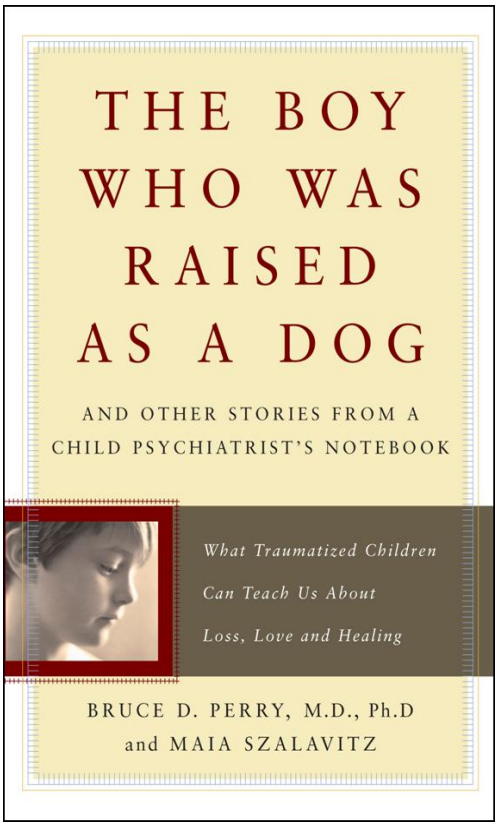
The Neurosequential Model in Education™

Study Guide for The Boy Who Was Raised as a Dog: v 1.0



Introduction

The human brain is a remarkable and complex organ. It mediates all of our thoughts, feelings and behaviors. It is the organ that allows us to form and maintain relationships, read, write, dance and sing. There is not a single aspect of human life that doesn't involve the brain. And, the brain is the target of our educational efforts. Whether the focus of the lesson is to learn to shape clay, skip rope, grasp long division, compose a paragraph, share, work in a team, or master the history of North Dakota, the teacher is trying to provide the patterned, repetitive experiences that will change the specific neural networks in the child's brain that mediate those functions.

The purpose of the Neurosequential Model in Education (NME) is to help educators, caregivers and students better understand some of the most important – and most easily mastered – concepts related to how the brain develops and changes. Understanding and acting on these concepts will lead to more effective and pleasurable learning experiences. The core concepts that the NME introduces have broad relevance for teaching typical as well as at-risk children.

There are several ways that the ChildTrauma Academy brings the NME to educators and educational settings; some of these are didactic (e.g., a day long seminar using a lecture format), some are more consultation based (e.g., the CTA's web-based Case-based NME teaching series) and some are relational, interactive and involve an ongoing learning process. This Book Study Guide was developed to help facilitate a reflective and interactive introduction to the NME. This Guide was conceived and developed by educators for educators – though it will be useful to a much larger audience. We are all hopeful that this will be a helpful introduction to the core concepts of the Neurosequential Model in Education.

The Book Study: Overview

Over the last ten years as the ChildTrauma Academy (CTA) was developing and introducing the Neurosequential Model of Therapeutics (NMT) to clinical settings there was an awareness of the relevance of these core concepts for education. The desire to formally bring the Neurosequential Model to educational settings has been present for many years. The desire started to become reality in 2010 when, after attending a seminar from Dr. Perry in Minot, ND, my teaching/curriculum writing partner Crystal Halseth and I asked for more training and for permission to teach the principles of neurosequential development and trauma informed practice to our fellow teachers at Erik Ramstad Middle School in Minot, ND.

We wanted to use Dr. Perry's first book, The Boy Who Was Raised as a Dog, as our background text and received permission to do that. We needed our staff to see and hear Dr. Perry as we had, and the CTA sent us videos to accomplish that professional and personal touch. We needed many of Dr. Perry's slides to use in our presentations. He provided. We wanted to secure graduate credit for our students, and Minot State University guided us through that process successfully.

With all in place, we offered the training, first to 25 staff members and then again to 15 more who weren't able to attend the first class. In 2011, we replicated the class at Dorothy Moses Elementary School in Bismarck, ND with another 25 staff members taking the training. Training has now started in Australia and Albuquerque, New Mexico and more requests are coming from other parts of the U.S., Canada and Australia.

This Book Study Guide is now available so that we can train trainers to handle what we think will be an ever-increasing demand for schools to learn about trauma informed practice and neurosequential development. The time is now for teachers to gain an NME perspective as they work with students who desperately need the classroom and life strategies we hope to share.

This manual comes to you from a team of professionals from Canada, Scotland, Australia, and the U.S. It has been reviewed and edited by Dr. Perry and his ChildTrauma Academy team and will continue to be revised as we work with professionals like you.

Sincerely,

Steve Graner,
NME Project Director
Fellow, The ChildTrauma Academy

Study Questions: The Boy Who Was Raised as a Dog

Chapter 1 Tina's World

1. One NME principle that can't be overemphasized is that changing the brain requires patterned repetitive experience. Discuss how this applies to the classroom in much the same way Dr. Perry applied it to his work with Tina.

2. Review why the sequential nature of the brain makes patterned repetitive experience so necessary.

3. On pages 10-12 of the book, Dr. Perry interacts with two mentors, Dr. Stine and Dr. Dyrud. Contrast the two men's styles and conclusions. Then contrast two schools of thought about traumatized kids that could exist amongst school staff: a neurosequential lens and a more traditional perspective.

