normal child. I actually hate the word when they speak about normal and 'not normal'. I don't know any child, every one has heavy ups, normal is something that's perfect, and nobody is perfect".

This co-construction depicts a multiverse of realities; the meanings on 'normality' are relative and not fixed. Ouma uttered her disapproval with recent times ' poor discipline', she said that she doesn't know a normal child anymore. The other side of the coin is a reflection on the previous constructions on Nadia's "problem". Julie portrayed her difference in the following description:

J: "Ja, there is definitely a difference. I think it's just that it comes down to the words; time and effort. That's where it boils down to, of course there be many people who would never take time and effort with them. Whether they are with normal or with special needs ".

Y: " So, her difference lies in her special needs?".

J: "I mean she desires the same things she wants to participate with the other children, she wants to be with them in the end of day. Its just she's different but still has needs within that".

Julie's words portrays the cobweb of 'dormative principles' (Bateson, 1972) in which people so easily become stuck. Depicting a lineal duality where either or choice has to be made. Congruent to an ecosystemic epistemology Julie chose not to adhere to this one reality. The themes on acceptance and resentment link with this perception of some parents, that Nadia has to be either normal or parents advise their children not to play with her. These themes were perturbations in our previous conversation on the time after the doctor shared the news.

<u>Defining the Problem</u>

Julie describes Doctor X as an exceptionally good doctor. She took Nadia to him from eighteen months old until she was four years old. She said that she didn't go back to him and will never go back to him after one specific incident. She voiced her disappointment in him. She said he accused her of being a paranoid mother. Julie recalled the day very vividly. She said that she and Len were convinced that Nadia was getting convulsions, she depicted the convulsions as weird and not like epilepsy. She managed to get an appointment with Doctor X. According to Julie he did not feel like listening to her that day. He knew Nadia had a bad startle effect, he dropped a book and Nadia reacted to it. Consequently he connected that reflex with the convulsions. Julie uttered her disgust, she said that he did not even phone to follow up.

I self-referentially disclosed, that I was perturbed by the way in which some people in power positions could reify certain meanings and realities (but as Maturana states "authority is always created by concession" (Efran, et al., 1990, p.189). We co-construct the reified meaning as a 'final judgement'. The meaning evolved with the unfolding of rich descriptions:

J: "Our orthopaedic surgeon compliments you when you come in there, saying that Nadia is looking so healthy and he tells me how good she looks. That's something you want to hear. I mean, he was so pleased with our hard work and improvement. He wont say negative things like 'it wont help to take her to horseriding' or ' that is stupid therapy', I mean.

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The doctors don't know anything about therapy. That's the one aspect they don't know anything about, if you should ask them, I blame them for not trying to find out more what therapies are available".

I reflected on my own ignorance and said that I realised through our conversations that there are many unfolding patterns that one can explore. Within the therapeutic relationship between myself, the researcher, and Julie and her mother as informants new stories evolved, new meanings and ideas unfolded in the context of mutual shaping (Anderson & Goolishian, 1988; De Shazer & Berg, 1988).

Resentment, Acceptance and Support

I mirrored our previous conversations and punctuated Len's struggle to accept Nadia's 'problem' versus her total commitment. She said it was a struggle to adhere with the idea of having a totally dependent person to nurture, care for and assist throughout the day for years. Furthermore, she had difficulty in accepting that she had to take the primary responsibility for all the therapies. She confessed that she sometimes wished she did not have the responsibility for one day, but she realises that she would not want it differently. We co-constructed our ideas and meanings on support.

I was perturbed by Julie's commitment and wanted to know in what way is Nadia central in her life. She was reciprocally perturbed, and replied:

J: "That's a difficult question, I mean, she is my whole life. Well, once I've made the commitment I mean she is my whole life".

J: "It's not always easy, you got one person that is totally dependant on you, sometimes I feel I wish I can have one day without the responsibility, you get days like that but the whole thing, you've got to make a commitment and live with it. I think I would have been more regretful if I didn't do a thing and seven years later down the road I look back and see how she looks, and ask myself could I not have done more to make a difference? One thing a person has to learn is, we all get our selfish days with our selfish needs, you've got to learn to pass through that. We used to have a lot of arguments, then I realised I have not made that type of commitment if one still think of those selfish reasons. And once you

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learned to put it pass you, maybe there I'll give all credit to the Lord to help me shift my whole way of thinking, that's something you've got to learn".

I recognised a possibly profound meaning of therapeutic riding in both Nadia and Julie's lives. Because their boundaries became diffuse and their connection almost enmeshed it may be necessary for Julie to have that space where she doesn't have to take all the responsibility, but that she can allow her mind to 'wonder'. Furthermore, support from her mother and Len becomes essential in perturbing the autonomy of the system within a domain of consensus.

The theme of support portrays a pattern of recursion and mutuality within Julie and Len' s relationship and defines their relationship as complementary. Julie explained that they have tried to begin a support group, according to her there is a need for an environment in which information could freely flow. She envisages a group in which a multiverse of realities could unfold.

Therapeutic Horseback Riding

Julie uttered that all therapies are long term therapy. She just wants Nadia to enjoy riding. She said:

J: "I think as long as she enjoys riding and there is progress, because definitely there is progress between her hips and things like that. The horseriding has definitely contributed to it. I think at this stage one just looks for a balanced therapy programme".

Y: "Ja".

J: "And maybe later her interest may change, that she doesn't want to do a specific therapy and that's not something you can cater for now. I mean when she was smaller she did music therapy. We shifted away from that because her teacher moved. We may find that she want to do something else, other than horseriding".

Y: "A matter of convenience, too?".

J: "Ja, if Sandy moves away, we surely have to look for somebody else in the area".

We elaborated on the themes co-constructed in the previous conversations. We reflected on the special bond between Nadia and Ruby. Julie depicted this connection as very special, especially because Nadia used to be very tactile defensive and now she trusts that horse with her life and allows the horse to touch her. According to Julie one could see how Nadia's self-confidence enhanced on horseback. Nadia is more responsive and friendly in her lessons. In addition, Julie perceives horseback riding as Nadia's extracurricular activity. She portrayed horseback riding as fun and enjoyment for both her and Nadia. Julie praised therapeutic riding as complementary to other therapies, she said that she perceives the improvement in Nadia's hip due to her participation in therapeutic riding. I reflected on the content of our previous conversations and the distinctions we had drawn. Both Julie and her mother said that they had nothing more to say at that time. We punctuated the importance of our conversations in a specific context and how the meanings may change and evolve over time.

Our co-construction of Julie's self-referential disclosure of her perception concerning therapeutic riding portrayed meaningful noise. The way she saw herself as a co-facilitator and being actively involved in the therapy were a different position she took to other mothers. Julie experienced the therapeutic riding as a therapeutic space for her too (Keeney & Ross, 1992). Both Julie and her mother reflected on the meaningfulness of therapeutic riding in terms of a space where mother and daughter could be together in a special way. A possible hypothesis to explore was the perception of therapeutic value in the paradoxical position of being a co-facilitator at therapeutic riding. Although she did not have to take full responsibility of Nadia, at that moment she was in a 'power' position, and she might have experienced a sense of control over the therapeutic encounter, which was orthogonal to her role at other therapies.

Meta-Perspective

The researcher encountered a fit with the co-researchers and research context. This encompassed the mutual perturbations within a domain of consensus and allowed for a multiverse of realities to emerge (Maturana, 1975). Coherent with the ideas of social constructionism was the evolving intersubjective loops of dialogue that unfolded richer

descriptions on the research journey. The researcher and co-researchers experienced how ideas, concepts and memories arose from the social interchange, these were mediated through language and depicted in several themes.

