Family Futures' Neuro-sequential Approach to the Assessment and Treatment of Traumatised Children: *Neuro-Physiological Psychotherapy* (NPP)

By Alan Burnell and Jay Vaughan

Introduction

What is Family Futures?

Family Futures is an Adoption and Adoption Support Agency based in London in the UK. It has a multi-disciplinary team comprised of the following:

- Social Workers
- Child and Adult Psychotherapists
- Clinical Psychologists
- A Paediatric Occupational Therapist specialising in sensory integration
- An Education Consultant who trained as a teacher
- A Neuro-Developmental Psychologist
- A Child and Adolescent Psychiatrist
- A Paediatrician

In addition to these clinicians, we have an adoption panel made up of staff from the agency, independent representatives and experts in the field of adoption, and adoptive parents. We also have a consultant for child protection, who we can call upon for advice. In total, we have a staff group of 19 full time permanent members of staff and eight consultants, who work within a specially designed building that offers therapy rooms, consultation rooms and a training arena for up to 30 people.

Family Futures was set up in 1998. It is a not-for-profit social enterprise which is regulated under Adoption law by the Children and Families' Services inspectorate of the UK government agency OFSTED. The

work at Family Futures is funded by Local Authorities and Health Authorities, on a family by family basis. In addition to our clinical assessment and treatment work, we run training courses for professionals working in the field of fostering or adoption as well as offering consultation around the country and overseas. We have a national catchment area and a national and international reputation as a centre of excellence and innovation in the treatment of traumatised children.

In 2012, Family Futures' assessment and treatment programme was validated by the UK Government sponsored C4EO (*Centre for Excellence and Outcomes in Children and Young People's Services*). We are now recognized as a center of excellence in achieving positive outcomes for children who are fostered or adopted, and to date, the only UK Adoption Support Agency to receive this validation.

Family Futures' **Neuro-Physiological Psychotherapy (NPP)** is:

- **Synergetic:** it brings together research and theory from a diverse range of human sciences, and applies them to our understanding of children in the public care system
- **Neuro-sequential:** our assessment and treatment programme follows the developmental path of brain and central nervous system development
- **Holistic:** it looks at the child as a whole, and considers every aspects of their development and every level of their interpersonal matrix
- **Systemic:** in that we work with the child, the parent, the couple, the family, the support network, the school and the wider community

The Social, Economic and Political Climate in which we operate in the UK

Adoption first became a legal status and process for transferring parental rights from biological parents to substitute parents * in 1926. Prior to that, the practice of babies and young children being cared for by extended

family members or strangers probably goes back to the beginning of human time. At its inception, the legal framework for adoption was designed for the placement of babies with adoptive parents. The law was designed to ensure:

- That adopted parents were suitable to care for a baby, and that this was not a financial transaction but a child-centred process. This process was initially devolved not to the State, but to philanthropic, usually church-run institutions, who had an existing role as a children's' home or orphanage. It was also possible to make what were called '*third party adoptions'*, where a doctor or a priest would act as an intermediary between the birth parent and the prospective adopters.

- Mothers bearing babies 'out of wedlock' were given the option to 'voluntarily relinquish' their babies in order to give them a better life. There was a strong emphasis on relinquishment being volitional. However there was usually strong familial and social pressure on young unmarried mothers, which made the decision for adoption almost inevitable.

- A process of 'matching' became part of the adoption process. The agency or panel would often select babies and parents based on similarities in background and physical characteristics. This was an attempt to make the adoption 'invisible'.

- The anonymity of the birth parents, particularly the birth mother, was preserved, and the baby was given a new identity. The expectation was that post-adoption there would be no further contact between the child and its birth family. It was common practice for the adoptive child not even to be told that they had been adopted. Anonymity protected the birth mother from the shame of motherhood out of wedlock, the adopters from the embarrassment of infertility, and the child from the stigma of illegitimacy.

At its peak, after the Second World War (1939-45), around 25,000 babies a year were being adopted. Today, the picture is a very different one. In the UK in 2010, 3,000 infants and children were adopted. The average age of adoption is now four. The majority of children placed for adoption in the UK today have been removed from birth families by statutory agencies because of 'significant harm' having been caused to them and this being proven in court. There is now complex and detailed legislation and regulation regarding the removal of children from their families of origin, thresholds of proof to be verified in court, and detailed care planning. An unintended consequence of this legalisation and bureaucratisation is that infants and children may wait in foster care for up to two years prior to the court agreeing to adoption as a plan. They may wait a further year for a family to be found.

The 'permanence movement' was imported from the USA into the UK in the 1970's. The premise behind this movement was that any child was adoptable, and that adoption was a better option for children than institutional care or long term fostering. This principle included children who had diagnosed special needs. The movement was initially pioneered by a small group of voluntary agencies, but the concept was latterly embraced by statutory agencies and extended to include children in the public care system who had no physical 'special needs' but had come into public care because of neglect or abuse. The earliest research on the outcome of this approach (MacAskill 1985) showed that a key factor in determining successful outcomes in such placements was post-placement and post-adoption support to the parents.

By the 1980's, it had become clear that parents who adopted older children from Local Authority care were running into difficulties with the persistent challenging behaviour that these children exhibited. Sadly the post adoption support was not at that stage fourth coming. At that time, a progressive voluntary agency called the Post-Adoption Centre had been established in London, by charitable donations, to offer post adoption support to birth parents, adopted adults and in particular adoptive parents. We will not go into the work of this agency in any detail but what is important is that it did

pioneering work in counselling for birth parents and adopted adults who wanted to trace their adoptive families. The Post-Adoption Centre further highlighted the need for post-adoption therapeutic intervention for older placed children. It worked in close collaboration with the national adoptive parents association, which at that time was called PPIAS.

The founding members of Family Futures were involved with this collaboration, and working at the Post-Adoption Centre at that time. Because of the growing recognition that the needs of the contemporary adopted older child were more challenging and complex, the founding members of Family Futures decided to set up a separate and specialised service for this contemporary cohort of adopters and their adopted children. Family Futures welcomed our first family into treatment in 1998.

