

## Developmental Psychotherapy: Part 1: Behaviorism

Scientifically Grounded Psychotherapy with Children  
Craig Childress, Psy.D.

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

“With respect to hyperactivity, current behavioural treatment for this disorder may need modification in the light of the findings of the possible role of **coercive parenting** in this study.” (p. 503).

(Morrell & Murray, 2003)

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

“It is of interest that the **MTA trial failed** to find an appreciable effect of behavioural intervention for core ADHD symptoms, although showing effects for related non-ADHD areas of functioning. However, the child-focused component of the behavioural intervention arm of the trial involved a summer holiday treatment programme of 9 hours per day, 5 days a week for 8 weeks of intensive behavioural intervention, and a schoolbased programme of 12 weeks of a part-time behaviourally trained aide working directly with the child (MTA Cooperative Group, 1999a). This represented a **massive** level of intervention, and if, as suggested by the current study, early coercive parental interactions are implicated in the subsequent development of hyperactivity, may actually be **counterproductive**.” (p. 503).

(Morrell & Murray, 2003)

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

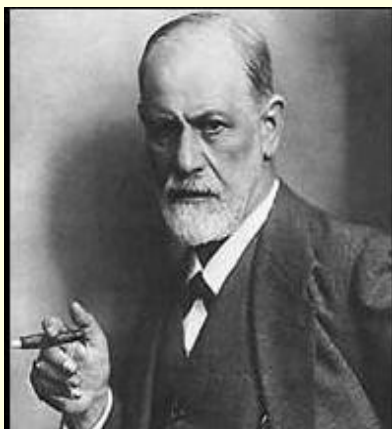
“In contrast, a recently conducted randomised controlled trial of a modified parenting programme for parents of pre-school children with hyperactive symptoms, focusing on **encouraging parental acceptance** of, and **respect** for, child characteristics through a **psycho-educational approach**, has shown effect sizes for reduction in hyperactive symptoms of .87 on the Parental Account of Childhood Symptoms (PACS), and .69 on direct observation (Sonuga-Barke, Daley, Thompson, Laver-Bradbury, & Weeks, 2001)” (p. 503).

(Morrell & Murray, 2003)

## Paradigm Shift

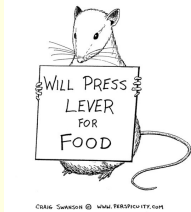
### The History of Behavioral Psychology

## Sigmund Freud – Psychoanalysis



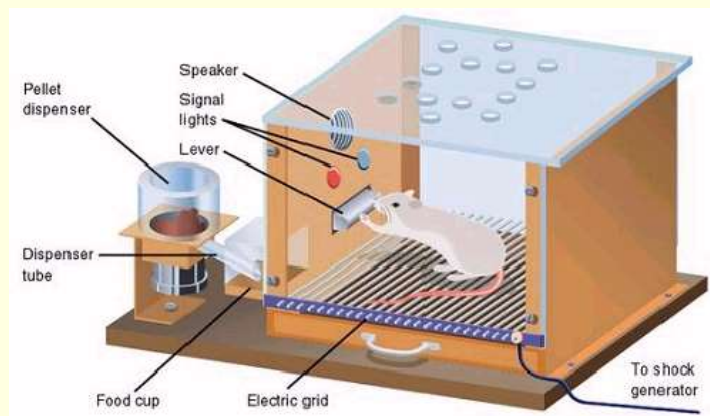
- Dominant paradigm of 1930 – 1950s
- Childhood experiences affect adult functioning
- Unconscious motivations affect adult functioning
- Oedipal Complex
- Id – Ego - Superego
- Psychosexual Stages

## B.F. Skinner – Behaviorism

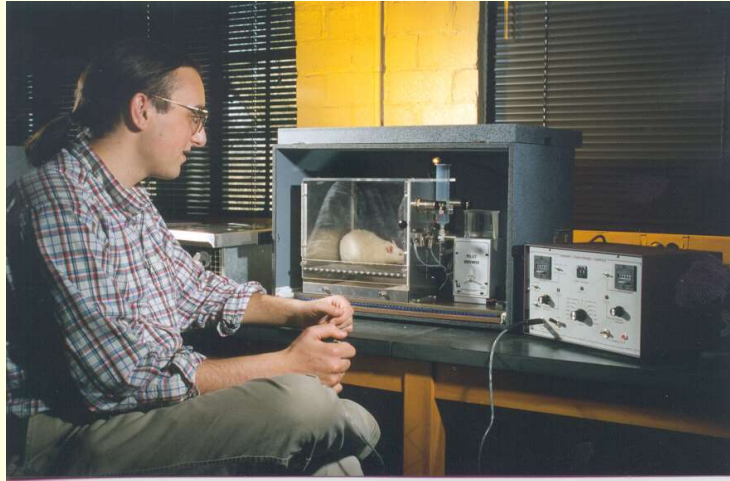


- Dominant paradigm of 1960s – today
- Reaction against “unscientific” basis of psychoanalysis
- Based in “experimental science” emerging from the university research laboratories in 1940s & 1950s with lab rats and pigeons
- Learning Theory

## The Skinner Box



## Learning Theory



## The Behavioral Model

- Learning Theory
  - Derived from laboratory studies teaching rats and pigeons in the 1940s and 1950s
  - Classical and Operant Conditioning
    - Reinforcement & Punishment
    - Extinction
    - Shaping & Fading
    - Differential Reinforcement of Other
    - Stimulus Control