4. Closely examine Dr. Perry's approach to therapy with Tina. Which of his techniques could translate to the classroom and the way you approach troubled kids?

5. On pp. 29-30, Dr. Perry discusses how our brains respond to novelty either positive or negative. How does this apply to children in school who have experienced a "different" normal than what we expect? What is the key to helping them adjust to a "new" normal?

6. After careful reading of the last paragraph of the chapter on p. 30, describe how schools could have great potential to be game changers in the lives and brains of troubled, traumatized children?

Chapter 2 For Your Own Good

1. "Resilient children are made, not born." (p. 38) After reviewing the first half of Chapter 2 and especially pp. 40-43, discuss how appropriate stress works positively to strengthen the student's ability to both learn and maintain self-control in the classroom.

2. How did Dr. Perry use his knowledge of the arousal continuum in his therapy sessions with Sandy? Why is it important for both teachers and students to understand the arousal continuum as it relates to learning in the classroom?

3. Discuss the difference between a stress response that is hyper-aroused and one that is dissociative? Think of examples of students that fit each descriptor and discuss how teaching and discipline can be handled best in both cases.

Chapter 3 Stairway to Heaven

1. On p. 62 of the book, Dr. Perry gives this advice to the mental health agencies called on to serve the Branch Davidian children taken in by the state: "create consistency, routine, and familiarity. That meant establishing order, setting up clear boundaries, improving cross-organizational communication..." Discuss his advice as it relates to your school and your classroom and the traumatized kids you are serving.

2. On pp. 72-73, Dr. Perry discusses the formation of a therapeutic web amongst those called in to treat the Branch Davidian children. How can your school improve the therapeutic web in place for your students? What individual strengths can you identify in your staff members that others can take advantage of? What strengths do you have personally that can be both valued and used in this web?

3. On p. 80, Dr. Perry says, "In fact, the research on the most effective treatments to help child trauma victims might be accurately summed up this way: what works best is anything that increases the quality and number of relationships in the child's life." What is your staff doing now or what can your staff be doing in the future to increase the quality and number of relationships in a student's life? Record some practical steps to making sure this happens at your school.

Chapter 4 Skin Hunger

1. "When two patterns of neural activity occur simultaneously with sufficient repetitions, an association is made between the two patterns." (p.85) How can this oft-repeated principle of Dr. Perry's be taken advantage of by the classroom teacher and school staff? (think pleasure, human interaction, and learning in concert)

2. Discuss and detail the therapeutic style of Mama P. Find at least five key ingredients of her intimate and effective work with Virginia and Laura. Then draw as many parallels as possible with how school staff members could combine to provide Mama P. style therapy for troubled students while they are in school.

Chapter 5 The Coldest Heart

1. Compare/contrast Leon and his older brother Frank. How did early childhood experiences lead to different life experiences and outcomes?

2. Discuss Leon's aberrant sense of pleasure. Detail the resulting problems that arose.

3. Was Leon salvageable? What kinds of interventions might have worked if caregivers and educators had understood his neurosequential development?

Chapter 6 The Boy Who Was Raised as a Dog

1. Detail the steps Dr. Perry and other staff members took as they began Justin's therapy. How was each area of the brain given attention?

2. Similarly, analyze and detail Connor's therapy in relation to the four parts of the brain.

[Note to trainers and trainees: We will not be including questions from Chapter 7 "Satanic Panic" or Chapter 9 "Mom is Lying..." because they are specialty cases with less universal application to the school setting. Feel free to include one or both if they have particular interest/application to your group.]

Chapter 8 The Raven

1. After examining Amber's case, detail the signs of a dissociative threat response that you might recognize in students in your school?

2. Discuss the threat response in the context of gender differences and how that may affect your efforts to either calm students or keep them in the alert state for optimal learning.

Chapter 10 The Kindness of Children

The Kindness of Children -- Discuss the advantages of teaching your students more about their own neurosequential development.

Chapter 11 Healing Communities

Healing Communities -- Summarize the changes possible in your school community that can help build a loving and caring community for all children, and especially those who are working to overcome the effects of developmental trauma.

Trainer Comments to Study Questions

Trainers: We are responding to our own questions in this section but not because we're afraid of trainees being "wrong" in their responses. We hope you'll be willing to field and respectfully appreciate the wide variety of answers you'll get. However, we do want to be helpful by including some talking points we hope the questions generate because they are crucial to the flow of the book study and our attempt to relate the original NMT principles Dr. Perry teaches to the school environment we hope to affect.

Chapter 1 Tina's World

1. One NME principle that can't be overemphasized is that changing the brain requires patterned repetitive experience. Discuss how this applies to the classroom in much the same way Dr. Perry applied it to his work with Tina.

Our hope as educators is that classrooms will be safe and predictable. Having pattern and repetition makes that possible. Sometimes teachers feel guilty about pattern and repetition, and in their efforts to be innovative, forget that balancing what is novel with what is predictable is the best teaching of all. Dr. Perry made Tina feel safe, established a pattern to their interactions, and allowed novelty only when it was appropriate. Teachers, too, need to ensure safety and order with sensible classroom norms, then establish a pattern of instruction that is developmentally sound, and from that solid foundation introduce the creative, stimulating material that makes teaching and learning so much fun.