When Love Is Not Enough

Unlike baby adoptions, where a clean break, a new home, and lots of love appeared to provide all that 'relinquished babies' required, this template of care did not appear to be working for older placed children. At its inception, Family Futures drew heavily upon attachment theory as devised by John Bowlby (1997) and as developed by Mary Ainsworth and Main and Solomon (1986). In the USA, attachment centres have been established to provide intensive, and, in some cases, intrusive, therapies derived from their interpretation of attachment theory (Cline and Fay 1990). Although we were aware of these centres and their work we did not replicate or emulate them because of their reliance on 'Holding Therapy'. The staff at Family Futures did however find attachment theories a helpful framework for us to understand the difficulties and behaviours that older children placed for adoption were displaying in their adoptive families. In 1994, in the USA, attachment difficulties in children were formally recognised as a distinct disorder, which was given the diagnostic name of Reactive Attachment Disorder, included in the DSM-IV (American Psychiatric Association 2000). This diagnosis was a helpful step in the recognition of attachment difficulties in childhood and gave

many parents the satisfaction of knowing that the difficulties they were experiencing were at least now been recognised by the medical profession.

From attachment theory to understanding trauma in infancy

In his later works Bowlby postulated the existence of '*an internal psychological organisation with a number of highly specific features, which included representational models of the self and of attachment figures'* (Bowlby 2005). This concept made sense of the patterns of behaviour that children were displaying not only in adoptive families but in foster homes. The template for attachment that they were displaying in the substitute families was the template that had been learned in a dysfunctional birth family. This attachment behaviour or attachment strategy can be seen as adaptive in the context of pathologised parent-infant relationships. In 'normal' functional substitute families, it was mal-adaptive. Bowlby had made the link between poor mother-infant attachment relationships and the development of '*delinquent'* behaviour in adolescence (Bowlby 1944). His followers had refined and developed his theory, and identified different attachment styles that children develop depending upon the quality and form of that primary attachment relationship between mother and infant (Main and Solomon 1986). These attachments styles have been defined as secure, insecure – ambivalent – avoidant – disorganised (Howe 2005).

Here is not the place to outline these in any detail, as they are no doubt familiar to most readers. We wish to note that these definitions of children's attachment style were helpful in our early days of working with children. It may be of interest ,however, to note that a current and eminent clinician in Germany, Dr Karl-Heinz Brisch, who is treating children based on an attachment theory of approach, believes that rather than see these typologies of attachment styles as discrete and separate entities, it is more helpful to see them as placed on a continuum along which children (and adults) may move (Brisch 2004).

After several years of developing our assessment and treatment programme at Family Futures based on attachment theory, we were struck by how traumatising the early experiences of the children we were then working with had been. For children removed because of 'significant harm' in infancy, there were common patterns to their early experience, which involved extreme neglect, physical and sexual abuse. At the same time, we began to question why it was that these children did not show the clinical signs of childhood PTSD.

The work of Bessell van der Kolk (2005) and Bruce Perry (2006) helped us recognise that PTSD in childhood was really only applicable to children who by and large have had 'good enough' attachments to primary carers, but had subsequently suffered single traumas. For children who have experienced multiple trauma and who also had insecure attachment relationships, their whole development was impacted from birth through infancy by repeated 'relationship' or 'ambient' trauma. This phenomena has subsequently been given the title of 'Developmental Trauma'. This syndrome has been researched and defined by Child Traumatic Stress Network Task Force (2003). On the following page is a summary of the causes and symptoms of developmental trauma, as defined by Bessel van der Kolk in the Psychiatric Annals, (2005).

	DEVELOPMENTAL TRAUMA DISORDER by Bessel van der Kolk in the Psychiatric Annals (2005)
A	Exposure • Multiple or chronic exposure to one or more forms of developmentally adverse interpersonal trauma (eg. abandonment, betrayal, physical assaults, sexual assaults, threats to bodily integrity, coercive practices, emotional abuse, witnessing violence and death) • Subjective experience (e.g. rape, betrayal, fear, resignation, defeat, shame)
B	Triggered pattern of repeated dysregulation in response to trauma cues • affective • somatic (eg. physiological, motoric, medical) • behavioural (eg. re-enactment, cutting) • cognitive (eg, thinking that it is happening again, confusion, dissociation, depersonalisation) • relational (e.g, clinging, oppositional, distrustful, compliant) • self-attribution (e.g, self-hate, blame)
C	Persistently Altered Attributions and Expectancies • negative self-attribution • distrust of protective caretakers • loss of expectancy of protection by others • loss of trust in social agencies to protect • lack of recourse to social justice / retribution • inevitability of future victimisation
D	Functional Impairment • educational • familial • peer • legal • vocational

There is no space in this chapter to elaborate the detail of Developmental Trauma. However, in essence, the central tenet is that

children who as babies and infants have experienced repeated trauma, and a failure of the primary attachment relationship to protect them, consequently suffer developmental impairment. This creates a more complex picture than the one painted by the attachment theory. Where there is a failure of the primary attachment figure to protect, nurture, regulate and model secure attachment behaviour, not only are the infant's attachment relationships distorted but their neurological, physiological and cognitive development is compromised.

This post-birth experience, for many children who are fostered and/or subsequently adopted, may have been preceded by negative, and toxic developmental influences in the womb, pre-birth. There is copious evidence on the effects of maternal substance misuse during pregnancy. (Phillips 2004 and Elliott, Coleman, Suebwongpat and Norris 2008). There is also evidence that poor maternal diet and high levels of maternal stress have an impact on the development of the foetus (Gitau, Adams, Fisk, Glover 2005, O'Connor, Heron, Golding, Beveridge, Glover 2002, Van den Bergh, Mulder, Mennes, Glover, 2005). There is even evidence that at conception, the birth father's lifestyle can influence gene expression (Volkers 1991).