The following themes reciprocally connected with each other:

- Feelings of guilt and ignorance
- Normal versus not normal
- Defining the problem
- Resentment, Acceptance and Support
- Performance and Progress
- Therapeutic horseback riding

The meanings evolved and changed in the process of social construction. The dialogue was initially altered with a change in research context. Being embedded in the therapeutic riding context allowed for manifold themes to evolve. Compared with the previous meta-perspective, these themes depicted a multiverse of realities on therapeutic riding. Rich descriptions unfolded in the reciprocal dance between researcher and co-researchers. Therapeutic riding was portrayed as being a therapeutic experience for both mother and child ; this was framed as news of difference.

The co-constructed therapeutic reality was embedded in the relationship between the researcher and co-researchers. In the research context the interconnectedness of systems were punctuated and perturbed. Consequently one can not not be curious about the possible shifts and changes in meaning if the husband's perceptions could have been mirrored in the context too.

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Michelle and Gerhard: Neil

Background and Context

I met Neil and his parents, Gerhard and Michelle at the same riding school where Paul rode. That same afternoon his sister and grandmother came along to support his horseriding. Neil was six years old; he had blond hair and was very affectionate. He was a child who expressed his feelings of joy and friendliness. He communicated with facial expressions and sign language. He was standing next to the one horse, touching it with affection while he waited for the next rider to mount the horse. Michelle struck me as a person who is spontaneous and talkative. We shared ideas on horseback riding and the possibility of their participation in this study.

In total, I had ten sessions with Michelle. Gerhard joined us in six of our conversations. My conversations with Michelle and Gerhard evolved within the context of their home environment. I met with them at seven o'clock in the evenings; we used to communicate in a social manner with the children present for the first 20 minutes. Neil was always very happy to see me, and did not hesitate to show his affection with hugs. The conversations unfolded in ten two-hour sessions. Michelle's mother plays an important role in Neil's life. She was involved in all his whereabouts and therefore she participated in two of our conversations.

I was able to attend four of Neil's horseriding lessons. I perceived progression in his posture and experienced the joy and laughter that he portrays when he is on horseback. Neil was a more advanced rider in his group; he depicted a lot of confidence in the more risk taking events, like jumping.

During my first visit at their house, I found only Gerhard and the children home. Michelle was still at work. Neil and his sister were excited to have a guest over. I joined Neil and his sister in their game on the carpet (my sitting on the floor became a redundant pattern on a process level, which isomorphically unfolds throughout all case studies). Gerhard made excuse for Michelle's delay.

I felt like an intruder into their privacy. Although this was a distinction I drew, it must have had an impact on the pattern of interaction in our relationship. We reciprocally influenced each other and in the end my own anxiety depicted a lot of factual background from Gerhard. He told me that Neil had been diagnosed with cerebral palsy when he was eight months old. He expressed that the way in which they were told that Neil has cerebral palsy was terrible. At that moment I was not empathic, I wanted to know about the role of therapeutic riding in Neil's life. (In retrospect, I must have been very nervous during our first encounter in their house. This portrays more about my own feeling of being uncomfortable with a person who I don't know, in a strange environment, than about the research context). Gerhard replied:

G: "One can't say it's only because of horseriding, as a parent I would do anything to help him".

Gerhard shared the plans about their forthcoming trip to the UK; he and Neil will visit a clinic, where Neil will receive hyperbarric oxygen treatment. Gerhard proudly uttered that eight months ago Neil started to walk for the first time. At that point in our conversation Michelle joined us. According to her perception horseriding meant a lot. She said that horseriding aided his balance and therefore contributed a lot to his ability to walk. She proudly remarked that Neil is able to ride alone, she said there has been a lot of progress. In addition Gerhard depicted the riding instructor as being patient and caring. He said that Sue's commitment and ability to work with a child like Neil motivated them a lot. Michelle fully agreed and said that they did not spoil Neil more than his sister. She said:

M: " We did not raise him in any different way, he had to adapt to our life, everything doesn't revolve around Neil".

Y: "I see".

M: "We are open for anything that may help others in future, we had to learn the difficult way, especially in South Africa because this is not a disabled friendly country".

Gerhard informed me that he would not be able to participate in our following conversation, because he and Neil are leaving for the UK for one month.

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I was confused about the process and content of our first conversation within the context of their home environment. Maybe due to my own uncertainty, and the unpredictability of the outcome of our conversations. It may be that the time of night when we had our conversation reciprocally influenced my perception on our conversation.

Medical Background

I met with Michelle at their house. We sat outside on a patio that overlooked their swimming pool. The atmosphere was very relaxed. I reflected on the previous conversation and my own confusion, she said it's a strange idea that someone wants to do research with them, especially after their personal struggle in obtaining any information. It started to rain; we went inside and started one of many conversations sitting around the kitchen table.

Michelle recalled the time before Neil's birth. She said that she had lost a child during a previous pregnancy, therefore the doctor put her on an extra hormone treatment. Neil was almost a premature baby of 32 weeks, but the doctors managed to prolongue the pregnancy till 38 weeks. She said that she gave normal birth with the help of an epidural. She vividly described the day of Neil's birth. According to the midwife Neil was supposed to be borne at 12:00, but after the doctor inhibited Michelle's contractions, he was borne at 14h45. He was a blue baby, they removed him and put him into an incubator. Michelle said that she insisted on seeing her child.

We touched the first themes of, guilt and anger that evolved through the dialogue between us. Michelle said:

M: "At first I had a lot of guilt and feelings of anger, as well as questions around the fact that he might have been normal if only the doctor was more considerate. I thought he was a very quiet baby. I didn't suspect anything at first, especially because it was my first child and I thought it was ok. He didn't really cry at all, just small little squeaks. As time went on I realised Neil could not roll over and didn't achieve normally expected developmental goals. At that time I started to withdraw, it must have been very difficult for Gerhard. I just built a shell around myself and Neil to protect him".

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Michelle expressed herself in an emotional way, she reflected on her feelings of guilt; of not being informed about his condition, and how this feeling of inadequacy and confusion became an initial barrier between her and other people. She expressed the difficulty in dealing with the extended family. Her guilt flourished as Gerhard was the last one to carry his family name, she said that Neil was not really what the family had in mind. Conversely this changed over time and there was a spirit of acceptance and care within the family.

Michelle's early memories of Neil's childhood portrayed an extremely difficult time. She said that he had been born with a narrowed windpipe and used to vomit all the time after feeding. She took him for an assessment when he was six months old. Michelle took Neil to Doctor X, she responded:

M: "He was so rude, he said ' he has a little brain damage, at least he is not a write off' , This words stay with me and still hurt me very much".

I reflected on her pain and sadness. I was perturbed by the way, in which the interaction between the doctor and parents became a redundancy in all the cases. I self-referentially disclosed my annoyance with the unproductive mental game that became established in the cause-effect sequences (Efran et al., 1990).

Michelle said that they did not know what to do after their encounter with the doctor, they did not receive any guidance and felt left outside in the dark. She voiced the beginning of their long road to different therapists. I explored her first introduction to therapeutic riding. Michelle replied that she read in a local magazine, 'Rooi Rose' about Riding for the Disabled, they could not help them at that time because Neil was too young. He was nearly three years old when she took him to another riding venue. Nevertheless it was a disaster, Michelle portrays the event as a negative experience. According to her, the actual trainer was not available, and an inexperienced person therefore took the lesson. They never went back to that riding school. Michelle said that her curiosity motivated her search for another riding school, a friend told her about Sue' s stables and remedial riding class.

In retrospect the reflexivity in our relationship mirrors equity in regard to participation, it is not a one-sided dance but a dance between Michelle and myself that unfolded in our

conversation. We shared ideas and co-constructed themes. I reflected on my own distinction in portraying Michelle as a person who is resilient. She remarked:

M: "I had to prove many people wrong with the progress Neil has already made, and I will continue showing them. At school he got two lessons occupational therapy, two lessons speech therapy and three lessons physiotherapy. At first he was a little blob, but when everybody could acknowledge that he has a problem, I don't use the word disabled in my vocabulary, it was like a new world. There were days that we've been confused, angry, feeling without hope and desperate, we needed to blame somebody".