## The Behavioral Model

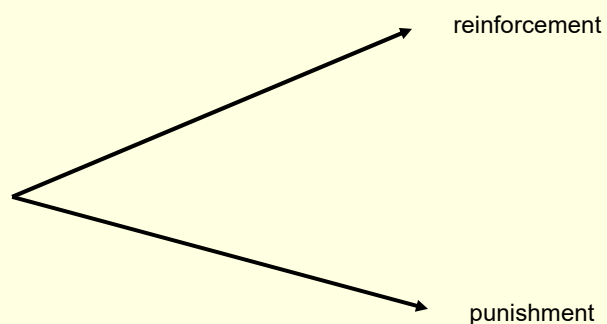
- Applied to human behavior
  - Behaviorism
  - An attempt to anchor psychological treatment within empirically-based Western science
  - Focus is solely on observable behavior
    - Restricted from speculating about what is happening within the “black-box” of the mind
    - Objective and verifiable – sole focus was on observable behavior

## Cognitive-Behavioral Therapy (CBT)

- Cognitive-behavioral psychology (1960s)
  - Is thought an observable behavior?
  - Strict behaviorists, such as Skinner, said no
  - But most behavioral psychologists recognized that thought often cued behavior
  - Thought defined as “sub-vocal speech”
  - CBT is used with adults
  - Behaviorism remains as the foundation for child treatments

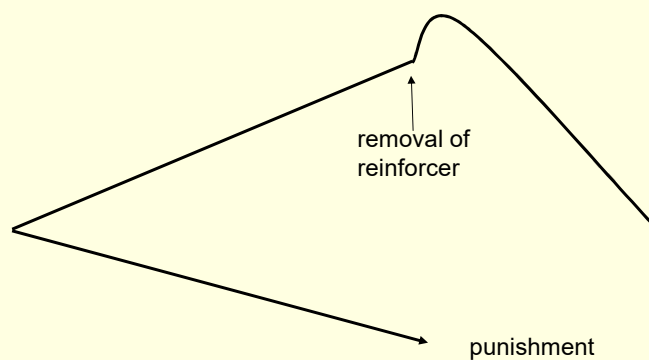
## Learning Theory

- Derived from animal models:



## Learning Theory

- Extinction ( the removal of reinforcement)



## Negative Attention

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- Children's misbehavior receives adult attention
- Adult attention is reinforcing
- Therefore:
  - Children's misbehavior is reinforced by the negative adult attention it receives
- Intervention:
  - Remove the reinforcer (negative adult attention) from children's misbehavior
  - "Time-out" from reinforcement

Webster-Stratton, C. (1992). *The Incredible Years: A Trouble Shooting Guide for Parents of Children Aged 3-8*. Toronto, Ontario; Umbrella Press.

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"Children's behavior is maintained by the attention it receives. Even **negative parental attention** such as nagging, yelling, and scolding can be rewarding to children." (p. 64)

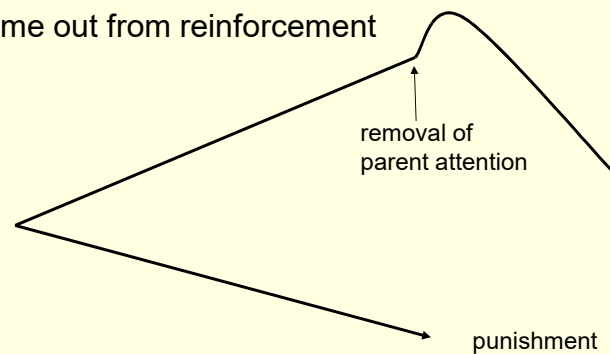
(Webster-Stratton, 1992)



## Time-Out

- Extinction (the removal of reinforcement)

Time out from reinforcement



Leitenberg, H. (1965). Is time out from positive reinforcement an aversive event? A review of the experimental evidence. *Psychological Bulletin*, 64, 428-441.

“The essential feature of TO [time-out] is a period of time in which positive reinforcement is no longer available.” (p. 428)

(Leitenberg, 1965)

## Positive Attention

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- Since adult attention is reinforcing
- Provide positive attention (e.g., praise) to positive behavior

“Catch them being good”

Wierson, M. & Forehand, R. (1994). Parent behavioral training for child noncompliance: Rationale, concepts, and effectiveness. *Current Directions in Psychological Science*, 3(5), 146-150

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“A second goal, then, of parent training programs is to help parents prevent the positive-reinforcement trap by delivering attention and other reinforcers to behaviors that are positive rather than negative.” (p.146).

(Wierson & Forehand, 1994)

## Behavioral Interventions

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- Cues
  - Command Structure
- Reinforcement
  - Praise
  - Token economies
- Extinction
  - Ignoring
  - Time-out
- Punishment
  - Response Cost

## Behavioral Interventions

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- Command Structure (cues)
  - Clear, 1-step command
  - Presented in the form of a statement not a question
    - 5-second pause for compliance
  - Warning of impending consequence
    - 5-second pause for compliance
  - Consequence

## Behavioral Interventions

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- Promoting Positive Behavior
  - Positive attention to positive behavior
    - “Labeled praise”
    - “Catch-them-being-good”
  - Reinforcement for positive behavior (token economies)
    - Star Charts
    - Point Charts

## Behavioral Interventions

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- Decreasing Problem Behavior
  - Extinction – Removing Reinforcement
    - Ignoring negative behavior
    - Time-out
  - Punishment – Applying Aversive Stimuli
    - Time-out
      - Shaming - boredom
    - Response-cost
      - Loss of privileges, activities, or objects

## Behavior Therapy

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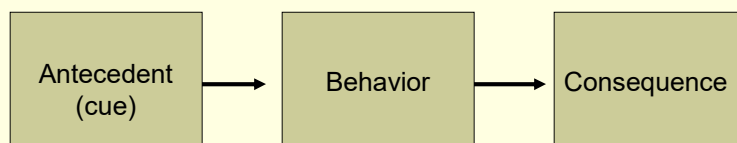
Behavior is controlled by the cue,  
not the consequence!