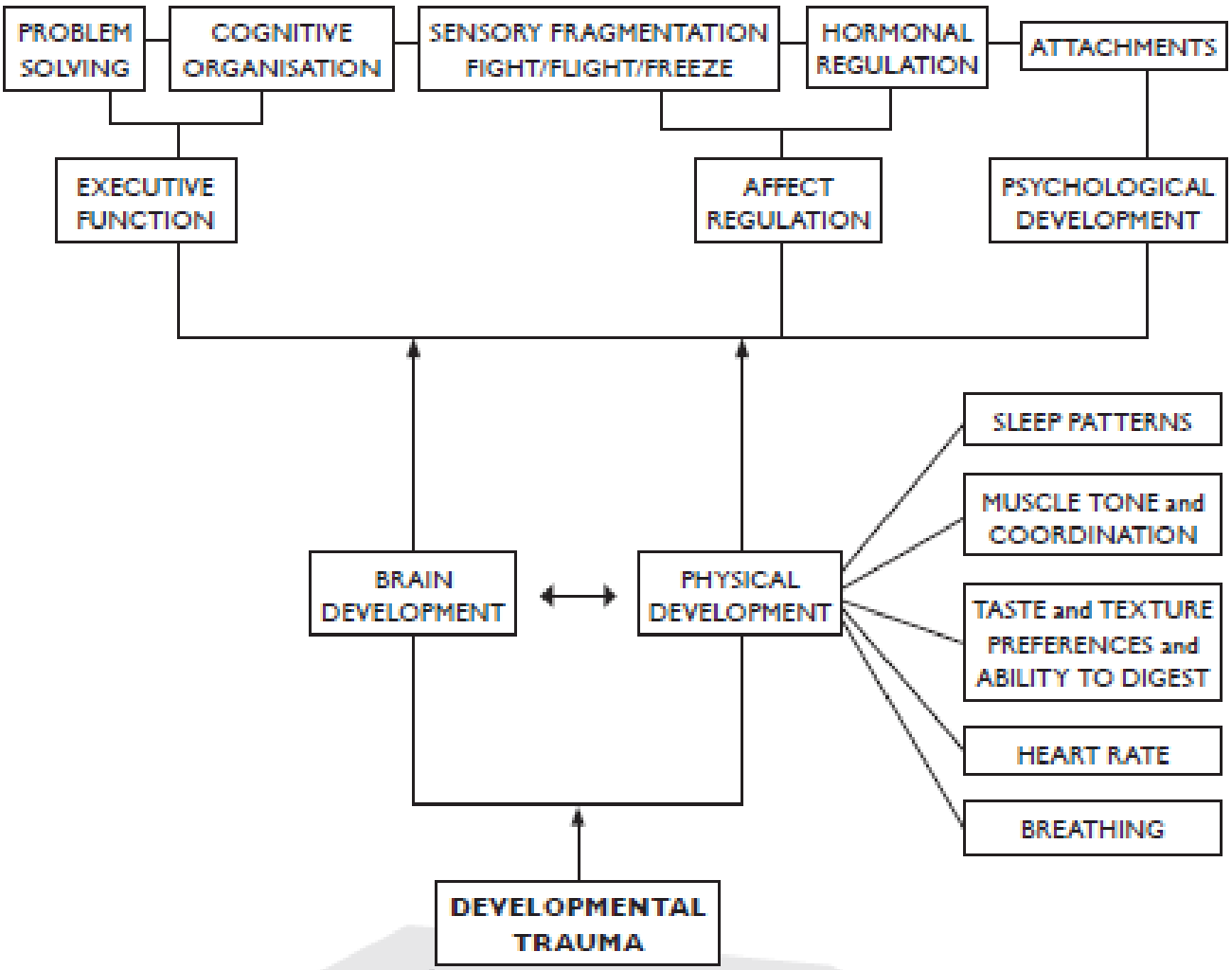
As a result of this recent neuro-scientific research, neuro-scientists and psychologists have been re-formulating infant development and the impact that good or bad parenting has on child development. This broadened our psychological understanding of what was happening with the children in our treatment programmes, by putting it in a biological and neurological context. For Family Futures, working with children who are fostered or adopted, most of whom will have come out of traumatising birth family environments, the concept of Developmental Trauma opened an exciting window of understanding, which has informed our assessment and therapeutic intervention programme. We realised that to help fostered or adopted children recover and heal effectively, we needed to develop integrated multi-disciplinary treatment programmes. We also realised that these programmes needed to address all aspects of a child's development, and, most importantly of all, needed to be implemented at the earliest opportunity.

Family Futures now provides this service to children who are fostered and adopted, usually at the point of crisis. With the understanding we now have, some or most of these crises could have been averted had a multi-disciplinary treatment programme of assessment and treatment begun at the point of entry of the child into the public care system. We should not be waiting for things to go wrong: we should use our awareness that child development is impaired by trauma as our starting point for post-placement therapeutic intervention.

This diagram below is one that we have devised as a way of helping parents to visualise Developmental Trauma.

TRAUMA TREE

Devised by Family Futures (© Family Futures 2011)



The Trauma Tree's 'roots' are in the prolonged neglect, deprivation, loss, abuse, violence, upheaval or any combination of these that the child has experienced in his or her early childhood, fundamentally affecting the development of brain, body and the relationship between them.

Children who are Fostered or Adopted

Family Futures' Assessment and Treatment model rests on four pillars. The first pillar is our acceptance of the concept of Developmental Trauma as described above. The second pillar is recognition of the need for a multi-disciplinary assessment and treatment service. In our view, this flows as a logical consequence of acknowledging that trauma has a developmental impact that affects all aspects of a child's development – neurological, physiological and psychological. For this reason we have the multi-disciplinary staff team outlines earlier in this chapter.

The third pillar that holds up our assessment and treatment model is a neuro-sequential approach (Perry and Hambrick 2008) to assessment and treatment. By neuro-sequential we mean an approach that follows the sequence of brain and central nervous system development in neonates and infants. Once we became aware that insecure attachments and other developmental dysfunctions in children were caused by Developmental Trauma, we began to study and apply neuro-psycho-biological scientific research and theory to our work with traumatised children. The fourth pillar is developmental re-parenting which we will explore later in this article but very much follows the neuro-sequential approach to treatment and works in tandem with the treatment programme.

It is these pillars that underpin Family Futures' NPP model of assessment and treatment. It is not simply the case that secure attachments will develop in substitute families once a child is removed from their traumatising birth family environment. The children import with them into their substitute family the developmental delay and damage that their previous life experiences have impacted upon them. It is vital therefore that this neuro-physiological and psychological damage is addressed in order for secure attachments to be developed in permanent placements. This point is crucial to the understanding of 'what works' when placing children in substitute families. Current practice, even if it acknowledges attachment as an issue, does not currently address the neuro-physiological dimension of the problem.

The future for successful substitute family care rests on our understanding of this and the need to establish services for substitute families that are multi-disciplinary and specialise in the field of placing traumatised children.