2. Review why the sequential nature of the brain makes patterned repetitive experience so necessary.

Answering this question should allow the trainees to focus on the lower parts of the brain: the brainstem and the diencephalon. The importance of the mother's heart beat and a healthy learning heart rate can be emphasized. Knowing that synapses are made stronger and faster through repetition should help trainees realize that memory is developed and enhanced through repetition. Lower level learning like memorization is an important building block to better overall cognition because it is centered lower in the brain and is important for developing learner confidence, background knowledge, and a sense of safety and success. Traumatized kids need that foundation in order to move on to better relational skills and higher level cognition.

3. On pages 10-12 of the book, Dr. Perry interacts with two mentors, Dr. Stine and Dr. Dyrud. Contrast the two men's styles and conclusions. Then contrast two schools of thought about traumatized kids that could exist amongst school staff: a neurosequential lens and a more traditional perspective.

Dr. Stine represents impersonal, quick fixes (heavily dependent on drug therapy) and the one hour per week sessions with a therapist. Maintaining distance between teacher and student would be important to maintaining educational integrity. Failure to learn would be the fault of the child who doesn't care and never will unless someone else intervenes or circumstances scare him into a better attitude.

Dr. Dyrud represents the teacher who has empathy, does care about a kid's background, and still maintains a professional relationship that is only as personal as is comfortable for both teacher and student. A Dr. Dyrud teacher would know that troubled students are troubled for a reason that likely includes a traumatic event or a traumatic environment. He would seek the causes of the acting out and learn ways to help regulate the student.

4. Closely examine Dr. Perry's approach to therapy with Tina. Which of his techniques could translate to the classroom and the way you approach troubled kids?

Dr. Perry checked her heart rate regularly, a practice now being done in some schools trained in NME. He understood that he had to be patient to wait for long term results because Tina needed many positive repetitions to make a lasting change. Troubled students require the same. Dr. Perry was well aware of her stage of development and structured activities to match. We teachers must constantly find ways to do the same so we can build on successes rather than always reacting to failures. Tina was given some opportunities to guide the therapy just like students need some choice in how they approach our assignments. Finally, Dr. Perry realized there would be setbacks and had to deal with temporary failures in order to establish an overall pattern of success.

5. On pp. 29-30, Dr. Perry discusses how our brains respond to novelty both positive or negative. How does this apply to children in school who have experienced a "different" normal than what we expect? What is the key to helping them adjust to a "new" normal?

As teachers we often wonder why our troubled students don't soak up the love and positivity we offer in our classrooms. The truth is they will....eventually...but initially they and we have to deal with troubled brains that are used to chaos. Brains love what is normal and seek what is normal even if normal is bad. That is why we have to be patient enough to establish the "new" normal. Repetition, repetition, repetition.

6. After careful reading of the last paragraph of the chapter on p. 30, describe how schools could have great potential to be game changers in the lives and brains of troubled, traumatized children?

Changing brains requires the time, the repetitions necessary to change the templates we have formed in our minds. One hour of therapy a week can't possibly accomplish that change. However, spending six to seven hours a day, 180+ days a year, with a staff of understanding, trauma-informed adults makes fundamental change possible.

Chapter 2 For Your Own Good

1. "Resilient children are made, not born." (p.38) After reviewing the first half of Chapter 2 and especially pp. 40-43, discuss how appropriate stress works positively to strengthen the student's ability to both learn and maintain self-control in the classroom.

Stress is good for students when it is introduced in a classroom that is safe and predictable making it vital that we teachers have some sense of the developmental comfort zone of our students. Acting out or dissociating will occur if students are introduced to material far beyond their current learning level. This is where layered lessons and group work can really help. A layered lesson allows for many levels of response from simple to advanced. Adding an art piece to the response often lets more advanced thinkers express themselves factually and creatively while classmates respond well but in a simpler fashion. Carefully orchestrated group work allows for a division of labor within the group that tries to match development allowing meaningful contributions from everyone working on the task.

2. How did Dr. Perry use his knowledge of the arousal continuum in his therapy sessions with Sandy?
(p. 43) Why is it important for both teachers and students to understand the arousal continuum as it relates to learning in the classroom?

Dr. Perry made himself appear small and safe by getting down on the floor and coloring quietly with Sandy, demanding nothing of her until she was ready to respond. Had he appeared big and scary, it would have triggered an arousal response that would have shut Sandy down, her way of surviving this encounter. A safe, quiet, caring adult was a new picture of how an adult male can be, and when Sandy trusted Dr. Perry, she opened up to him.

Traumatized students will move along the arousal continuum quickly if they are used to having conflict with teachers in their past. Standing over them, raising your voice, and threatening them with dire consequences may be what they are used to, and they will go into survival mode quickly when faced with that template. In that mode, they cannot learn. Crouching down, speaking softly but firmly, and making a student aware that your classroom is a safe and orderly place is an appropriate way to keep students from moving along the arousal continuum and out of the learning zone. Like Sandy, troubled students will learn to expect this new template over time, and their behavior will adapt to it.

3. Discuss the difference between a stress response that is hyper-aroused and one that is dissociative? Think of examples of students that fit each descriptor and discuss how teaching and discipline can be handled best in both cases.

Hyper-aroused children act out. They will fidget, make noise, and talk out of turn. You will know by their actions that they are not on task.