Behavior is controlled by the cue,  
not the consequence.

Behavior is controlled by the cue,  
not the consequence.

## The Behavior Chain

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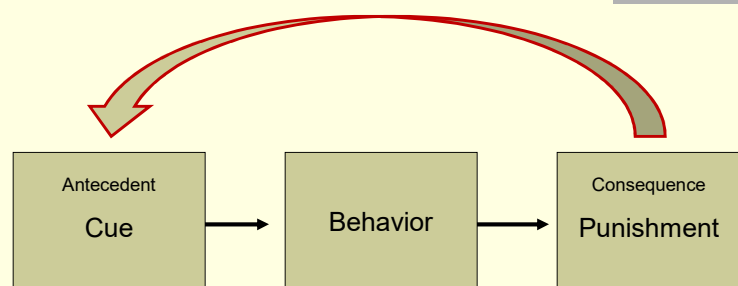
Behavior is elicited by the cue

The probability that a behavior will occur is a function  
of the **consequence**

## Behavior Therapy

- Learning through the application of punishment can be brutal

## The Behavior Chain

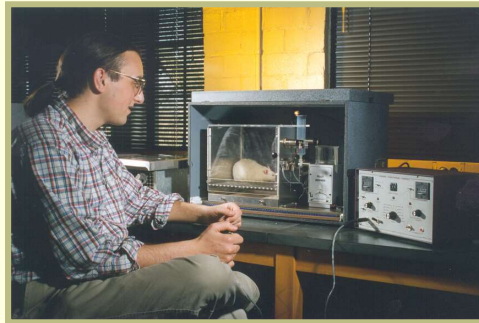


To create a *time-jump* of the **consequence** (punishment) to serve in the role of a **cue** requires either severe punishment or extended punishments in order to induce the traumatization necessary to create the temporal jump in role from consequence to cue (fear).

## Behavior Therapy

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- Reinforcement requires a motivated rat.
  - Food is withheld from the rat the night before.
  - As soon as the rat is satiated, learning trials stop.



## Behavior Therapy

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- Punishment is not used in behavior therapy because of its severe side-effects
- Punishment is used in “Parent Training” curriculums; “Parent Behavioral Training” (PBT)

## Behavior Therapy

- Parent Behavior Training is NOT good behavior therapy. It is very bad behavior therapy.
  - It was tolerated among the behaviorists because of the professional argument of cost-efficacy and the empirical validation of “parent training” in reducing... “behavior problems”... in children, i.e., “increased compliance” in children.
  - The focus is on the child meeting the needs of the adult, rather than the adult meeting the child’s needs.

## Behavior Therapy

- Parent Behavior Training is bad behavior therapy:
  - Minimal focus on cues (stimulus control)
  - Heavy reliance on punishment to suppress behavior
  - No management of punishment side-effects
  - Reinforcements don’t consider motivation/satiation
  - Delivered by non-behavior therapists
  - No discussion with parents of alternative treatment interventions



## Shifting Paradigm

Complex Systems Perspective of  
Child Development

## Emerging Scientific Evidence

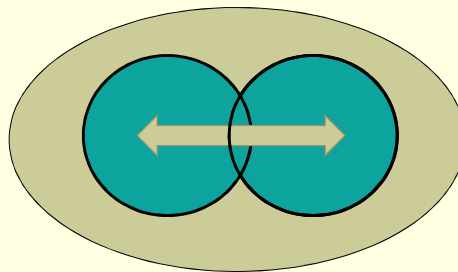
- Confluence of:
  - Attachment Theory
  - Developmental psychology
  - Infant psychological research
  - Cognitive neuroscience
    - (computer models of neural networks)
  - Early childhood psychology, occupational therapy (sensory –motor integration), speech & language

Shore, A.N. (1996). The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology.(emphasis added)

“There is now widespread agreement that the brain is a self-organizing system, but there is perhaps less of an appreciation of the fact that the self-organization of the developing brain occurs in the context of a relationship with another self, another brain.”

- This other self, the primary caregiver, acts as an **external psychobiological regulator** of the **“experience-dependent”** growth of the infant’s nervous system.” (Shore, 1996)

## Relationship is a Complex System



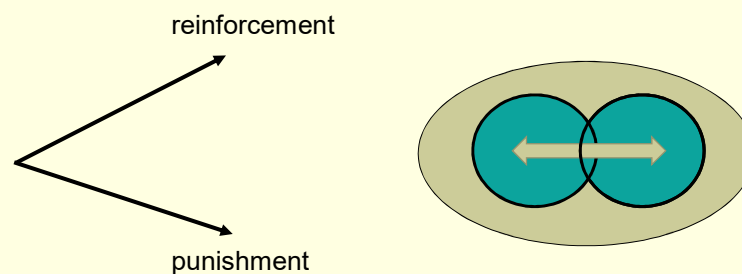
“A complex system is one whose behaviour is the product of **non-linear interactions** between its parts and from which new properties can emerge.”