The model that we have developed is simply put as follows

THE STRUCTURE AND PROCESS OF FAMILY FUTURES' NEURO-PHYSIOLOGICAL PSYCHOTHERAPY ASSESSMENT AND TREATMENT PROGRAMME WITH CHILDREN & SUBSTITUTE PARENTS

The Neuro-Physiological Psychotherapy reflects the structure of the brain and its development in the following way:

The level of the brain	**PRIMITIVE BRAIN**	**LIMBIC BRAIN**	**CORTICAL BRAIN**
The focus	**TRAUMA** ►►	**ATTACHMENT** ►►	**IDENTITY**
The themes	**FEAR & STRESS REDUCTION CO-REGULATION AND ATTUNEMENT EMOTIONAL AND PHYSIOLGICAL AWARENESS**	**DEVELOPING A MORE SECURE ATTACHMENT SHAME REDUCTION THE DEVELOPMENT OF CONSCIENCE AND EMPATHY**	**DEVELOPING A COHERENT NARRATIVE REFLECTIVE CAPACITY**
and the form of intervention	**SOMATIC WORK & SENSIORMOTOR THERAPY TO CALM THE NERVOUS SYSTEM ALONG WITH SENSORY INTEGATION THERAPY DEVELOPMENTAL RE-PARENTING AND ONE-ON-ONE TIME AT HOME FOOD SLEEP TOILETING MEDICATION WHERE APPROPRIATE SCHOOL-BASED INTERVENTION OR HOME SCHOOLING**	**DYADIC DEVELOPMENTAL PSYCHOTHERAPY & NON-VERBAL CREATIVE ARTS THERAPY TO ADDRESS TRAUMA RE-ENACTMENT & SUPPORT ATTACHMENT RELATIONSHIPS THERAPLAY TO ENHANCE ATTACHMENT DEVELOPMENTAL RE-PARENTING SCHOOL-BASED WORK WITH TEACHERS AND PEERS MEDICATION WHERE APPROPRIATE**	**DYADIC DEVELOPMENTAL PSYCHOTHERAPY TO HELP THE DEVELOPMENTAL OF A COHERENT NARRATIVE AND IDENTITY ISSUES WITH A LIFE STORY WORK FOCUS FACILITATED CONTACT - REUNIONS WITH NON-THREATENING BIRTH RELATIVES AGE APROPRIATE PARENTING SUPPORT ONGOING SCHOOL SUPPORT IDENTITY AND SELF-ESTEEM WORK INDIVIDUAL THERAPY MEDICATION WHERE APPROPRIATE**

With parents the focus of intervention is

ANXIETY REDUCTION
UNRESOLVED PARENTAL TRAUMA
REGULATION STRATEGIES
EDUCATING
SUPPORT NETWORKS

COUPLE RELATIONSHIP COUNSELLING & INDIVIDUAL THERAPY
INFERTILITY AND LOSS

PARENT MENTORING
NETWORK MAINTENANCE

AGE APPROPRIATE PARENTING

PREPARATION FOR ADULTHOOD

SEXUALITY ISSUES
PARENT INDIVIDUAL AND COUPLES WORK

Alan Burnell 8-10-08 updated with Jay Vaughan March 2012

NPP – working with the Primitive Brain

The first thing we should emphasis is that whilst NPP is outlined as a *linear progressive programme* from working with the primitive brain, to working with the limbic brain, and then to working with the cortical brain - *it is not necessarily a linear process*. At times, children will need to begin at a different point in the NNP programme, and they will inevitably at times revert to more primitive brain responses. But the basic pattern of work is to move from primitive brain responses towards cortical brain responses. It is very important when engaging with a child that substitute parents and professionals are aware of which part of the brain they are endeavouring to communicate with.

Traumatised children respond to many normal situations with primitive brain responses – fight, flight or freeze. As a consequence, it is hard for them to form secure attachments to primary carers: traumatised children who have been traumatised primarily in their relationship with parent figures cannot form secure attachments easily, even in a safe environment. Therefore the focus of initial interventions with traumatised children needs to focus on regulating the primitive brain responses to inter-personal interactions.

Understanding the various triggers (of the fear response) and focusing on developing a broader spectrum of ways in which the child can feel calm in their body and feel regulated and safe is essential. Safety is a key focus in this stage of the therapy and the work aims to support the child and their

parent figure in feeling safe in all areas of their lives. This is slow and painstaking work for a child who has perhaps never felt safe anywhere and has little access to internal self regulation for fear responses and pathologised internal working models.

A further development in our thinking and practice, which has evolved out of our awareness that traumatised children are over-sensitised, and therefore liable to primitive brain responses and dys-regulated sensory processing, has been our integration of more body-based and somatic therapeutic approaches. Though these have been largely developed and shown to be successful in helping traumatised adults, we have begun applying the biological and physiological theories and research about how the central nervous system operates, to our work with children. For traumatised adults and children, the impact of trauma inhibits the normal and effective discharge of stress, which becomes somatised in the body. We have learnt a great deal from the work of Levine (2006, 2010) and Ogden, Minton and Pain (2006), which has helped us understand how the somatic embodiment of trauma should be addressed.

Another important aspect of this work is sensory integration and functional paediatric occupational therapy work with the child. Occupational therapy is integrated into the overall NPP therapy programme and focuses on regulation of sensory processing and supporting the child and parent figure in understanding how the body processes sensory information. A neuro-physiological impact of the failed biological parent-and-child attachment relationship and the subsequent poor care that ensues for the infant is the failure of the child's sensory processing capacity to develop. Sensory processing and sensory integration as a facet of normal child development has been highlighted by Ayres (2005). Other occupational therapists have developed her original work with children and are now applying it to children with Developmental Trauma (Koomar 2009).

Central to our model is that alongside helping the child to cope with traumatic responses, the child needs help to repair missed developmental

stages and their ability to manage the sensory environment. The work on sensory processing has shown that traumatised children tend to be either *sensory-defensive* or *sensory-seeking*, and sometimes both together. If a child is dys-regulated in any of their senses this will impair their ability to make sense of the world, to remain regulated and to interact with primary caregivers in a way that is conducive to forming secure attachments. For this reason, the collaboration and co-working between psychotherapists, paediatric occupational therapists (trained in sensory integration) and parents is an essential ingredient in helping a child to stabilise and to feel safe.

Central to this approach is an understanding of the workings of the sympathetic and parasympathetic nervous systems, which are the mediators of the body's response to stress and traumatic responses. Helping parent figures (and children) to understand the workings of the central nervous system (described in age appropriate language) enables them not only to know how to regulate the child's behaviour once they have become aroused, but also to anticipate dys-regulation and how to see the early signs of dys-regulation. The idea is that the parent figure and child become 'sensory detectives' (Auer and Auer 2010) learning how to track the body and the central nervous system. This process very much mirrors mother and baby interactions in the first years of life, which is when we learn how somatic experiences are indicative of emotional and physiological responses to our environment and our physiological needs for food, sleep, comfort and so on.