Y: "Like an emotional roller coaster".

M: "One has to keep hoping for the best, otherwise one will not try. We do not raise him in another way than his sister, he must learn sometimes the hard way. It is not our plan to spoil him. We let him experience and explore. At first his sister would take advantage of his slowness, she would mock him and run away, but he doesn't forget. He will pay her back as soon as he gets an opportunity".

My perception on the way that they treat their children is congruent with their plan of not spoiling Neil. It may be that this way of living sculpted Neil and his sister to be children with resilience too.

Michelle praised the commitment and endurance of her helper at home, Rosy. She said that Rosy practised with Neil until he could crawl and patiently taught him to stand up, and then eventually to walk. Michelle uttered:

M: "Last year he started to walk by himself. I think horseriding played a crucial role in his walking. It strengthens his muscle tone, muscles and balance".

Y: " When did he start horseriding?".

M:"With Sue, three years now. He loves the horses!".

Therapeutic Horseback Riding

We watched some videos of Neil's horse riding. The videos resemble the progress he made over the years. The videos started with a small boy who was unbalanced and only sitting on the horse. As time went on, Neil became more balanced, his posture improved and his smiling face portrayed a lot of self-confidence. We watched Neil all dressed up on horseback during their fancy-dress horse show. Neil was very excited to watch the videos with us. He would jump up and down and pretend to ride an imaginary horse. Michelle shared his joy. She said that Neil used to be a 'sloppy little thing', in the beginning, he didn't have fear around the horses but his muscles were very 'floppy'. We shared ideas on his first encounter with Sue. Michelle said that he was a little afraid in the beginning but that vanished when he found a fit with Sue. She expressed their trust in Sue. While talking, Michelle interrupted herself and made me attend to Neil's 'beautiful' way of riding. I complemented Neil on his riding skills. According to Michelle, horseriding made a big difference in their whole family's life.

The themes contain rich descriptions and involve not only Neil but also his family. We co-constructed ideas and evolving themes on Neil's enhanced self-confidence, riding skills and the importance of the relationship that encompasses the unfolding themes. This portrayed the interconnectedness of systems and how they reciprocally influence each other. In language Michelle depicted a shift in meaning with regard to her perception of Neil's riding: at first, he was a ' little blob', then a 'sloppy little thing' then 'look how beautiful he rides'.

Gerhard and Neil were back from the UK. Michelle commented on Neil's improvement in walking and concentration. We spent time talking about their experiences abroad and their perceived progress. I shared the shift in my research process, and informed them on the quantitative part that will be part of the study.

Progress

We continued our conversation on their perception of therapeutic riding. I was curious to explore the meaning they attributed to the space next to the arena. Gerhard remarked:

G: "In the beginning it was more difficult, we were not horsy people, they were in a click. We didn't grow up with horses, I know how to shorten the reins".

M: "the stirrups".

G: "See, we don't even know the language yet, but now its different".

Y: "In what way is it different now, have you become horsy people and some of the other parents are not?".

M: "As I am a market agent its easy for me to chat and be open with new people, and to share our experience. Maybe its because we saw such a lot of improvement in Neil. We believed, and he is getting better all the time. He just loves horses. He'll go up to them and throws his arms around them, and boy! He is difficult if we can't go or when it rains too much".

G: "Perhaps its because we have so much in common. All having in a way, not all to such an extent as Neil, but all share common difficulties".

M: "Did you notice that about all of them are boys?".

We co-constructed some ideas on having a group for the parents before the lessons. They expressed a need to share with other parents while the children have an opportunity to get acquainted with the horses on a different level. They shared their perceived difference on Neil's first encounter with horseriding. They said that he used to groom the horses, touch them and play with them before Sue allowed him to mount a horse. They said that Neil has a fundamental relationship with a horse, he learnt to befriend a horse. According to them that is not the case anymore. I reflected on their sadness and there perceived loss. We co-constructed ideas on the uniqueness of each child. I was intrigued by Michelle's observation on the ratio of boys in the remedial class in comparison to the other riding classes in which there are more girls who ride than boys.

Michelle and Gerhard portrayed a shift in the meaning they attributed to Sue's relationship with Neil. In the beginning they were thrilled with her interest in their child and

thankful to her for all the time and effort she invested in Neil. They used to see a lot of progress in Neil's riding and his balance. But according to them they have reached a plato with Sue. We speculated on their perceptions. We co-constructed the hypothesis that Sue's new tack shop may perhaps interfere with her previous priorities with regards to Neil and the others in his class.

I realised what a big part their relationship with the trainer played in the meaning they have attributed to horseback riding. This punctuated the fit in our relationship and brought forth the idea of mutual influence and intensified my position as an insider in the research context.

Field Notes

I have been a participant observer at the stables where Neil had his lessons. I perceived him as a rider who is competent and proud. He performed two transitions individually. He would start the horse off in a walk, then a trot and back to a walk and then a halt. This is very advanced compared to the others in his class, they still needed a helper to assist them during the lesson. Each time when Neil passed his parents in the one corner, he waves at his family and maintains their attention through looking back until all of them have waved at him. When I asked him about his experience of the lesson, he would smile and show me two little thumbs up. He makes a lot of physical contact with the horse; strokes its neck and face and depicts a sense of proudness when giving the horse a carrot or an apple after the lessons. During one of the lessons Neil's sister also participated in a lesson. But one of Sue's dogs harassed the horse she was riding on and reciprocally influenced her to get a big fright. Michelle was furious and upset.

Meaningful Noise

In a follow up conversation with Michelle, she expressed her unhappiness with Sue 's commitment. She said that she is considering another stable. She said that she doesn't want to stop horseriding completely because it means too much to Neil. According to Michelle, there is a younger girl, who has no experience in working with children with special needs, that takes the lessons. The meaning of riding shifted for them in that context. Michelle portrays it as a money scheme. She said that Sue would sometimes take a lesson,

but then her attention is only with the new children and Neil doesn't benefit from it anymore. They voiced their concern with regard to the lack of progress, to them it is as if Neil did not show any progress for a very long time. Another shift occurred in Michelle's perception on the other parents at the remedial class lesson. She said:

M: "I have been very alert to our conversations around the ring, some parents are so negative, they only focus on the negative. I can't see why they still bring their children if they feel that they don't benefit. I thought myself that I do not want to be influenced by them. I feel one must try everything for all your children. Again we do not give him any special upbringing, although it is not always easy".

I was fascinated by this contrast and curious to explore with them the shifts that may evolve from this shift in meaning. I reflected on previous themes and the complexity of the ideas that we co-constructed in our conversations. I self-referentially disclosed that I realised through their stories that I have to have a glimpse of their perceptions on having a child with special needs before we could start our co-construction on the meanings that they attribute to horseback riding.

Defining the Problem, Acceptance

Congruent with ethnographic principles I portrayed them not only as co-researchers but also as the informants, I expressed my wish to learn from them. I wanted to explore with them the culture in which a child with special needs is part of the family and context. Gerhard remarked:

G: "At first I didn't believe that he had a problem, I thought he was a bit slow. But nothing serious, he was our first born, we didn't have an idea when, what"

M: "You remember how they've told us : 'he has brain damage, but at least he is not a write off', that was the exact words".

G: "Michelle took it far worse than me, she was very emotional about it all. I was the stronger one, I encouraged her to phone the doctors, even though I still thought that he was

just a little slow, but he'll get there. Four months after they've officially diagnosed him with CP I started to accept it".

Y: "In what way did she help you to accept it?"

G: "No, she didn't it was rather me that supported her".