(Hopkins, 2001)

Hopkins, B. (2001). Understanding motor development: Insights from dynamical systems perspectives. In Kalverboer, A.F. & Gramsbergen, A. (Eds.) *Handbook of Brain and Behaviour in Human Development*. Kluwer Academic Publishers: Boston. (emphasis added)

“The starting point is a thermodynamical perspective based on field theory and the science of self-organization in general that provide a theoretical umbrella under which its constituent approaches pursue a common scientific agenda: a natural law-based approach that links information with dynamics in order to explain the **organizational principles and mechanisms of pattern formation** at the ecological scale of analysis (i.e., the scale at which organisms and their environments are defined).” (Hopkins, 2001)

## Linear vs. Nonlinear



Shore, A.N. (1997). Early organization of the nonlinear right brain and development of a predisposition to psychiatric disorders. *Development and Psychopathology*, 9, 595-631. (emphasis added)

The basic unit of analysis of the process of human development is not changes in behavior, cognition, or even affect, but rather the ontogenetic appearance of more and more complex **psychobiological states** that underlie these state-dependent emergent functions.”  
(p.595) (Shore, 1997)

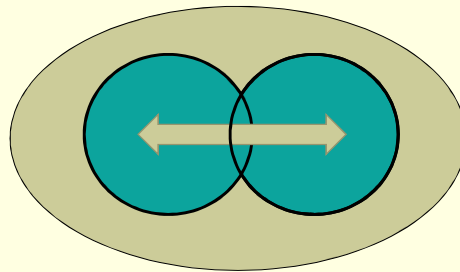
- Ontogenetic: of or relating to the origin and development of individual organisms

Kraemer, G.W. (1992). A psychobiological theory of attachment. *Behavioral and Brain Sciences*, 15, 493-541. (emphasis added)

- Attunement is a process by which **genetically mandated experience-expectant and dependent** brain microstructure is modified in relation to the caregiver.
- The rules for how this process takes place, how modifications are made thereafter, and how processes that have gone awry can be reversed appear to be most profitably cast in terms of **neurobiological theory rather than a behavioral** systems approach (p. 510).

## System Regulation

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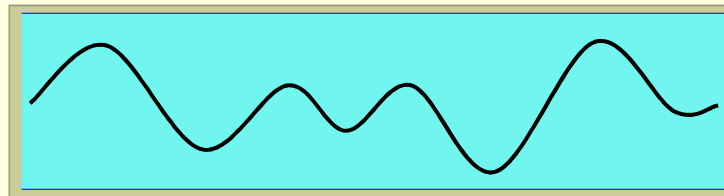
## Regulation

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- The child is taking in information from his or her environment, including the social environment
- The child is using this information flexibly to adapt and modify his or her behavioral responses
- The child's responses are organized and goal-directed
- (the system is organized and adaptively balanced)