In our experience, it is not just the child's sympathetic and parasympathetic nervous system that needs regulating: it is often that of the substitute parent. Parenting traumatised children is highly stressful, and is liable to trigger unresolved trauma responses to rejection and aggression in the adults. Even parents who have been assessed and vetted by social care agencies to be 'good enough' parents to adopted or foster children, will find that their emotional responses become dys-regulated and their emotional resources depleted in the reality of parenting day-to-day. An integral part of any treatment programme has therefore to include not just child focused therapy but therapeutic support for adoptive parents and carers. In

acknowledging that adoptive parents and carers are the primary conduit for change we need to also acknowledge that their parenting needs to be insightful and reflective. Therapeutic developmental re-parenting is about repsonding to the needs of children appropriately not reacting to them. Dan Siegel in his book *Parenting from the Inside Out* (2004) encapsulates this approach.

Equally, it is not only parents who have had a traumatic history who are impacted in this way. The work of Babette Rothschild (Rothschild 2000, 2006) and her focus on secondary trauma and caring for carers also makes an important contribution to our understanding of the effects of the child's trauma on the substitute parent and traumatised child relational dynamic. Any therapeutic model needs to address the issue of secondary trauma and take it on board as part of the therapeutic package surrounding the child. Substitute parents will require not just preparation for the task of parenting, but intensive support in the years that follow. They need to be provided with intensive parent mentoring for at least the first three years of a new placement, in our view, and then offered on-going support throughout the child's childhood.

Placing and supporting traumatised children in substitute families is not just a question of looking at the dyadic relationship between the parent figure and child. We see it as a triangular relationship, involving, in addition, the supporting social worker and or therapist/therapy team. It is important that there is external supervision and consultation to the social worker/therapist/therapy team so that they in turn do not become dys-regulated, take on child and parental projections, and, because of the intensity of the work required, become victims themselves of secondary trauma. In our experience, without sufficient supervision, consultation and emotional support, professionals often tend to move towards a position of becoming parent critical. The professional system around the family is also vulnerable to the unconscious process of 'splitting', in which the parent-child dynamic gets projected onto the professional system, and acted out. Careful case management is therefore vital, if such phenomena are not to occur (Conway 2009).

There have been a number of writers and researchers in the field in recent years whose work has contributed to the development of Family Futures NPP model (Perry et. al 2006, Van der Kolk 2005, Levine 2006, 2010, Ogden, Minton and Pain 2006). These neuro-sequential approaches represent a significant shift in thinking, post Bowlby, because for Bowlby, attachment was the primary condition for healthy development in an infant. Our recent greater understanding of the neuro-physiological impact of trauma on child development has shed light on the *pre-conditions for secure attachments* with substitute parents. Regulating traumatic responses is the first stage in helping children with substitute carers to develop a secure attachment.

Developmental Re-Parenting by substitute parents therefore requires parents to understand the physiology of stress, and how the brain and central nervous system respond to stress. Helpful to our approach of developmental re-parenting has been Hughes' concept of parenting with PACE (Hughes 2009) and Heather Forbes' and Bryan Post's work at the Beyond Consequences Institute in the USA (Forbes and Post 2006). Both models are very parent positive and are based on the understanding that substitute parents need to interpret traumatised children's behaviour as emanating from fear, and that the role of the substitute parent is to help children move from fear to love with understanding and empathy.

Hence Family Futures NPP begins back to front, ie with the primitive reptilian brain, allowing the child to experience, via the parent, what happy babies experience: periods of 'quiet alert' (Klaus 1999). During such periods, babies take in their environment and learn from their parents, wiring up their neurological systems in a developmentally adaptive way.

Because of the developmental insults the child has experienced, parents have to go back in order to go forward developmentally. This requires the parent to parent the child as if they were much younger than their chronological age, even taking them as far back as the baby stages. This

requires parents to massage and play games with their child, which involve touch and close eye-to-eye contact. It is not unusual for parents to play such games as peek-a-boo, counting fingers and toes, the sorts of interactions parents would normally have with an infant. Despite the chronological age of the child, developmentally traumatised children will often engage in these interactions with relish, as, at some level, they themselves appear to be aware of what it was they missed out on when they were very young. Bath times and bed times are very important, in establishing a predictable routine, which is nurturing and developmentally attuned. Meal times and food may have to follow a similar developmental catch-up, with the child going back to being fed from a bottle for a while to have that experience or to having mushy food, rather than solids on occasions. This has importance physiologically, nutritionally as well as psychologically. This process of regression however needs to be carefully managed by the therapy team and supervised so it is appropriate.

Of course what parents discover very quickly is that their child does babyhood and infancy in a traumatised way. So yes, they are eager to regress and do regress, but remain hyper-aroused, hyper-vigilant, controlling or dissociative. By small steps and successive approximation (shaping), parents are supported in their attempts to try and 'normalise' an appropriate infant response. The paediatric occupational therapist role is important at this stage not just in helping to normalise sensory processing but in assessing motor development and co-ordination.

An example would be a child who for the first year or two of infancy spent most of the day strapped in a buggy and who never learnt to crawl before they walked, who never learnt right-left synchronisation, and had poor muscle tone and balance as a consequence. The parents might, in a playful way, carry out a series of exercises with the child which are designed to address these specific physiological developmental gaps.

Our role within the therapeutic interventions with parents at this stage is to set the developmental context for parents and encourage and support

them not to *grow their children up,* but to take them back, and to give them the babyhood and the infancy they never had but still desperately need.

There is not sufficient space in the context of this chapter to elucidate all aspects of a multi-disciplinary assessment and treatment programme for children who are developmentally traumatised. However, it is important to mention other facets of our programme at this phase.

- Further psychological assessments to screen for any specific psychological, behavioural or psychiatric disorders or risk-factors, such as self harming and suicidal ideation.
- This would also formulate whether the child has any specific psychiatric disorder and whether they would benefit from medication. In our experience a significant minority of children we have worked with do require and have benefited from medication as part of the treatment programme.
- Another area of therapeutic intervention relates to schooling (if appropriate) and assessing the child's executive functioning and cognitive processing. A feature of our multi-disciplinary programme is that it is systemic and incorporates close collaboration with school as well as parents.