Dissociative children will blend into their surroundings. They are quiet and often thought of a "good kids" who aren't doing well but cause no problems.

Both cases require discipline. Hyper-aroused kids will make us move along the arousal continuum, a natural response on our part, but we must remain as calm as possible, keep the voice quiet, kneel down, get close, and speak firmly. We must resist any temptation to make examples of these kids and embarrass them in front of their classmates. That will only escalate the fear response. Still, they must know that you have responsibility for controlling the learning environment for all kids, and you will not allow them to spoil that. Be calm, be present, and be fair, but do not be afraid. You have ultimate control of your classroom.

Dissociative kids, sometimes termed passive/aggressive, can be more difficult. They, too, need the voice quiet, your close presence, and a firm voice that doesn't threaten but is matter of fact. These kids sometimes need a one on one conference time after school so you can explain your understanding of dissociative behavior and the fact that you are not being fooled by quiet, seemingly compliant behavior. It may help for you to work out a subtle trigger for that student when you need them to get back in the learning zone.

Chapter 3 Stairway to Heaven

1. On p. 62 of the book, Dr. Perry gives this advice to the mental health agencies called on to serve the Branch Davidian children taken in by the state: "create consistency, routine, and familiarity. That meant establishing order, setting up clear boundaries, improving cross-organizational communication..." Discuss his advice as it relates to your school and your classroom and the traumatized kids you are serving.

Classroom norms are essential but don't have to be uniform. Each teacher has his/her own idea of how to create a positive learning environment. What must be true for all is "consistency, routine, and familiarity" inside each individual classroom. These three things establish the frame that protects both teacher and student and allows the calm necessary for creative thinking.

The idea of "freedom in a frame" works for all kids but especially caters to traumatized kids. They can only handle novelty and creativity when they feel safe, cared for, and successful.

2. On pp. 72-73, Dr. Perry discusses the formation of a therapeutic web amongst those called in to treat the Branch Davidian children. How can your school improve the therapeutic web in place for your students? What individual strengths can you identify in your staff members that others can take advantage of? What strengths do you have personally that can be both valued and used in this web?

First of all, school staffs need to realize how much they need to take care of one another. Helping one another with physical, emotional and spiritual health concerns grows a staff that

has the energy and will to serve troubled, traumatized children. The more you can foster a teaching family, the better chance you have to handle the toughest cases in your student body.

Knowing one another well also leads to using the individual strengths that surround you. Identify those helpers and call on them in times of need. It is a pleasure to help and to be helped. Don't be an island of excellence, be a stream that flows freely to all who need your assistance. Celebrate your diversity and make it work for you.

3. On p. 80, Dr. Perry says, "In fact, the research on the most effective treatments to help child trauma victims might be accurately summed up this way: what works best is anything that increases the quality and number of relationships in the child's life."

What is your staff doing now or what can your staff be doing in the future to increase the quality and number of relationships in a student's life? Record some practical steps to making sure this happens at your school.

Traumatized kids are often cold, unfriendly, and hard to like. The mirror neurons in our brains receive nothing from such kids, and we naturally want to ignore them. However, it is our job to turn their mirror neurons on by working to change the way they experience others. First, they need many positive interactions in a day whether they reciprocate or not. If a number of staff members make it a point to greet a troublesome child each day, his brain will struggle to resist the positivity generated. Numbers matter.

Then, you must increase the quality of those exchanges. Saying hi is good. Saying "Hi how are you?" and taking the time to stop and listen to the response is much better. We often run into students walking alone in the hallway. A one on one exchange can happen and should happen. It takes less than a minute to have a healthy, dopamine producing interaction. We all have a minute.

Chapter 4 Skin Hunger

1. "When two patterns of neural activity occur simultaneously with sufficient repetitions, an association is made between the two patterns." (p. 85) How can this oft-repeated principle of Dr. Perry's be taken advantage of by the classroom teacher and school staff?

Success is pleasure. A positive relationship is a pleasure. So when learning is paired with a stable, predictable relationship, life in the classroom becomes something to look forward to for students. The brain makes an association between learning and pleasure.

We can't be fooled into thinking most kids will learn best by failing, picking themselves up by the bootstraps, and getting it done. Few kids are motivated by failure. In fact, traumatized kids are triggered by failure into a negative stress response that prevents learning at all.

We don't have to make lessons too easy, but we must make them brainwise, using a step-up approach that starts with success and moves up to challenge.

2. Discuss and detail the therapeutic style of Mama P. Find at least five key ingredients of her intimate and effective work with Virginia and Laura. Then draw as many parallels as possible with how school staff members could combine to provide Mama P. style therapy for troubled students while they are in school.

1. Need to be loved -- Trouble kids have had plenty of conflict, plenty of anger, and plenty of power plays done by the misinformed adults in their lives. They need a new normal and someone patient enough to deliver the repetitions it will require to develop that environment. Teams of teachers can help do that by constructing a strong, consistent, but loving frame for that troubled student to exist within. When a student feels loved, the threat response no longer cripples him/her. Learning can begin.
2. Appropriate touch -- Sometimes in education we have to touch without touching: get close, lower our stature, speak softly, laugh together. We can touch students in class when music and rhythm become part of our instruction.
3. Sense of humor -- Teachers need to laugh as much as kids do. It is a stress release, a dopamine infusion, and a positive association between learning and fun. Teachers who laugh at themselves make a healthy statement to everyone in the class: I'm not perfect, and I don't need to be, and I like being here with you.
4. Rocking/rhythmic movement -- Sensory breaks that involve walking, balancing, dancing or rhythmic hand movements are therapeutic for everyone, especially the kids who struggle with self-regulation.
5. Developmental awareness -- The reality of every classroom is that kids are at different developmental levels and can only grow intellectually if we start them off with some sense of success. They need to feel accepted and then challenged. They will only move toward the novelty of learning when they have the foundation of acceptance.