## Regulated emotions-behavior

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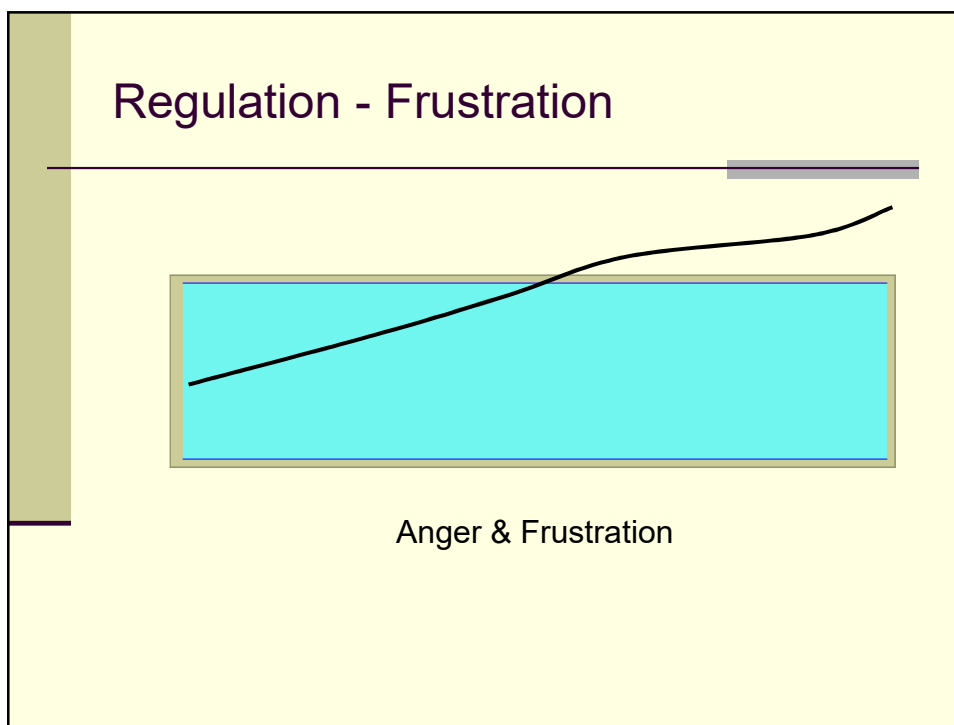
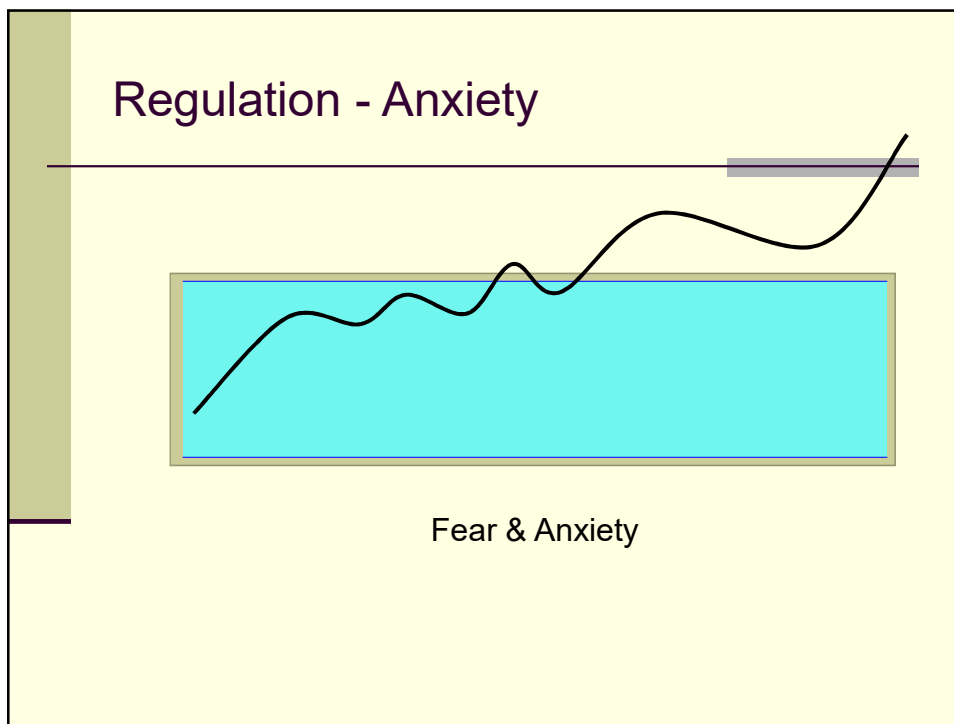


Regulated Affect – Regulated Behavior

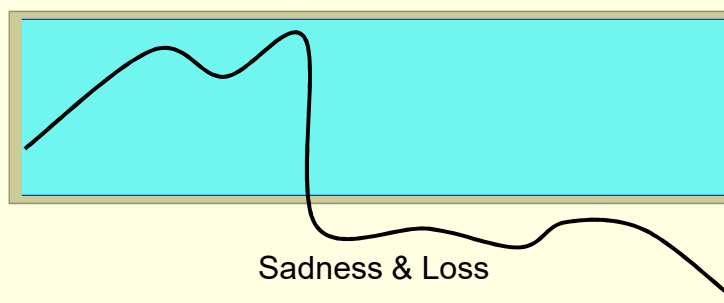
## Challenges to Regulation

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- Three emotions are especially hard to regulate
  - Anxiety (fear)
  - Frustration (anger)
  - Loss (sadness)

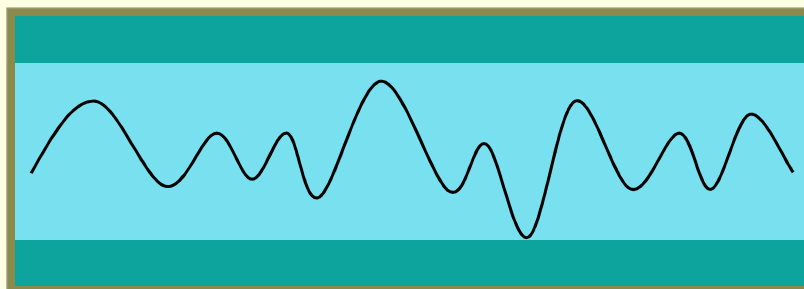


## Regulation - Disappointment



## Supporting Regulation

- Happiness and pleasure make it easier to maintain regulation

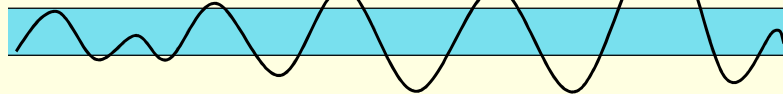




## Constriction - Expansion

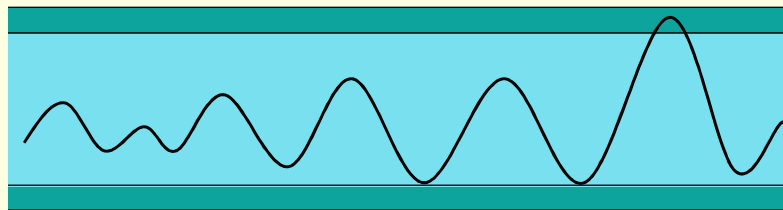
### Low self-esteem

- baseline of sadness – frustration - anxiety



### High self-esteem

- baseline of warmth – happiness - and affection



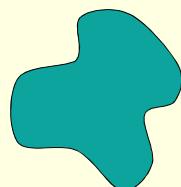
## Systemic Communication

- Behavior is a communication
  - When a child's nervous system becomes unable to **regulate** or **organize** affect or a behavioral response...
  - The child's nervous system emits a behavior that elicits the involvement of a more mature nervous system to assist with **re-regulation**
  - That's how the caregiver-child system is designed to operate