M: "I use to be so heartbroken when I looked at other kids, when I compared Neil to them. I don't do it any longer. We've grown a lot".

G: "There was a lot of frustration and anger as well in the beginning, we wanted to blame somebody. So we still blame the doctor, he made a judgement mistake, he thought Michelle could still wait..."

We elaborated on their ideas and feelings of disbelief on how it happened and how they still feel sad at times. Gerhard uttered:

G: "Still today at sometimes it hurts when we're at a party and I see the other kids run around, I can't help feeling sad".

M: "There are sometimes that I just want to hear his voice, what he would have been saying if he could, and to see him run over the grass".

The descriptions in our conversations became richer and coloured with emotion. Michelle said that she forgave the doctors, although she is not a believer, a friend helped her with forgiveness. They said that they've had a lot of support from their loyal friends and family.

Throughout our journey I met some of their loyal friends. Neil's godfather and his godmother were there on two separate occasions. According to Michelle:

M: "Our friends treat him as a normal child, some of our Afrikaans friends say he is a 'hemelkind'. Some other people overcompensate in their interaction with Neil. I just sit back

and laugh, they automatically assume that he must be deaf and dumb because he doesn't speak".

G: "if somebody asks if he has a problem I would explain that they could talk to him, he understands. He isn't brain damaged to such an extent that he can't understand and can't communicate. I don't think he is brain damaged"

Through our conversation a multiverse of realities unfolded, different meanings were co-constructed around the ideas on 'normality', communication, brain damage, etcetera. Michelle shared her wish for him to be able to communicate or talk. She said that communication was the beginning and the end. At first she only wanted him to walk, but then she had a lot of empathy with his frustration in not being able to talk.

Reflection

Retrospectively this case unfolded from the outside layers inwards, orthogonal to the other two cases, where we first explored the meaning of having a child with special needs and then moved inward to explore the meaning of therapeutic riding. I reflected on my perception of our journey and explored their experiences respectively. Gerhard said:

G: "Maybe this will be of more assistance for others, not that its not of any assistance for us, if we had an earlier start it would have been more beneficial, perhaps. There was no assistance, no book we could read... Now that we've been thinking about it more actively it makes it easier to share it with other parents who wants to know more".

M: "I haven't really thought about Neil's therapies before, its something I had to do, I was always aware that Neil gained a lot emotionally from horseriding. But I haven't reflected on the impact it had on us, how much it actually means to me".

I sketched a similar scenario to those in the other two cases, and asked them too write me a letter in which they convey the meaning of horseriding in Neil's life:

M: "Gave my child confidence to do a lot more
- Aided his walking

- Something that he didn't have to be a 'normal' child to do
- That was his sport in a way
- Because he enjoyed it, and he could do it, it gave me a sense of achievement
- Discipline ".

G: "First you notice that your kid can't do what other kids do and now he can do something that most other kids do not have a chance to do or even want to do. And it is also good to see progress which we saw from the third or fourth session which gives you hope as well".

To reveal their perception on Neil's experience of therapeutic riding and the meaning that he would have attributed to therapeutic riding, I asked them to write with their non-dominant hand what Neil would have written. Michelle said that it is difficult. I reflected on the possible difficulties Neil may experience on a daily basis.

M: "'Lekker'
I love it
Horses are great
I can do it on my own
It makes me feel free of my handicap".

G: "I enjoy horseriding because I am big now, and I can now ride by myself".

We co-constructed ideas on three different themes that evolved from their letters. Michelle reflected on the interconnection and mutual influence between systems. She mirrored Neil's feeling of achievement as her own. She touched on the idea of discipline, how the lessons, exercises and concentration had a positive effect on his discipline. Gerhard made a personal connotation in portraying that horseriding gave him hope, implying that there have been moments where he too may have been more vulnerable than he once depicted.

There was a shift in the initial meanings that they attributed to horseriding. The meaning evolved:

G: "It is now so disorganised at Sue's".

M: "In the past the children got to know the horse, Neil was so proud about it, but there is no emotion in it at the moment. They used to play with the horses, do silly things, like 'around the world".

G: "It was a highlight in the past, now it doesn't weigh as much and it is sad. They need the emotional connection with the horse".

This was an example of the multiverse of realities that unfolded in the story. It was interesting to be part of a co-construction of ideas and see how there is a reciprocal dance between the meanings and context. Therefore the negative connotation that evolved in this context can be depicted as meaningful noise. It punctuated the importance of the connection between the rider and instructor, and how the parents' perception on that relationship had an influence on the meaning they attributed to therapeutic riding (Keeney & Ross, 1992).

I reflected on our previous conversation. Michelle replied:

M: "Never, horseriding will never end for Neil, he loves it, I can't picture his world without horses and riding".

Y: "In what way does you relationship with the stables perhaps influenced your current feelings?".

M: "A lot, it is definitely not as it use to be, Sue doesn't give the same attention to the children and their relationship with the horses any more".

Y: " that's sad ".

M: "A big disappointment to me, but we're going on Saturday to check out a new possible riding school. In the past Neil used to be extremely upset when we were not going to horseriding. Now it is 'so what' I don't like it at all. It is not as special as it used to be for him either. It is a rush to the horses, put the children on horseback let them walk for half an hour, that's it!".

I couldn't help wondering what Neil would have said, how does it really make him feel, what does horseriding mean to him, what is his perception? I want to reiterate that we are working with perceptions and sometimes perceptions on perceptions with regards to the meaning that Neil would have attributed.

Michelle elaborated on her previous description of therapeutic horseback riding, she said that his self-confidence definitely was enhanced. She said:

M: "Neil used to really communicate with the horses. Blow up in their noses, he laughed when the horse pulls its head away and then Neil tried to touch it.It was almost for me as if they had a very special bond. Neither of them could speak and still they communicated almost on a special level. A level that we can't understand, it was very nice for him, he found a silent friend in a horse".

Y: "Used to? ".

M: "I'm very frustrated with the way the classes are dealt with, at the moment Sue is not giving the lessons anymore, its disorganised and not safe".

This rich description encompasses one of the meanings of therapeutic riding in a descriptive way : the horse as being depicted as a " silent friend " in Neil's life. This was to me a viewpoint on our journey, overlooking the panorama of meanings that unfolded on our way. We reached a cross road, I hypothesised that they will either change riding schools or terminate therapy in order to conserve the autonomy of their system (Kenny, 1989).

Feedback

It has been two months since I last saw them; this was due to the distribution of the questionnaire and mutual excuses from both parties. I met Michelle at her house, Gerhard was not there yet, but Neil's grandmother and his godmother were both visiting. Isomorphic to my first visit to their house, I experienced a similar feeling of intrusion. I did not comment on the intuitive feeling. Neil's grandmother untied the knot, she asked whether it is still necessary for me to work with them, since Neil stopped horseriding for nearly one and half

months. I learnt that Gerhard had to close his business and that they had to cut down on extra expenses. I felt ashamed for not being aware of their circumstances and said that I am truly sorry for them. In retrospect I wonder whether Michelle didn't perhaps feel that she had disappointed me by not having a happy ending for our story. This feeling may have reciprocally influenced me to feel like an intruder.

I shared with them that this story is unique and that the meanings that evolved over time encompass rich descriptions; therefore I would love to have this conversation with them. Michelle replied:

M: "We came such a far way, and it doesn't change what we've been speaking about, the other day we met two people who know the OT you've told us about, and I think if I take him horseriding again I'll rather take him there and do it that way".

Gerhard joined us. In response to their curiosity I shared my experiences at the other riding schools and stressed that one cannot diminish the children's positive experiences at smaller riding schools. Riding in itself stays an enjoyable activity; I perceived it while doing fieldwork, to me the enjoyment is reflected in the children's smiles.