Family Futures have found from a small research project (Family Futures 2009) a very strong correlation between Executive Functioning difficulties and children who have experienced Development Trauma. Executive Functioning difficulties (Ylvisaker and Feeney 2002) were first identified with children with acquired brain damage and now we are considering that Developemental Trauma has similar consequences.

Executive Functioning is the ability to problem-solve in 'novel' situations. This applies not just to the classroom but any social or everyday activity. The inability to effectively solve problems leads to frustration, heightened anxiety and low self-esteem with all the attendant behaviours that go with these. This is where it is important to have a teacher as part of the multi-disciplinary team, someone who is aware of functional difficulties,

trauma and attachment, and, has a thorough knowledge of the school context and educational requirements and challenges, so that they can liaise effectively between school, home and child.

NPP – working with the Limbic Brain

Whilst the first phase of treatment is essentially body-based fear reduction work with the parent and child dyad, the second stage of treatment moves more toward the model of Dyadic Developmental Psychotherapy (DDP) developed by Hughes (2004). We have learnt a lot from Dr Hughes' writing as well as his training and teaching of the staff team at Family Futures. This psychotherapeutic approach, which involves close co-working with the substitute parent, helps the child and the parent to begin to explore the origins of the child's feelings and how they are manifest in the here and now. Family Futures also employs art therapy approaches in its DDP work, engaging the child in creative arts activities. These provide a medium for communication, exploration and symbolic representation of the child's internal world. The use of the creative arts in this phase of NPP is a vital element of Family Futures' therapeutic work, because of the limiting impact that Developmental Trauma has on the child's capacity to experience and verbally articulate the full repertoire of feeling and body states that they experience. We use painting, puppetry, sand trays, clay and drama to name but a few of the creative media we employ. (Malchiodi and Perry 2008, Cattanach 2003, Jennings 1983, 1986, Jennings and McCarthy 2011, Gersie 1997, Jones 2007). A fuller account of Family Futures' work using the creative arts in its therapy is in the Family Futures' book *Trauma Attachment and Family Permanence* (Archer & Burnell 2003). It is also possible at this phase of treatment to use the arts to further deepen exploration of somatic issues for the child.

Secure attachment behaviour and affect enrichment is only possible when a child is not living all the time in a state of constant traumatisation. As someone once said, a traumatised child has two feet in the past, and their head looking backwards. A securely attached child has one foot in the present and one foot in the past, but they are looking through the present to

the future. To achieve this requires parent and child to engage in more attachment focused therapies. In this way, along with its reliance on DDP and the creative arts therapies, Family Futures also integrates Theraplay (Booth and Jernberg 2009) into NPP.

Theraplay was developed in the 1960's in America, as a form of attachment focussed play therapy designed to enhance attachments between parents and children. In Theraplay, the first step is an assessment of parent child interactions in the domains of structure, nurture, engagement and challenge. The outcome of this assessment will determine the sort of activities that the therapist will support the parent and child to engage in. Each activity will be targeting one of these four elements, in an attempt to redress any imbalance or deficit. This mid-brain focussed therapy is developmentally a stage on from the hard-wired survival responses of the primitive brain, which require regulation and management: this work represents a move towards the development of experience-dependent neurological and synaptic connections. It is a positive experience of infancy, free from the fear of trauma.

This phase is to work with the child and substitute parent on secure attachment formation, which is a mid-brain function. We also encourage parents to adopt a Development Re-parenting approach, where the primary carer is encouraged to regress the child and to go back to developmentally much earlier parent-child interactions, so that the child can experience all stages of parent-child interaction in a developmentally sequential way. This approach needs to be systematic and consistent across the child's network, including other family members, school and peers. At Family Futures we carry out a programme which involves educating the network about Development Trauma and the specific developmental needs of the child they are relating to. This is particularly relevant to children who have been physically and sexually abused as they may continue to act out at home, at school, or with peers.

NPP – working with the Cortical Brain

When parents and children are able to achieve moments of calm and reflection, it is possible to help the child to begin to make sense of their early experience and the effect it has had on their feeling states, behaviours and relationships. In our NPP model at Family Futures, we enable the child to begin to address the trauma through a form of life story work using the DDP model as mentioned earlier. As a precursor, one of the therapy team will have done an exhaustive and forensic search of the adoptive child's file when they were living in their birth family and in foster care. The aim of this exercise is not just to get a 'coherent narrative' of the child's life with dates, times, people and places, but also to create as vivid a picture of the child's lifestyle and day-to-day experience at each developmental stage as is possible.

The actual life story work often focuses on using a large sheet of paper, paints, crayons, and other creative media, to depict, using the metaphor of a road or a river, the child's life course. The child is helped to understand their history by the therapist and parent painting, drawing and sticking pictures of significant events and relationships onto their time-line. This will be annotated by the child with their expression of feelings that they had then or that they have now, which they can represent using paint, pastels, colours and words. Through this process, the child's feelings and experiences are acknowledged, validated and empathised with. There are many creative ways of helping children make sense of their history, Joy Rees' book *Life Storybooks for Adopted Children* (2009) is another example.

The child is also encouraged and empowered to express their feelings and to retrieve often unpleasant memories in the safe and accepting environment created by the parents and therapists working together. As and when the child inevitably becomes resistant, dissociative or dysregulated, the role of the therapist is to set the pace that the child can cope with and model for the parents how best to help their child process their feelings. This process of mapping the child's life story often starts in the here-and-now,

acknowledging the safe, nurturing environment in which they now find themselves and working backwards chronologically into less safe and more scary times. This process can take months and often needs to be revisited at different times throughout childhood as the child's ability to make sense and process their past develops.

For children who have experienced early trauma, which leaves them with a negative self-image, and a heightened level of fear, a secure attachment forms the basis for the development of a positive sense of self and optimism about other people's intentions and the future. At this stage in the therapeutic process, the child is hopefully freer of pathological fear, has a more positively internalised secure attachment with the parent figure and can now develop a positive sense of self and self-worth. From this position, with the parent and therapist, the child can develop and use their reflective capacity and their cortical capacity for integrative left-brain right-brain thinking to begin to think about themselves, their current relationships and their past. Without the distorting lens of trauma hampering them so much.