Chapter 5 The Coldest Heart

1. Compare/contrast Leon and his older brother Frank. How did early childhood experiences lead to different life experiences and outcomes?

Frank was raised when his parents had a network of support from family and friends in a small community. Leon was raised in a big city with no extended family present to support his Mom and Dad. Frank was held, rocked, fed at regular intervals and loved by many people in his life. Leon was a fussy baby left alone for hours at a time when his Mom felt helpless to soothe him and had no one to turn to for help. For Frank, relationships were a pleasure, and he associated people with loving care. Leon was left to soothe himself, and he developed no association between relationships and care. He was left with no capacity to connect with other humans except in a manipulative way. Frank had the foundation for satisfying family life. Leon became

a sociopath who couldn't feel empathy even after murdering two girls and facing their families in court.

2. Discuss Leon's aberrant sense of pleasure. Detail the resulting problems that arose.

Leon's sense of pleasure was not connected to positive relationships. So, his only pleasures were found in how he could selfishly please himself. Without the ability to enjoy the give and take of healthy relationships, Leon only valued others for what they could do for him. He became a manipulator as sociopaths do. He would become angry and violent when manipulation didn't work as planned, and violence seemed to be a good way to get the pleasure he wanted. In the end, it cost two girls their lives. He killed them without remorse to get the pleasure he thought he deserved from them.

3. Was Leon salvageable? What kinds of interventions might have worked if caregivers and educators had understood his neurosequential development?

At age two Leon qualified for an early intervention preschool program. Had the caregivers been aware of neurosequential development they would have recognized the need for the lower brain development Leon missed. In an ideal world, he wouldn't have been put in a group of six or seven disturbed children who had one overwhelmed caregiver but would have had significant one on one attention devoted to his need for sensory integration. He could have begun some animal assisted therapy, learning to be kind, making associations between loving touch and the pleasure of giving attention.

In school he could have had a teacher who recognized his need to move, one that used sensory breaks throughout the day to keep him regulated. Better success in school would have led to more positive relationships with teachers and classmates. Of course, the best remedy for Leon would have been having parents who understood enough about brain development to provide the nurture he needed from the start. Sadly, none of these were possible for Leon, but these interventions can be possible for other children who have tough starts if training becomes available for parents, child care workers, and educators.

Chapter 6 The Boy Who Was Raised as a Dog

1. Detail the steps Dr. Perry and other staff members took as they began Justin's therapy. How was each area of the brain given attention?

Dr. Perry begins with soothing and trying to create a safe atmosphere for Justin. He does all he can to remove threat and reduce the fear that Justin feels in this strange environment. Then he begins to feed him in a non-threatening way, hoping to bring some level of satiety that might allow this relationship to begin. There is no attempt at language or asking questions, just the use of a musical, rhythmic voice to aid in calming Justin down. Taste and soothing sound are effective but otherwise Dr. Perry does all he can to limit sensory stimulation, making

sure Justin can only see what he can safely handle. Human interaction came to Justin in small doses. At first, only Dr. Perry and one other staffer made regular visits, allowing Justin some sense of familiarity with the people who had entered his life. Physical therapists were introduced to assist Justin with large muscle coordination and balance. Next up was speech therapy, opportunity to catch up on the language development he had missed. After two weeks, Justin was placed in a foster family and made remarkable progress.

2. Similarly, analyze and detail Connor's therapy in relation to the four parts of the brain.

Because of his early childhood neglect, Connor had an aversion to touch, the first of our senses to develop outside the womb. So, Dr. Perry started with using a slow, safe, systematic, rhythmic massage therapy. Connor's Mom was present to soothe him and to learn the techniques herself. Connor's heart was monitored to keep stress at a manageable level.

Next, Connor became involved in a music and movement class to improve his rhythm. This activity was done to target needs in both the brainstem and the midbrain but had the capacity to engage Connor with others, helping him with relational quality as well. This ended up improving his gait and lessened his infantile rocking and humming.

With lower brain improvement at an encouraging level, Dr. Perry added parallel play therapy to improve the limbic system. Dr. Perry reduced the power differential by allowing Connor to dictate terms of their interaction. He only employed talk therapy if Connor was ready for it and asked questions. Otherwise, they shared the same space quietly until a sense of safety was established and Connor was ready to move outside his comfort zone to explore interaction with someone he was learning to trust.

Finally Connor was ready to have a friend and bonded with a boy who had been in his music and movement class. They enjoyed Pokémon cards together, worked through some hazing at school, and gradually became functional in their social environs. Connor was fortunate to have better than average intelligence, supportive parents with a good income, and an understanding school. He went on to graduate from college.

Chapter 8 The Raven

1. After examining Amber's and Ted's case, detail the signs of a dissociative threat response that you might recognize in students in your school?