I shared a glimpse with them on the portrayed positive experience of Paul, and the co-constructed and perceived relationship between Paul and a horse. Gerhard replied that therapeutic riding most definitely means something if that's the way in which Paul's story unfolds. According to Gerhard, Paul did not have such a positive experience from the start.

Our conversation reflected Gerhard's feelings of anger and disappointment with Sue for giving up on their children. Michelle angrily reflected on her mutual feeling of disappointment in Sue. She said the main reason for them to quit horseriding was because Sue's dogs spooked her daughter's horse, and therefore the stables became dangerous and disorganised. Michelle replied:

M: "Look I would have continued taking my children to riding if only Sue's attitude was different. If she said ' sorry, I'll try and control the dogs around the horses, but she didn't. My daughter won't go near a horse again. I'm sorry, that's wrong!".

G: "We will go there if attitude change and if it was different circumstances financially. And I suppose when we started, we were the first to start riding in the normal class, and Sue actually gave him special attention. So for having that to see what we eventually were getting, how can I say, there have been a ... The people that came later saw what they were getting then, and stayed on that level. With us it just went down like this. He wasn't getting, you don't want to say individual attention, he wasn't getting any more new input, and he would get on the horse and do the normal exercises. It was not Sue anymore, it was somebody else who just ran the class based on what that person saw from Sue's lessons. So I think we stopped for more than only the time when the horse spooked".

Neil's grandmother also expressed her concern with regard to the incident, she said that it would have been a fiasco if Neil was on that horse.

This dialogue portrayed a shift in the initial meaning they've attributed to horseriding. In the beginning horseriding was a context in which fun and enjoyment was depicted, then it had became an unsafe and disorganised environment. I explored Gerhard's need for more therapeutic riding for Neil, he said:

G: "In the beginning it was so good for balance and you want to take him horseriding, it's different, it 's not like a normal child, for them it's not to walk better or to make you do this or that or whatever. But I think in Neil's case and the others they are there for a purpose, because you were told that, because the horse moves like that it does help for your balance. So you've been there for therapy and if you want to do that take him to a place that has trained people for therapy. So then you'll get therapy out of it as well as the kids are also having fun riding horses. But at Sue's there was progress in the beginning, for the third and fourth session and it was great improvement. But later with, I would say, it's sad, but one still gets a certain amount of therapy out of it. Sure, just the riding itself, the enjoyment".

In our domain of consensus (Maturana, 1975) my participation in the research context must have been a perturbation to them. Their meaning of therapeutic riding evolved into something they cannot get from their present riding school anymore. Therefore they have to either change riding schools or quit riding to preserve the autonomy of their system. I curiously explored their experience on our journey. Michelle immediately replied that they

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are more aware of what can be done for children like them. Gerhard expressed his feelings of confusion and how this pattern was broken by his input in co-constructing the story.

G: "I would say it was nice to learn that there are other alternatives. I think when we first found out we start looking for answers, ok, there were schools, they told us he'll go to a special school, we realised that actually".

M: "They just said he is brain damage, it's a permanent thing, there is nothing they can do, he wont get better, wont walk, wont talk, he is just going to lie down. When you asked them, they didn't say, ok, try this or that like horseriding, no they tell you nothing. Everything we know we had to find out, we have had problems, we asked a lot of questions. I think there should be more coming from the medical side, doctors and they should not only say ' see the scan, and that scan show something wrong' that's it, they're finished. There should be more compassion. So for you doing this sort of study at least somebody is trying to help".

G: "It would have been nice if doctors could have been more helpful".

The dialogue linked with the themes of "Not knowing", the confusion parents experience when they first hear that their child has special needs. This is coherent with the next theme of 'normality'.

Normal versus Defining the Problem

We reflected on some of our previous co-constructions, they said that they still feel and believe in a normal upbringing for Neil, everybody, their friends treat him as a normal child. They did not want to elaborate on our previous ideas on "Defining the Problem". I asked Gerhard to elaborate on his perception of the time after Neil's birth.

G: "It was hard, took a long time to accept it, you don't realise to what extent, I think it's more it was a shock. Continually one still works on that, you don't realise I think if I find out now, it would have been different. Because you don't know what to expect, you have not experienced anything like that before. I don't know the hardship, the effort to make him walk or talk to sit in the saddle. All those things it would not have taken such a long time if we knew".

Ouma: "it was a great shock".

M: "It was that Friday afternoon, I came to your house, you nearly crashed the car when I said that he is got brain damage".

Y: "mm m".

M: "It's really rough, there is no compassion or empathy at all it's just".

G: "That was the worse those first couple of months".

Our conversations expanded and I reflected the richer descriptions that unfolded from the portrayed emotionally laden language. They self-referentially disclosed the struggles with their own emotions and how the reaction could have been different if it was somebody else's child.

G: "Somebody else has to have such a kid, then they could know what you are going through, but if you haven't been, like I haven't been in contact, they haven't so we would have been similar. What do you say to them, I mean, there is more to life than showing sympathy".

M: "They 're not even interested in finding out there's no facilities for people with handicaps. Let us call it handicaps".

The complexity of language became apparent. Gerhard reflected on the other side of the coin, that places him in an onlooker's position, this depicts the importance of the context of our story. Context is about the relationship and the various recursive relational processes through time (Bateson, 1979) The themes on 'The defined problem and the time after birth' connected with the themes of 'Acceptance and Support'.

Acceptance and Support

We embroidered on the theme of support, we reflected on the time when Gerhard had to support Michelle, and how they experienced a lot of support from their friends and family. Gerhard depicts his acceptance as:

G: "I think its not as much acceptance, it's more believing it with that, it took a while, my acceptance was right from the beginning when the doctor said that's what it is. I accepted right from there. But it, to take acceptance, to know what it entails, that took a while, ok, he doesn't look funny, walk funny, it take time, one didn't know that he would have get as far as he got up today. That he might possibly stayed a baby, that's a long time, it was a shock".

I reflected on the pattern of unpredictability with regards to progress, and how one is constantly confronted with ups and downs throughout different stages of life.

G: "It goes on for the rest of his life. I still think, how would it be if he could talk?".

M: "What would his voice sound like?".

G: "He is such a loveable person, imagine if he suddenly has a voice, and he was 100% right. What little boy he would then be. So you still keep asking yourself, how would he do it differently?".

M: "I think it is like a tunnel and you can't see the light at the end of the tunnel. But you've got to fight your way through every step of the way. You don't know what's he gonna be like in a years time from now. We've been very lucky, he progressed. No one guaranteed any progress. This wall, black wall infront of you and you just keeping pushing forward, fighting to get there, you don't know what will be in end at the end of the day. I think that's where a lot of parents crack. They don't know how to handle that anymore. Neil's grandmother shared that she had been heartbroken in the beginning, but Neil is her grandson and she loves him to death, no matter what happens to him".

Therapeutic Horseback Riding

We reflected on the distinctions drawn from our previous conversations. Michelle changed the subject:

M: "We've taken Neil for piano lessons, maybe he'll be able to make a living out of it someday".

Y: "Would you say, it's like players on a stage, horseriding has moved to the back and been replaced by music in the limelight?".

M: "I would say the only reason why it shifted is circumstances, otherwise I would have carried on with horseriding, he thoroughly enjoyed it".

G: "I hope we'll start soon".

The meaning they attribute to therapeutic riding unfolded in richer descriptions and portrays the multiverse of realities in the experience of therapeutic riding.

To Gerhard it was mostly about the progress that Neil has made at therapeutic riding. According to him, they've reached a stage where they didn't see any progress anymore and therefore it wasn't therapy anymore. He described it as a plato, but he said that Neil will definitely participated in horseriding again. Michelle's description of Neil riding, started of with he was a 'blob', than a 'sloppy little thing' and then 'look how beautiful he rides' . Michelle depicted a sense of proudness and mirrored her own feeling of achievement that complements Neil's enhanced self-confidence. Michelle cherished the emotional connection between Neil and a horse, and the fun experience he had at riding.