Unfortunately this is often where therapy with adopted children starts; with 'Life Story Books', chronologies and contacts with birth family members that traditionally have been seen as continuity with the past. For the contemporary adopted child, for whom chaos, neglect and abuse were their first experiences of life, it is arguable that such continuity can be seen more as contamination and re-traumatisation if the phases, outlined above, have not been worked through first. However bad or traumatising a child's early experience and history might have been, if they have processed these feelings and experiences, and have been helped to form secure attachments, then they can reflect upon their past and their present, and think about their future, with a greater sense of hope and optimism, and they can remain self-regulated than would previously have been possible. At this stage the child should be regulated and forming secure attachments in order to be able to do the cognitive processing required to develop a positive sense of self, a problem-solving capacity, and emotional intelligence.

It is important to remember that the ultimate aim of therapeutic work with Developmentally Traumatised children is not just to give them information about their past, but most importantly to enable them to develop understanding and forgiveness. Forgiveness, not in a religious sense, but as the ultimate act of resolution. Such resolution is something that can only come from within, and cannot be imposed from without. Just as the child has been helped to understand themselves in the context of their history, they need to be helped to understand their birth parents' and their birth family's behaviour in the context of their history.

Following the Family Futures NPP approach enables the child to move from primitive brain feeling states, to mid-brain inter-personal affective relationships, to cortical self-reflection. We would argue that the aim of any therapeutic intervention should be to move children from fear to feelings and ultimately to forgiveness.

A Clinical Vignette of the first phase of Family Futures NPP

Jake and where it started

Jake was 9 years old and angry. Not just a little bit angry, but really mad. He hated everything and everyone. He did not know why, but he just hated. He woke up in the mornings with a start and was instantly wide awake, tingling all over and drenched in sweat. He never felt hungry and only ate when his stomach absolutely insisted. Most of the time what he felt was a sort of itching sensation in his hands and feet, and the impulse to hit, kick and bite. Only when he did this did he get any relief. J ake also liked climbing up high and balancing on things, often, to his parents' horror, the high wall in the garden. Jake did not care what happened to him. Jake did not care what he did to anyone in his path. Jake wanted to die.

It all came to a head one particularly difficult day at school when Jake had lashed out at his favourite class teacher, the one who usually made him feel just a bit calmer. Jake felt as if nothing and no one could help him. He

went to the toilets at break time and spent a long time locked in the only cubicle that would lock. He was sweaty and breathing fast. The only thing that seemed to help was when he dug his nails into his hands until small bubbles of blood began to appear. Jake began to feel calmer as the blood trickled down his hand. He began to think about going to sleep forever and the pain going way. He slowly took off his belt and tied it around his neck. He put down the lid of the toilet seat and began to tie the other end of his belt to the cistern. Jake felt calm. For the first time in a long time, Jake felt calm. He no longer felt sweaty and tingly but quietly focused on making the knot of his belt firm.

Mrs Baker suddenly knocked on the toilet door and Jake panicked, shouting out for her to go away. Mrs Baker was shocked: she didn't believe it was possible for a child to want to hang themselves. An ambulance was called immediately and the day was consumed with worried professionals asking lots of questions. Jake's foster parents felt responsible. Jake's social worker felt responsible. Mrs Baker went over and over how she could have handled the morning differently and if she had been too harsh with Jake.

Jake sat on the bed at the hospital and did not speak. He did not know what to say. He had not really planned to kill himself but he did not want to be alive any longer. He did not feel angry, just very little and very lost. He wanted a hug but he did not know how to ask for one. His foster mother sat on the chair beside him, her eyes red with tears. His social worker looked ashen and the doctors and nurses kept fussing around him. People spoke in hushed voices, but no one spoke to him.

Jake's story

Jake was removed from his birth family when he was five years old following repeated safeguarding concerns due to his birth mother's drug use, violent relationships and unexplained injuries on Jake. The situation came to

a climax when Jake's birth mother tried to hang herself, and Jake was found trying to get her down by the police, who had been called due to neighbours' concerns. Jake had had placements in several foster homes which had all disrupted due to his aggressive and unpredictable behaviour. Jake had not had any therapeutic help. The prognosis for Jake was considered to be poor as his current foster parents were already beginning to state that they could not cope with him any loner.

…..and what happened then

Jake did not want to talk to the therapist and he certainly didn't want his foster mother to talk to her either. He made a lot of noise on the drums and was as loud and threatening as possible. He watched them sitting on the sofas and tried to work out what was happening. He drummed as loud as he could until his arms ached and his own ears were echoing with the noise. The therapist quietly wondered if Jake was making a lot of noise to try to scare her off and stop her from talking and saying things he didn't want to hear. Jake began to drum again. When he stopped drumming, as his arms were really aching by now, the therapist remarked on how excellently loud his drumming was and what strong arms he must have. Jake smiled and held up his arms showing his muscles. The therapist exclaimed loudly at his wonderful arms and Jake beamed from ear to ear. He was keen to show his muscles and moved over to have his foster mother and the therapist feel them. Some time was then spent wondering where Jake felt most comfortable in relation to both his foster mother and the therapist. Jake said he felt most comfortable sat beside the drums or standing up in front of them therapist and his foster mother showing them his muscles.

As the session progressed Jake was keen to show off all his physical skills and was especially keen to show his strength. The session focused entirely on how strong and physically able Jake was, and how when his body felt strong and he felt in control, Jake felt calm. Jake was curious about this. He was even able to describe how he disliked the sweaty, shaking feeling he sometimes got and how he preferred it when he felt powerful and all his

muscles were pulsating under his skin. He was keen that his foster mother touch his strong muscles and was able to allow her to see how fast his heart was beating and how when he was feeling strong, it calmed. With encouragement, he practised moving his breathing lower down into his abdomen and feeling his whole body feel calmer. By the end of the session Jake was beginning to ask questions about his body and why at times he feels the strange tingly sensation all over and the itching sensation in his hands and feet. He listened quietly and thoughtfully to the explanation about 'fight, flight or freeze' and how all human beings when scared, really scared, have no choice other than to survive. At the end of this first session, the therapist asked what Jake thought he did when he was scared. Jake went quiet, looked for the first time at this strange woman, and said, *"I fight. I have to fight to stay alive".*

In future sessions Jake learnt more and more about his amazing body and how he managed when stressed. He grew to understand the sweating, the itching, the tingling and his impulses to hurt others and himself. He learnt how to work out where he should sit in the room to feel calm and how when he began to feel stressed he could uses physical body-based games to calm himself and regulate his breathing. He was not at this point helped to make any connections to his history. One day, however, Jake came into the therapy room with his belt tied round his neck.