Amber was a cutter who hid her arms with long sleeves no matter the weather. This is readily observed in school, mostly with girls. In a similar vein, students with excessive piercings and tattoos may exhibit signs of a dissociative threat response. Both can be addictive if, when administered, the student enjoys a release of opioids or retreating into a trance-like state.

Students like Amber are rarely trouble in class. They are most likely to retreat into their own safe world, often engaging in fantasy style art. They have learned that many teachers will ignore their lack of engagement because they are quiet. Their strongest resistance to class order will come when asked to participate in groups.

Amber wore dark clothing like some other students who viewed themselves as "Goths." For her and others like her, this is one way to find acceptance in places like school even if the social group is small. It is much better than being ignored.

For Ted, the telltale sign of a dissociative response was excessive fainting. Dr. Perry got to the root of it--Ted's witnessing of domestic violence. He too daydreamed a lot in class in order to escape.

2. Discuss the threat response in the context of gender differences and how that may affect your efforts to either calm students or keep them in the alert state for optimal learning.

Ted and Amber both had dissociative responses to threat. However, there is often a gender difference regarding threat response. Boys are more likely to become hyper-vigilant due to the nature of brain evolution in hunter-gatherer societies. Boys were raised to fight and to protect, to be the warriors. They are naturally more action-centered when it comes to threat and tend to act out more in class if they are experiencing fear on a regular basis. They benefit greatly by a steady dose of somatosensory activities throughout the day and within the class hour. These activities allow a release of energy that can bring one from the alarm zone back into the alert zone where learning can happen. A teacher can also find ways to give hyper-vigilant students opportunities to help in class, especially if that help requires physical movement. Pushing a wheelchair, delivering a message, carrying books or any activity that is a demonstrable effort to help is particularly good for males who struggle with chronic threat.

Girls like Amber too often go unnoticed because of "no harm, no foul" mentality. However, they too need the somatosensory activities to reengage when they are in their dreamer state. Their evolutionary tendency is to disengage because in hunter-gatherer societies they were not expected to fight but to be compliant in order to survive as a potential child bearer for the winning tribe.

Check the population of world prisons and you will find a distinct difference in numbers of males and females, especially between violent males and violent females. Educators need to understand this difference and become as aware of the dissociative response as we are of the hyper-vigilant response. In both cases, we need to be aware of the target zones we need to hit as we plan lessons and carry them out. Adding music and movement and rhythm to our classes will benefit all students who are disengaging due to pervasive threat in their lives. These activities can be soothing for some and stimulating for others all at the same time.

Chapter 10 The Kindness of Children & Chapter 11 Healing Communities

The Kindness of Children -- Discuss the advantages of teaching your students more about their own neurosequential development.

We often hear or say ourselves, "Kids are cruel." It is too often true. Bullying has become a chronic problem in many schools. However, when one understands the neurosequential nature of the brain and the threat response, we realize much of this negative behavior is caused by fear of the unknown and the unusual. As Dr. Perry shows by relating his experience teaching a first grade class about how the brain works, this can change with even a little knowledge about our most amazing organ. Students who begin to understand the brain begin to recognize why differences among peers exist and why those differences don't have to be feared. They begin to realize many things about themselves including their own fear response and how that can be mediated using practical measures like good exercise, sleep, diet, music, and strong relationships.

Understanding our own brains also leads us toward empathy, a greater understanding of another's life circumstances, and how we can be helpers in the battle against fear and misunderstanding. Understanding the threat response gives us a biological and historical foundation for comprehending social ills like prejudice, domestic violence, and bullying. Understanding how a brain is made healthy takes us beyond comprehension toward practical efforts to remedy the ills that disturb us so much.

Healing Communities -- Summarize the changes possible in your school community that can help build a loving and caring community for all children, and especially those who are working to overcome the effects of developmental trauma.

The understanding gained by training staffs and students in the neurosequential model should have many positive effects. It begins with self-understanding, learning to overcome our own fears and prejudices. It extends to improving our peer relationships, doing all we can to improve the strength of relationships staff to staff, student to student, and staff to student. Then it extends to our practice, designing the school day and our individual lessons to reflect how the brain works and what the brain needs to thrive.

Understanding the brain should lead to greater patience, knowing it takes many repetitions to affect change.

Knowing our brains should lead to holistic health, knowing that good diet, sleep, exercise, music, and rhythm all lead to a strong mind.

Improving our brain health should lead to an understanding love, realizing we need a strong foundation of human relationships to thrive.

About The ChildTrauma Academy

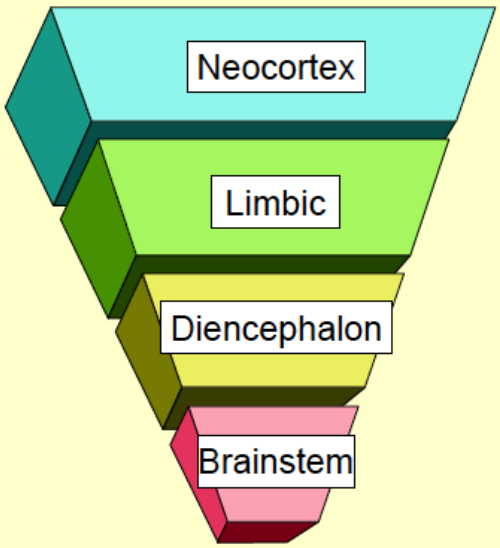
CTA is a not-for-profit organization based in Houston, Texas working to improve the lives of high-risk children through direct service, research and education. We recognize the crucial importance of childhood experience in shaping the health of the individual, and ultimately, society. By creating developmentally informed child and family respectful practice, programs and policy, CTA seeks to help maltreated and traumatized children.