M: "There is a definite bond between Neil and horses. See the way he was introduced to horses was different than now. He was allowed to play with them, he had to understand the animal before actually mounting it, he will never lose that. When he sees horses he goes nuts, he knows horses".

Y: "You have said earlier the children got to know the horses and that he was very proud about riding, but now there is a lack of emotion. They don't play with the horses anymore".

M: "It was a highlight in the past, but suddenly it doesn't matter that much anymore. He used to communicate with the horses. It was for me as if they had a very special bond. Like I've said they communicate almost on a special level, that we cant understand. It was very nice for him, he found a silent friend in a horse".

Meta-Perspective

The meanings that unfolded on this journey portrayed the significance of relationships and connectedness. The researcher experienced the idea that nothing has meaning, unless it evolves in a context at a specific time in which a specific meaning is attributed to it. Context refers to the unfolding patterns over time, it is the recursive interrelated networks between systems that change through time (Bateson, 1979, Keeney, 1983). The shift in their perceived meaning of therapeutic riding was isomorphic to the shift in their perception on their relationship with the trainer. These perceptions reciprocally influenced each other. Within this story a multiverse of realities unfolded (Maturana, 1975).

The following themes reciprocally connected with each other.
- Anger and Guilt
- Therapeutic Riding
- Progress
- Meaningful noise
- Defining the Problem, Acceptance
- Reflection
- Normal versus Defining the problem
- Acceptance and Support
- Therapeutic riding

Through the use of metaphor, text, imagery, narrative and story-telling the researcher and co-researchers co-constructed a more circular perspective and highlighted the patterns that connect these complementarities. The ideas and meanings are constantly changing through telling and retelling and it floats in time, therefore social fit and process influence the ideas (Becvar & Becvar, 1996). The researcher's constructionist position emphasises the need to gain multiple descriptions of events so that different views can be juxtaposed to

yield a higher order of description or relationship between events in a greater system (Efran, et al, 1988). This story has been coloured with 'meaningful noise'. Therefore alternative behaviours, choices, structures and patterns could be punctuated on this journey (Keeney & Ross, 1992).

Benita and Banie: Lize

Metaperspective

The researcher would like to acknowledge their participation in this study, but unfortunately their story will not be reflected in the same way as the other three stories. However the researcher will have a follow up session in which the themes and meanings will be co-constructed. But this conversation will not be part of the study. The researcher did not disregard the themes that unfolded in the conversations with Lize's mother. The conversations allowed for a multiverse of realities to unfold. Through dialogue we shared ideas on the following themes:

- Ignorance and inexperience
- Anger and guilt
- Defining the problem
- Acceptance and Support
- Therapeutic riding

Benita's, (Lize's mother), perception of her own experience at therapeutic riding portrayed a difference. According to Benita therapeutic riding created a space in which she could sit back and let Lize do something totally independent from her. Benita did not want to be part of the lessons. The meaning she attributed to this time is to relax and to see how her child's self-confidence enhanced over time.

Lize went for an operation in the middle of our journey, followed by the Christmas holiday season, consequently the Feedback conversation in which co-construction and reflection play a crucial role, did not happen. The researcher did not want to mirror only her perceptions of Lize's perceptions, as a result the story will be excluded from this chapter. However being embedded in an ecosystemic epistemology, their story could not **not**

influence the outcome of this study. The researcher's perception had been reciprocally perturbed in a consensual domain of experience and the relationship with the co-researchers in the research context allowed for rich descriptions to unfold.

Self Reflexivity

In retrospect, the researcher was curious to explore the meaning of horseback riding in the lives of children with CP. This exploration recursively unfolded a multiverse of realities. There was a fit with each family in a consensual domain of experience (Kenny, 1989; Maturana, 1975). The relationship between the researcher and co-researchers created a space in which different ideas and meanings could co-evolve. These portrayed the uniqueness of each story and emphasised the role of context. Context is about the relationship and the various recursive relational processes through time. A kaleidoscope of meanings evolved in relation to context and time, the meanings either shifted or formed patterns of interaction (Bateson,1979; Keeney, 1983; Lincoln & Guba, 1985).

The researcher experienced the perturbation to the context when being a participant observer. The distinctions were drawn and the themes co-constructed from an ecosystemic epistemology, these were depicted in each story. Therefore the perceptions and stories are coloured with the researcher's epistemology.

Language and conversation portrayed the different meanings. There was a striking resemblance in all the stories concerning the struggle they've experienced in their relationship with the doctor and in obtaining any relevant information. True to an ethnographic enquiry, the informants shared their knowledge, and the researcher and co-researchers reciprocally learnt from their culture in their context.

Conclusion

In this chapter the researcher shared the rich descriptions that unfolded in the stories on the research journey. The uniqueness of each story is depicted in the conversations and context. The researcher disclosed her self-referential experience on the qualitative journey. In the last chapter the descriptions from the case studies will be connected with the

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information from the questionnaires, these will be triangulated with the researcher's reflection on the process, and followed by final recommendations and conclusions.

CHAPTER 8

TRIANGULATION, RECOMMENDATIONS AND CONCLUSION

No man can reveal to you aught but that which already lies half asleep in the dawning of your knowledge

Kahlil Gibran

Introduction

The research question "What does therapeutic riding mean in the lives of children with cerebral palsy?" created a space in which a kaleidoscope of meanings unfolded. True to an ecosystemic exploration this study emphasised description, and minimised explanation with reference to the findings in the previous chapters. These meanings and descriptions evolved over time in a dance between the researcher and co-researchers, and allowed for rich descriptions to unfold in the research context. Through methodological triangulation different aspects of the research topic were mirrored in conversation and interaction with the co-researchers. The two methodologies, qualitative and quantitative, built upon each other and provided meaningful noise that neither one could have provided alone. Theoretical background and the unique experiences of each co-researcher in this study have been presented with interconnected links throughout this work.

Self-referentially the research process in the different contexts perturbed the researcher. Each research context became a learning curve in which mutual influence reciprocally established a relationship between the researcher and co-researchers. Through participating in peer debriefing the researcher meta-communicated on the limitations and recommendations with regard to the research topic and process.

In this chapter follows an overview of the triangulation process, in which the researcher self-reflexively connects her way of drawing distinctions with the research contexts. This allows for a holistic view of the aforementioned theories and a circular connection of the meanings attributed to therapeutic riding. Strengths and limitations of this study, recommendations and then the conclusion will follow.

Triangulation

Qualitative and quantitative methods have been triangulated with the researcher's self-referential disclosure. Within the use of these method types, the researcher triangulated three different modes; the use of multiple sources of data (mother, father, grandmother, riding instructor), methods (interviews, observations, video material, questionnaires, thematic analysis) and investigators (co-constructors of reality). The different modes informed each other and allowed an understanding of therapeutic horseback riding in greater complexity. This implies that one takes the whole context and system around therapeutic riding into account. It embraces Keeney's (1983) idea that " any position, perspective, conceptual frame of reference, or idea is a partial embodiment of a whole we can never completely grasp " (p.3).

Self-reflexively the researcher was embedded in the research context. Being driven by a passion for horseriding and a curiosity to explore the meaning of horseriding in the lives of children with cerebral palsy inspired this research journey. In retrospect, the quantitative part of the study introduced the therapeutic riding fraternity, the different divisions of therapeutic riding and numerous children with special needs and their parents or caretakers. Two experts in the field informed the assumptions made in the questionnaire. Therefore meaningful noise derived from the gathered information. The information from the questionnaire unmasked very specific perceptions parents have of therapeutic riding. These perceptions underlied the meanings that have been attributed to therapeutic riding in the conversations with the co-researchers in the case studies. Some of the themes and patterns that evolved from the questionnaires were coherent with the themes that co-evolved in the conversations.