This session was a turning point for Jake. Jake did not at first seem aware of the belt but his foster mother and the therapist were. Jake's foster mother's eyes were wide with horror as she waited, wondering when the therapist would make a comment. The session instead focused on helping Jake calm his body and felt some strength and mastery over what was clearly his high level of stress. Jake's breathing deepened and he explained he had not eaten that day. A plate of food was brought into the session and he ate quietly, calming with each mouthful. Jake talked about not being able to eat when he felt stressed, and how often he went without any food all day. Jake, once he had eaten, laid back on the cushions on the floor beside the sofa and allowed his foster mother to stroke his head.

Jake looked much calmer but he still had the belt around his neck. The therapist said that she thought Jake must be wondering when she was going to comment on the belt ,and Jake said yes, he was wondering. The therapist asked him to notice the belt and where it was and really see what happened in his body once he began to notice. Jake closed his eyes and his lower lip began to tremble. The therapist quietly encouraged him to open his eyes and look at his foster mother so he was not on his own. Jake did and a tear slowly began to move down his cheek. Without saying a word, Jake kept looking at his foster mother and just allowed the tear to trickle down his face. Very quietly, and sounding very young, Jake began to tell the story of the day he found his mother hanging from the banister by her neck. All the time he talked he looked at his foster mother and his tears were mirrored by her tears as he told what he had never told anyone before. When he had finished, she held him and rocked him in silence.

For Jake this was the beginning of him telling his story, rather than acting it out.

What can be learnt and applied to the care and treatment of children in public care?

- Developmental Trauma and Attachment Theory should be the starting point for our thinking about children in public care who have experienced poor quality parenting in their birth family. What we have learnt from neuro-scientific research of recent years, from Attachment Theory and Developmental Trauma, is that the majority of children in the public care system, whether they be fostered or adopted, have had every aspect of their development impacted by early poor parenting. All and any remedial help for these children takes place in the context of their relationships with primary carers and attachment figures. The role of foster care is therefore far greater than providing day to day care. It should be seen as the foundation for developmental repair through positive relational interactions.

- An integrated multi-disciplinary assessment and treatment programme, systemic in design and practice, is essential for effective help. As all aspects of a child's development are impacted and impaired by trauma in infancy, it is essential that all children in public care have a comprehensive, multidisciplinary assessment, which looks at every aspect of their neuro-physiological and psychological development. This assessment should provide the blue-print for a treatment plan and an appropriate parenting approach.

- Residential carers, foster carers and adoptive parents are the primary conduits for change as Developmental Trauma is only resolved by parenting and the development of secure attachments. Too often, foster carers are seen as temporary or transient figures in a child's life. The true value and potential of high quality care giving by residential staff and foster carers is not recognised. In the hierarchy of therapeutic agents, medical professionals, psychologists, therapists and social workers are seen as pre-eminent, and foster carers are given very little respect or recognition for their role. It is important for the future that we turn this hierarchy on its head and put foster carers, residential workers and adopters at the top of the pyramid, supported below by a multidisciplinary team of professionals.

- This remedial help needs to begin at the point of entry of the child into the public care system, and not left until problems arise or only when permanent placements have been made. It is common practice for remedial help only to be offered to children once there are difficulties in the foster home, or a placement breakdown. Remedial help for children in public care should be pro-active not reactive. The therapeutic programme for children coming into foster care should start the moment they cross the threshold of the foster carer's home. Their feelings of fear, sadness and anger should be not only

acknowledged but validated. Whether foster care or residential care is short term or long term, it should be therapeutic from the word go.

- Substitute parents need to be educated about the impact of trauma on child development, Developmental Trauma, developmental re-parenting, and parenting Beyond Consequences. A major task for public care providers for children is educating not only professional staff but foster carers and adoptive parents on the impact of trauma on child development. Clear and systematic approaches to developmental re-parenting should be put in place so that parents and carers are not just relying on intuition or ways of parenting that reflect their own experience of being parented. We are at the beginning of a new awareness of the needs of children in the public care system, which requires a new approach.

- Facilitated contact and conversations between siblings and significant others are important issues that needs re-visiting. In most cultures, contact between children who are fostered and their birth family members is regarded as a positive experience for children who are in the care system, as it is felt to provide continuity and a sense of identity. At Family Futures, we believe that contact between siblings who are not placed together is helpful for their development, provided it is properly managed: there is research evidence to support this (Sanders and Campling 2004, Silverstein and Livingston Smith 2008). However, in our view, it is more complicated when thinking about contact with birth parents, grandparents and other adult relatives. Because by and large, in the UK, children are only in the public care system because they have been caused 'significant harm' in their birth family, we have been led us to question whether contact with adult family members is always 'a good thing'. In our experience contact can be re-traumatising and undermining of foster or adoptive placements. That being said, Family Futures does however on occasion 'facilitate' or 'manage' contact between children who are fostered or adopted and adult birth family members, when this is seen

as having a therapeutic value for the child as part of their 'life story work'. (*For a fuller account of facilitated contact see* Archer and Burnell 2003).

- We must not discount the important role that medication can play for some children by providing a 'chemical window of opportunity' for change. Amongst many child psychiatrists and paediatricians, foster carers and parents, there is still a reluctance to consider medication for children who are looked after. This reluctance is supported by the lack of appropriate and trialled medication for childhood psychiatric disorders. However, because of the severity of the traumatic experiences that many children in the public care system have experienced and the profound effect it has had upon them, at Family Futures we have seen the value of medication for many children who have ADD, ADHD, high anxiety, depression and who are impulsively aggressive and highly dysregulated. Our awareness that trauma affects the development and functioning of the brain and the central nervous system has made us aware that there are times when medication is the only short term remedial symptomatic relief that is available to some children. We therefore need to put the debate about medication for children in the public care system on the agenda for the future.

- In our experience, children welcome Family Futures NPP programme as do parents and carers, as it makes sense to them and is grounded in a holistic approach. It has been encouraging for us at Family Futures to experience the enthusiasm of foster carers, adoptive parents and the children for an NPP assessment and treatment programme that is collaborative, holistic and focussed on their experience. In our clinical experience, what we have seen are children who are desperate to be part of a safe, loving and empathetic family. The therapeutic challenge has been to help them know how to accept and live within such a family, as they have never learnt the language of love.

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