## Distress – “dysregulation”

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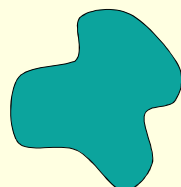
Hungry baby



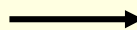
## Communication: “protest behavior”

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Hungry baby



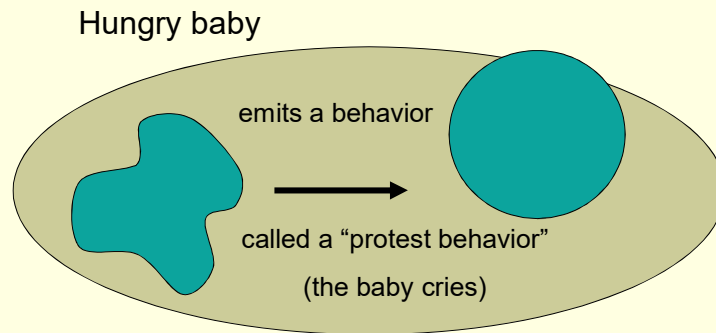
emits a behavior



called a “protest behavior”

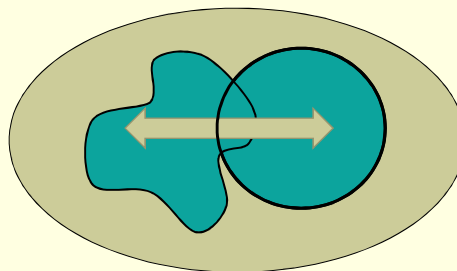
(the baby cries)

## Response: attachment approach



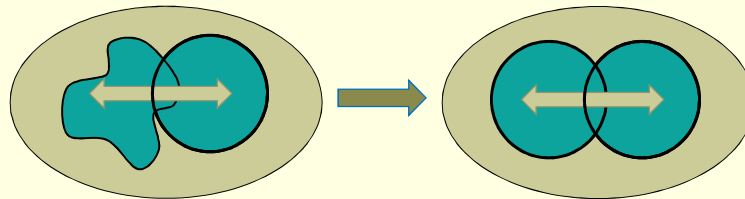
To elicit the organizing involvement of the more mature nervous system.  
The protest behavior must be somewhat **annoying** to the caregiver

## Re-regulation: authentic empathy



The caregiver responds with an **attuned** and **empathic** response to the child's distress, and assists ("scaffolds") the child's re-regulation.

## Re-regulation: “scaffolding”



The caregiver responds with an **attuned** and **empathic** response to the child's distress, and assists (“scaffolds”) the child's re-regulation.

## Use-Dependent Development

- The more **mature nervous system** of the adult caregiver helps re-regulate and re-organize the less mature and **dysregulated** nervous system of the child,
- Thereby building, through **use-dependent** “scaffolding,” all of the neural networks involved in regulating the emotional-behavioral, and ultimately, communication, networks of the child.

Shore, A.N. (1997). Early organization of the nonlinear right brain and development of a predisposition to psychiatric disorders. *Development and Psychopathology*, 9, 595-631. (emphasis added)

“The mother must monitor the infant’s state as well as her own and then **resonate** not with the child’s overt behavior but with certain qualities of its **internal state**, such as the contour, intensity, and temporal features.”

(p. 600)

(Shore, 1997)