These portrayed a thick description of therapeutic riding. It is again significant to reiterate that this study portrayed the perceptions and stories of the co-researchers and researcher. The researcher did not aim at changing behaviour or ideas on this journey, however, in some cases the meanings and beliefs of the co-researchers have been challenged or perturbed and certain changes or shifts in meaning did occur.

The qualitative part of the study punctuated the significance of relationship and interconnection between systems (Becvar & Becvar, 1996). Ideas from first-order

cybernetics, like the importance of relationship and connection, became interwoven in the research process, along with ideas from second-order cybernetics, constructivism and social constructionism, with reference to Chapters 4 and 5.The researcher was a participant observer, therefore being present in the research context already acts as a perturbation of the observed system (Keeney, 1983). The researcher became a co-constructor of the stories that unfolded. The importance of language that has been depicted in conversation became apparent as meanings and ideas unfolded and shifted. However this was a reciprocal process of co-construction and mutual influence within a domain of consensus (Kenny, 1989; Maturana, 1975).

In all the conversations therapeutic riding connected with the other systems in a unique way, therefore the researcher had to explore the meanings attributed to the idea of having a child with special needs before co-constructing ideas on therapeutic riding. Through conversation a multiverse of realities was depicted (Kenny, 1989). This highlights the complexity of systems and the idiosyncratic way of reflecting on each story. As a pattern of interaction emerged through a negotiated and interpretive process, the focus was on the importance of understanding situations from the perspectives of the co-researchers' contexts. Consequently the researcher and co-researchers could explore the other interrelations surrounding the meanings attributed to therapeutic riding. This was also done with reference to the conversations in the first case study on the parents' marital problems and the shifts they perceived. In the new meanings that evolved in the last case when external financial threats perturbed the ideas about horseriding, together with the shift in their perception of the instructor. Inherent in these examples is Maturana's (1975) idea of structure-determined behaviour, this suggests that all living systems have their behaviour determined by their structure or components. Fourie (1995) states that a person's structure encompasses the knowledge he or she has. This knowledge becomes the basis for attribution of meaning, therefore each attribution of meaning evolves from prior knowledge and an individual's inner structure. Structure is not static, and shifts and changes constantly, meanings evolve and shift within new contexts over time (Levy, 1997). Therefore " whatever is perceived by anybody in this system can only be interpreted by reference to that individual's existing ideas " (Fourie, 1991b, p.63).

According to Efran et al. (1990, p.45) "acts of distinctions carry profound implications". Distinctions pave the road we travel in life and consequently through connecting these distinctions the kaleidoscope of attributed meanings become visible.

In retrospect the meanings that unfolded in this study co-evolved and co-constructed meaningful noise (Keeney & Ross, 1992). The researcher learnt from the respective cultures and portrayed but only her perception on the co-researchers' perceptions on therapeutic horseback riding. The two-fold study broaded the researcher's scope of the therapeutic riding field and allowed rich descriptions to unfold. The researcher experienced a fit with the co-researchers in co-constructing their stories, being in a relationship with the co-researchers was more congruent with the researcher's personal epistemology. However, distributing and collecting the information from the questionnaires opened doors to unexplored territories.

Triangulation of the Constructed and Evolving Themes

Feelings of Guilt and Ignorance

These co-constructed and co-evolving themes connected with the feelings of anger, and the frustration of not knowing enough about the child's 'problem'. These descriptions of the co-researchers were experienced as an unfolding richness. It was only through an established relationship and within the conversations that these themes could co-evolve. The researcher co-created a space in which the co-researchers could reflect on their feelings of guilt surrounding the time before the child's first encounter with therapy. These themes punctuated the interrelation and interconnection between the family system, and reciprocally the relationship within the broader context.

Normal versus Not Normal

Although the perceptions from both the qualitative and quantitative co-researchers depict an aversion towards this lineal dichotomy, it was significant to experience the unspoken duality. My own ideas and values perturbed me with regard to my idiosyncratic way of drawing distinctions in relation to children with special needs. The co-researchers in the case studies voiced a clear discrepancy between 'parents with only normal children' and

parents who are in the same situation with them. Both the information in the qualitative stories and the descriptions from the open-ended question revealed the importance of the underlying normality of therapeutic horseriding activity. No matter what each one's idiosyncratic perception of the word 'normal', it is used within society. It becomes an invisible measure of compliance, and an everlasting struggle in the lives of those who share their space with a child or adult with a portrayed difference.

Defining the Problem

The co-constructed themes that evolved in conversation with the co-researchers with regard to their perception of the way in which they were informed about their child's problem portrayed each one's unique, but connected pain. This has been and still is a perturbation to myself and as a therapist too. This theme connected the themes that were portrayed in the normal / not normal duality and form a pattern of disconnection with all the people that do not share in their tacit knowledge. This information could only evolve in conversation and in a relationship with the researcher, therefore it is perceived as significant to the descriptions in this study.

Acceptance and Support

Rich descriptions unfolded with regard to the interrelation of the family and the family's connection within the broader context. Each respondent voiced his or her idiosyncratic way of struggling with the idea of having a child with special needs and reciprocally each one's personal battle towards 'partial acceptance'. From the stories echoed the constant struggles that evolve in time and context, and therefore acceptance is an ever-changing idea. The theme of 'support' revealed the patterns of interaction within the family system and portrayed the connection and disconnection within the systems respectively.

Therapeutic Horseback Riding

I have been fascinated by the manifold meanings attributed to therapeutic riding. In fact the initial curiosity has been stimulated, and not answered through this research encounter. I learnt from my participation within the research context, I had been embedded in the research context and viewed the field as an open sea of future research possibilities.

From the questionnaires, more precise and detailed information with regard to the child's physical and emotional experience of therapeutic horseback riding was reflected in the respondents' perceptions. I was privileged to share in the laughter and joy of the children that were co-constructors in the case studies while they were on horseback. Although the aim of the study was not to prove anything, its significance was clearly voiced in the progress and improvement portrayed by the co-researchers and respondents' punctuations.

Strengths of this Study

Being embedded in an ecosystemic epistemology paved the way to a relationship within the research context. The researcher has been a participant observer and experienced mutual influence in gaining knowledge from the informants in each research culture. This study encompassed the research context. Therefore all the idiosyncratic ways of drawing distinctions, the different value systems, beliefs, circumstances and relationships were encompassed.

Through triangulation between the qualitative and quantitative methodologies and the researcher's self-reflexive disclosure on the research process this study created a space in which rich descriptions of therapeutic horseback riding could evolve. The dance between the two methodologies and two paradigms revealed meaningful noise (Keeney & Ross, 1992). It built upon each other and provided ideas and thoughts that would not have been possible from only one perspective.

By viewing CP and therapeutic horseback riding as socially co-constructed linguistic realities this study transcended the mind-body dichotomy and provided the space in which a multiverse of realities could unfold. The stories unfolded in a specific context and at a specific time, therefore the themes and ideas are dynamic and portrayed only a glimpse of the lives of children with CP and their families.

Through self-referential disclosure of my epistemology and my experience of the research process and being in the process, trustworthiness of the findings was achieved. There was an openess to contextual factors and conversations continued until redundancies emerged (Lincoln & Guba, 1985). Furthermore triangulation, different sources, investigators and methods of inquiry were used in this study. Participation in peer debriefing perturbed the

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researcher's ideas, biases and ways of thinking and provided credibility in this study. In conversation with the co-researchers member checks provided an opportunity for the co-researchers to question and challenge the ideas and reconstruction on the conversations. Thick descriptions co-evolved over time and within the research context. Through self-referential dialogues with the information, credibility, transferability, dependability and confirmability of this study was punctuated.

Limitations of this Study

Because of the descriptive nature of the questionnaire and the co-constructed stories between the researcher and co-researchers future replication of this study to verify or prove the findings is neither possible nor valid. Some critics may view this in a negative perspective, but within the ecosystemic approach this can be portrayed in terms of difference.