For more information
Jana Rosenfelt, M.Ed.
Executive Director, ChildTrauma Academy
jrosenfelt@childtrauma.org

ChildTrauma Academy
5161 San Felipe, Suite 320
Houston, TX 77056

For online resources
http://www.ChildTrauma.org
http://www.ChildTraumaAcademy.com

FIGURES



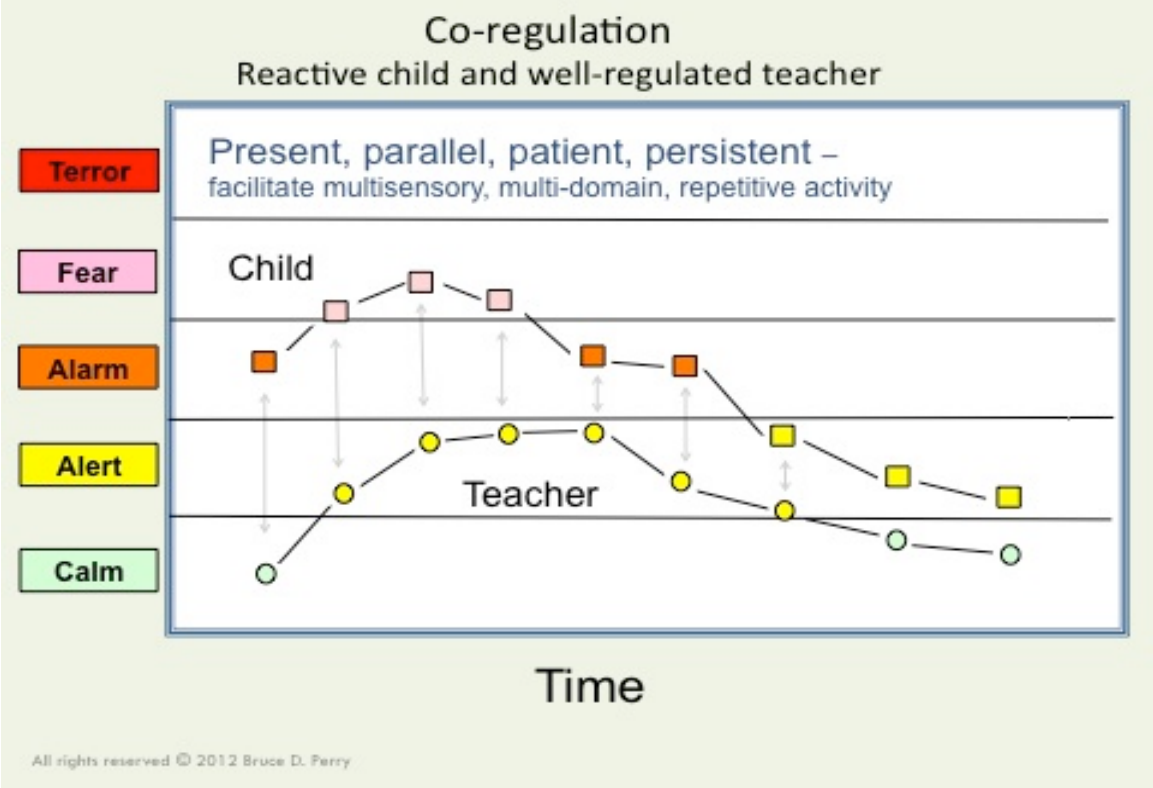
Abstract thought
Concrete Thought
Affiliation
"Attachment"
Sexual Behavior
Emotional Reactivity
Motor Regulation
"Arousal"
Appetite/Satiety
Sleep
Blood Pressure
Heart Rate
Body Temperature