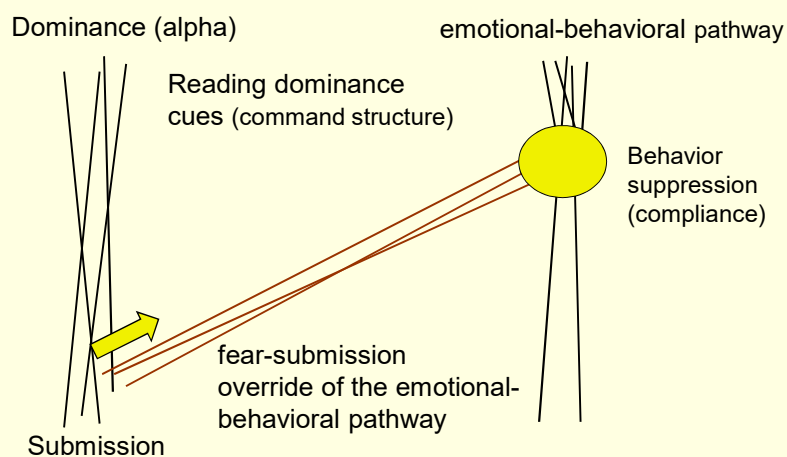
## Building Regulatory Networks

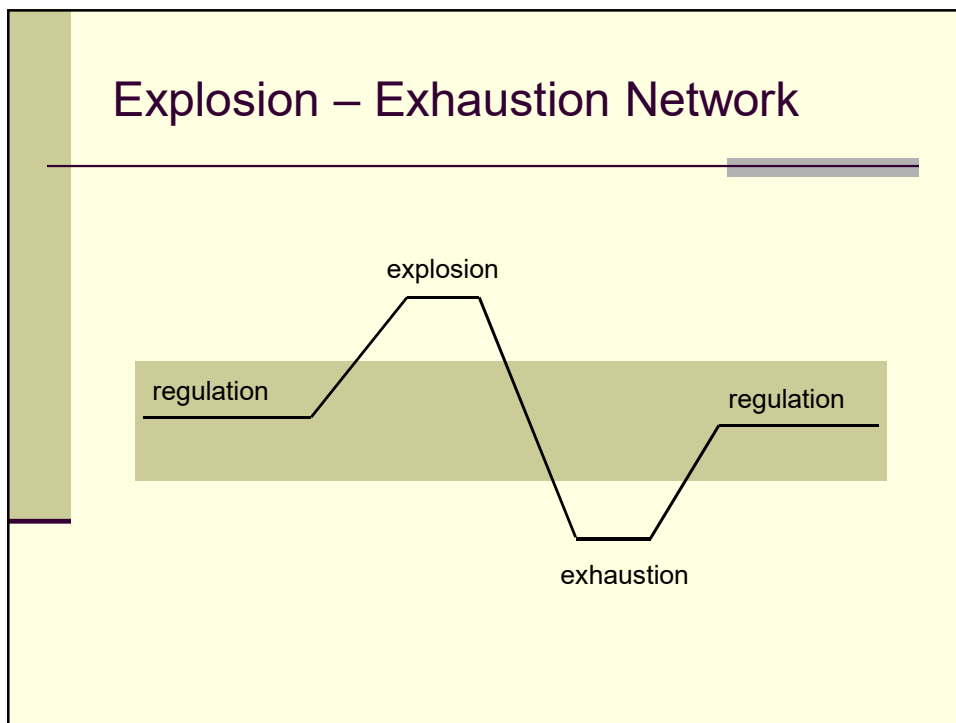
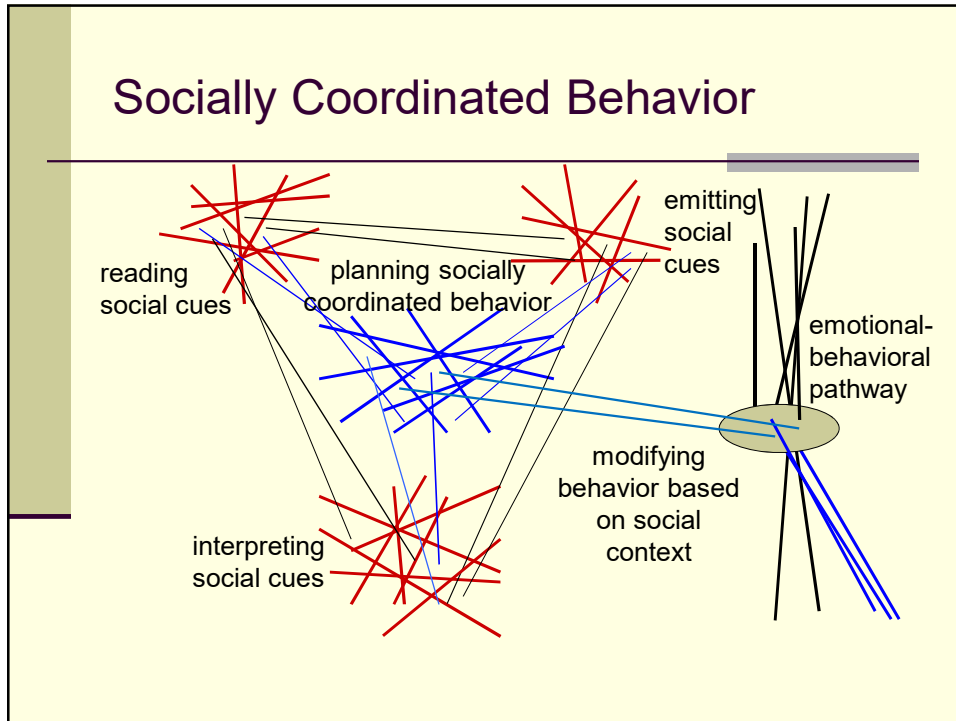
- With regard to building neurological networks, we build what we use. This is called “use-dependent” neural development
  - Synaptogenesis
  - Long-term potentiation
  - Use-dependent myelination

## Neurological Regulatory Networks

- In helping children grow the affect and behavior regulatory neural networks we have 3 choices as to which regulatory networks we wish to use (“scaffold”) and strengthen:
  - Dominance – Submission
  - Socially Coordinated Behavior
  - Explosion – Exhaustion

## Dominance-Submission Pathway





## Building Regulatory Capacity

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The question becomes...

Which regulatory system do we want to build with young children?

- Whichever network we wish to build should be the network we use in mediating the re-regulation of children's psychobiological states

## The Role of Protest

Behavioral Communication



## The Role of Protest

- When a child confronts a developmental challenge that threatens neural cohesion and neural organization... begins to **dysregulate** the child...
- The child emits a behavior (a protest behavior) to elicit the involvement of a more mature nervous system to assist with re-regulation of the child's neural networks.

## Conflict (and Protest) is Normal

- Adult:
  - My neurological networks are motivating me to engage in the task-oriented acquiring of resources to sustain our health ("I need to go shopping at the grocery store")
- Child:
  - My neurological networks are motivating me to engage in active exploratory learning to gain mastery skills in my environment ("I want to play")

## A pause to consider: need & want

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- Adult:
  - My neurological networks are motivating me to engage in the task-oriented acquiring of resources to sustain our health (“I **need** to go shopping at the grocery store”)
- Child:
  - My neurological networks are motivating me to engage in active exploratory learning to gain mastery skills in my environment (“I **want** to play”)

## A pause to consider: normal

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- Child:
  - My neurological networks are motivating me to engage in active exploratory learning to gain mastery skills in my environment (“I want to play”)
- This is a normal and healthy developmental motivation
- The child’s neuro-developmental systems are pressing the child in this direction (need?)