Only one open-ended question was included in the questionnaire, therefore the respondents' perceptions may have been confined by the distinctions drawn by the researcher and two experts.

Due to time restraint on the completion of this study only 31% of the questionnaires were collected and only three of the four case studies were completed, the researcher will have a feedback session with the last co-constructors in the near future.

It cannot be denied that there are stumbling blocks in the way of this study; the use of a small sampling group, the lack of a control group, the failure to measure and control for potential confounders and the tendency to rely on non-standardised, subjective observations.

Another possible limitation to some critics may be the inclusion of children who are unable to language the meaning they respectively attribute to therapeutic riding. The ecosystemic epistemology encompasses the child's attributed meaning and embraces the idea of not only spoken language but also each one's idiosyncratic way of drawing distinctions.

This study did not attach diagnostic labels that portray only one way of describing a child, instead the respondents' descriptions were used to depict the child's story.

Recommendations for Future Research

For future researchers more in-depth, long-term designs, using several case studies are suggested. Consequently a study must either focus on case studies over a longer period of time, or quantitative methods must solely be applied on a larger sample group. However, the researcher does not regret the methodologies used in the current study, this recommendation is based on the cost and time spent on this study. It has been an expensive endeavor.

In order to accredit therapeutic riding in the fields of medicine, rehabilitation and education, more research has to be done. Therapeutic riding has been depicted as a complementary therapy to all other conventional therapies in the quantitative and qualitative part of this study. Therefore it may be significant to orchestrate a comprised study by a multidisciplinary team consisting of a psychologist, occupational therapist, physiotherapist, speech therapist and medical doctor in the future.

There is a great need that the medical personnel should be informed of the influence and impact their interaction have on the families of children with special needs. Through workshops and attending psychological conferences medical doctors may become aware of the psychological dance between them and the patients' parents. To punctuate Capra's (1987, p.165) words: " To adopt a holistic and ecological concept of health in theory and in practice, will require not only a radical conceptual shift in medical science but also a major public education ".

This study introduced the interconnectedness of systems with regard to one theme, therapeutic horseriding. It opens a door to various other possible research areas within the field of therapeutic riding.

Conclusion

At the end of this study the researcher invites the reader to visualise a smiling child on a prancing horse, allowing the tacit knowledge of a rider to touch the soul of each one reading this narration. The researcher cherishes the co-constructed and co-evolved themes with regards to therapeutic riding. This journey has become an experience that is treasured by those who shared in the laughter and tears that coloured the ideas and memories in relation to therapeutic riding and something called "cerebral palsy".

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SURVEY QUESTIONNAIRE

I would be grateful if you could fill out this questionnaire to assist me with my research. Please accept my reassurance that any information will remain strictly confidential and will be used for research purposes only.

More over, individuals who have collaborated in this project will in no way be identified in any theses that may result.

With this reassurance, I look forward once more to your co-operation.

If this questionnaire is not collected please mail to:

Yolanda Tredoux
Box 14996
Farrarmere
1518

This research is done under the auspices of the Psychology Department, University of South Africa.

Cover Letter

Dear Respondent

As you well know, various studies explore the use of horse riding from different frameworks such as physiotherapy, occupational therapy or nursing. This study aims at collecting and connecting different meanings on therapeutic riding within the frame of psychology.

Very little is currently known about the meaning of horse riding in the lives of children with cerebral palsy. This study has its aim, to unfold richer descriptions and meanings concerning this topic.

There are no right or wrong answers. Just your honest opinion about the questions asked. Your response will be completely confidential – the result of this questionnaire will appear largely in the form of statistical reports. You will not be identified in any way.

Thank you for your time and co-operation in filling out this questionnaire. Your help in creating a better understanding of the meaning attributed to horse riding is greatly appreciated. I would appreciate it if you will create a picture in your mind before answering the questions, seeing your child within the frame of the specific question.

Thank you again for your time

Y.Tredoux
(MA Student in Psychology)
UNISA

QUESTIONNAIRE: The use of horseriding in the lives of children with cerebral palsy

1. Biographical information of your child
Please mark the appropriate one with an X
Sex

Male		Female	

1-3 ☐☐☐

4 ☐

Please state your child's age
Age _____years

5-6 ☐☐

2. Classification of cerebral palsy
Please mark the appropriate one with an X

Spasticity
a. spastic monoplegia (one arm, or one leg involved)
b. spastic hemiplelgia (one side of the body involved)
c. spastic diplegia (whole body involved, legs more than arms)
d. spastic quadriplegia (involvement of all four limbs) ☐

7 ☐

Ataxia (balance and incoordination) ☐

8 ☐

Athetosis (involuntary, uncontrolled movements) ☐

9 ☐

Mixed type (athetosis and spasticity) ☐

10 ☐

Please mark the appropriate one with an X
The time period your child has been participating in therapeutic riding
0-3   months
4-6   months
7-12   months
13-24   months
Longer than 24 months ☐

11 ☐

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How would you describe the value of therapeutic horseback riding in your child's live?

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What do you think is your child's perception on therapeutic horseback riding?

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Please answer the following questions by marking the appropriate answer with an X on the accompanying scales.

I have not noticed any positive changes in my child's emotions since he/she started therapeutic riding.

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   12 ☐

I think therapeutic riding has sensitised my child's own body awareness

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   13 ☐

Therapeutic riding has no effect on my child's awareness of his/her own body language

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   14 ☐

I think therapeutic riding has become a barrier in my child's socialisation with other children

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   15 ☐

I have noticed that therapeutic riding enhances my child's interpersonal relationships

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   16 ☐

Therapeutic riding does not create a space for my child to meet new friends

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   17 ☐

What do you think is the most appropriate word to describe therapeutic horseback riding. Please mark only one with an X

hobby
sport
fun
therapy
recreation   18 ☐

I think therapeutic riding gives my child a reason to be proud

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   19 ☐

Therapeutic riding has limited my child's imagination

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   20 ☐

I do not think therapeutic riding has enhanced my child's self confidence

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   21 ☐

I have noticed that therapeutic riding improves my child's concentration

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   22 ☐

I think therapeutic riding does not assist in my child's speech development

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   23 ☐

Therapeutic riding has improved my child's **balance on** horse's back

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   24 ☐

Therapeutic riding has improved my child's **balance of** horse's back

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   25 ☐

I have noticed that therapeutic riding decreases my child's arm, leg and head coordination

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   26 ☐

Therapeutic riding has improved my child's eye contact

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   27 ☐

I think therapeutic riding has influenced my child's activity level (a busy child becomes more calm)

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   28 ☐

OR

(a passive child becomes more alert)

Agree | 1 | 2 | 3 | 4 | 5 | Disagree   29 ☐

Therapeutic riding has a negative effect on my child's motivation in doing schoolwork

Agree

1	2	3	4	5

Disagree

30 □

Please mark the appropriate blocks with an X, you may choose more than one area in which you percieve an improvement after your child start to partcipate in therapeutic horseback riding

Handwriting □   31 □
Spelling □   32 □
Arithmetic □   33 □
None of the above □   34 □

Horses are not a theme in my child's creative writing /work

Agree

1	2	3	4	5

Disagree   35 □

I think therapeutic riding enhances my relationship with my child

Agree

1	2	3	4	5

Disagree   36 □

Which one of the following statements do you agree with most

- Therapeutic riding is the single most important therapy my child receives □
- Therapeutic riding can be a substitute for all conventional treatment □

- Therapeutic riding is complementary to other therapies □

- Therapeutic riding enhances my yuppie status □   37 □

Please mark the appropriate one with an X
This questionnaire has been completed by the child's

mother		father		grandma	grandpa	Guardian

38 □

Other (specify)_____