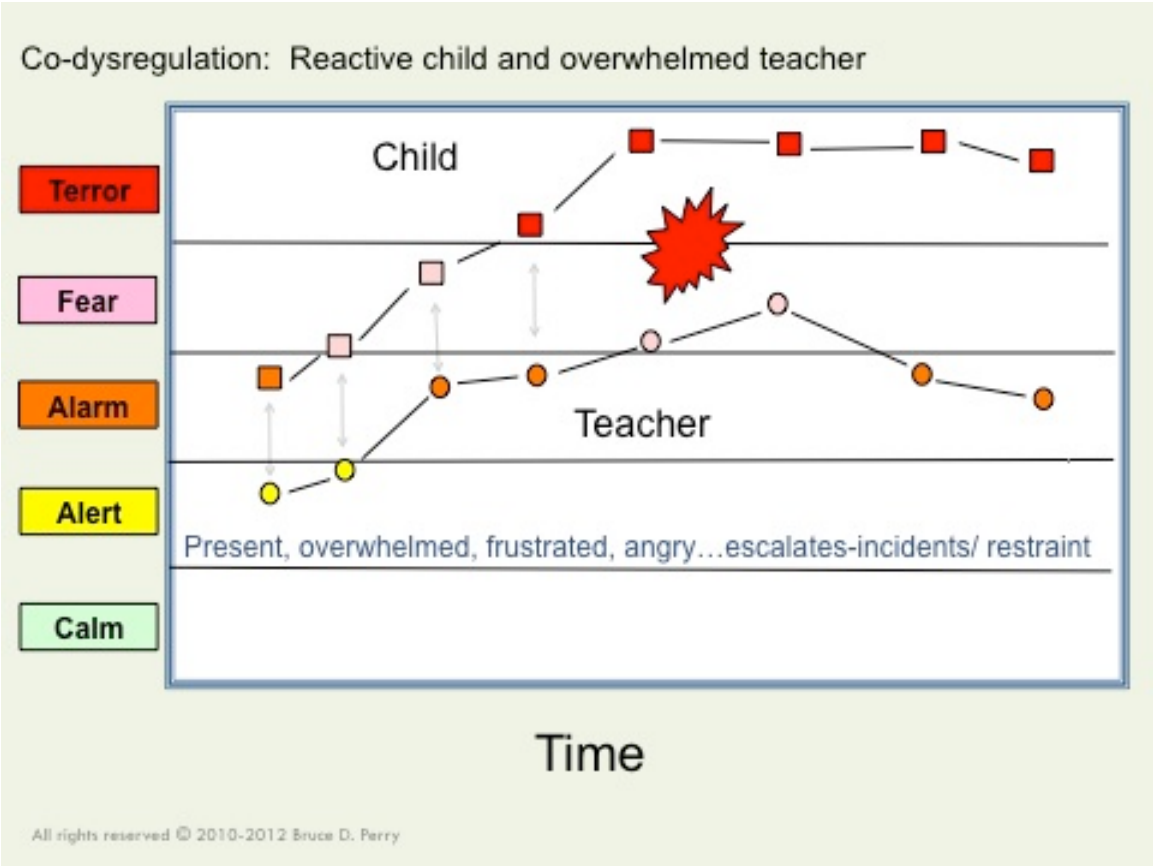
Hierarchy of Brain Function: The human brain is organized from the most simple (e.g., fewest cells: brainstem) to most complex (e.g., most cells and most synapses: frontal cortex). The various functions of the brain, from most simple and reflexive (e.g., regulation of body temperature) to most complex (e.g., abstract thought) are mediated in parallel with these various areas. These areas organize during development and change in the mature brain in a 'use-dependent' fashion. The more a certain neural system is activated, the more it will 'build in' this neural state -- creating an internal representation of the experience corresponding to this neural activation. This use-dependent capacity to make internal representations of the external or internal world is the basis for learning and memory.

Sense of Time	Extended Future	Days Hours	Hours Minutes	Minutes Seconds	No Sense Of Time
Arousal Continuum	REST	VIGILANCE	RESISTANCE Crying	DEFIANCE Tantrums	AGGRESSION
Dissociative Continuum	REST	AVOIDANCE	COMPLIANCE Robotic	DISSOCIATION Fetal Rocking	FAINTING
Regulating Brain Region	NEOCORTEX Cortex	CORTEX Limbic	LIMBIC Midbrain	MIDBRAIN Brainstem	BRAINSTEM Autonomic
Cognitive Style	ABSTRACT	CONCRETE	EMOTIONAL	REACTIVE	REFLEXIVE
Internal State	CALM	ALERT	ALARM	FEAR	TERROR

The continuum of adaptive responses to threat. Different children have different styles of adaptation to threat. Some children use a primary hyperarousal response, others a primary dissociative response. Most use some combination of these two adaptive styles. In the fearful child, a defiant stance is often seen. This is typically interpreted as a willful and controlling child. Rather than understanding the behavior as related to fear, adults often respond to the 'oppositional' behavior by becoming angry and more demanding. The child, over-reading the non-verbal cues of the frustrated and angry adult, feels more threatened and moves from alarm to fear to terror. These children may end up in a primitive "mini-psychotic" regression or in a very combative state. The behavior of the child reflects their attempts to adapt and respond to a perceived (or misperceived) threat.

When threatened, a child is likely to act in an'immature' fashion. Regression, a 'retreat' to a less mature style of functioning and behavior, is commonly observed in all of us when we are physically ill, sleep-deprived, hungry, fatigued or threatened. During the regressive response to the real or perceived threat, less-complex brain areas mediate our behaviors. If a child has been raised in an environment of persisting threat, the child will have an altered baseline such that the internal state of calm is rarely obtained (or only artificially obtained via alcohol or drug use). In addition, the traumatized child will have a 'sensitized' alarm response, over-reading verbal and non-verbal cues as threatening. This increased reactivity will result in dramatic changes in behavior in the face of seemingly minor provocative cues. All too often, this over-reading of threat will lead to a 'fight' or 'flight' reaction - and increase the probability of impulsive aggression.


Co-regulation
Reactive child and well-regulated teacher
Terror
Fear
Alarm
Alert
Calm
Present, parallel, patient, persistent –
facilitate multisensory, multi-domain, repetitive activity
Child
Teacher
Time
All rights reserved © 2012 Bruce D. Perry


Co-dysregulation: Reactive child and overwhelmed teacher
Terror
Fear
Alarm
Alert
Calm
Child
Teacher
Present, overwhelmed, frustrated, angry…escalates-incidents/ restraint
Time
All rights reserved © 2010-2012 Bruce D. Perry