## Wants and Needs

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- Adult: I need to go to the grocery store
- Child: I need to play
  
- Adult: I want to go to the grocery store
- Child: I want to play
  
- One person's motivational networks are as persuasive for them as another person's motivational networks are for that person

## Evolutionary Perspective

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- Adults need to gather food & hunt
- Children need to learn life skills
- Solution
  - Engage the child's natural tendencies toward exploration and mastery in the context hunting and gathering life skills
  - Show the child where the plants are and how to recognize them, how to work as a group to hunt
  - Encourage the child into exploratory learning of life skills

## Modern Perspective

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- Engaging in adult task-oriented activity (going shopping) is a more complex and sophisticated task than the child's neural networks can fully capture at this point in development...
- Solution:
  - Make shopping fun (simpler, developmentally appropriate); engage the child's active participation/learning; maintain social involvement during the activity, i.e., support and engage the child's natural motivations for active exploratory learning

## Cooperation

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- Children want to cooperate with us... it is evolutionarily adaptive for children to follow, learn from, and cooperate with the adults of the species...
- The issue is whether we, as adults, are actively cooperating with our children...  
(“cooperation” vs. “compliance”)

## Protest is Normal

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- Conflicts between two people's motivational networks are inevitable
- The issue is not whether there is conflict, it is one of how conflict is resolved
  - Negotiating and resolving protest behavior facilitates the development of more complex, socially-mediated and socially organized neural networks
  - The developmental challenge signaled by protest behavior is metabolized and processed

## High Protest Signaling

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However...

- When there is a high frequency of protest signaling, it means that the developmental challenges faced by the child are not being adequately metabolized and processed within the caregiver-child system

## Response to High Protest Signaling

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- The issues in responding to High Protest Signaling (ODD spectrum) are...
  - What developmental challenge is the child confronting (and signaling)
  - Is that a normal challenge (understanding the child's perspective – de-centering)
  - How do we, as adults, manage such challenges (consideration of the neuro-regulatory networks we wish to build)

## Behavior as Communication

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- The development of language
  - Behavioral communication is the first phase, mediated by the adult's response to behavior **as-if** it had **communication** value.
  - Affective signaling
  - Verbal language
- The language of early childhood is "Monkey"
  - Gestures, tone, relational moves

## Protest as Communication

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The communication of Protest Behavior is...

I want to cooperate, but my neuro-regulatory networks are overwhelmed by differing motivational demands and excessive affect...

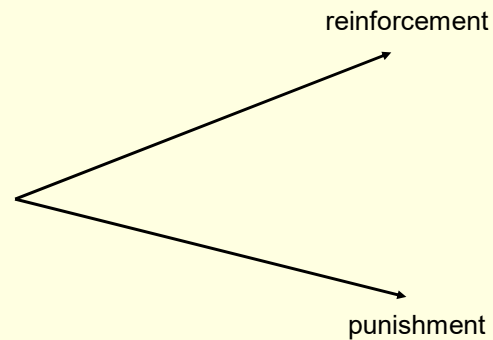
May I please get your help in managing my distress and in helping me cope with this situation?

## Behaviorism Revisited

Problem Behavior or  
Dyadic Communication

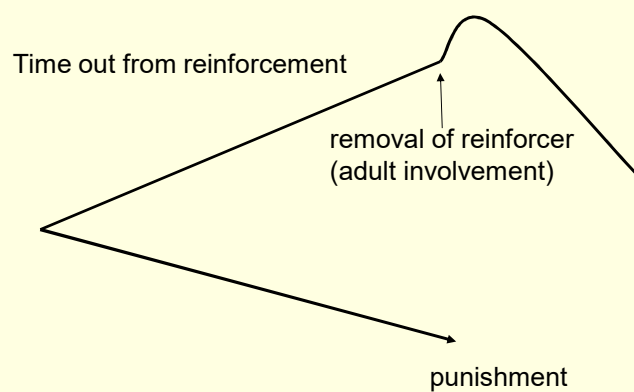
## Revisiting Learning Theory

- Derived from animal models
- Animals don't develop language



## Revisiting Learning Theory

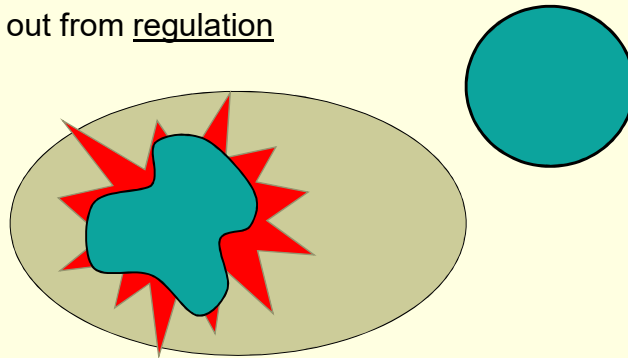
- Extinction ( the removal of reinforcement)





## Complex System Dynamics

- Extinction is actually the removal of regulation support
- Time out from regulation



## Attachment Theory

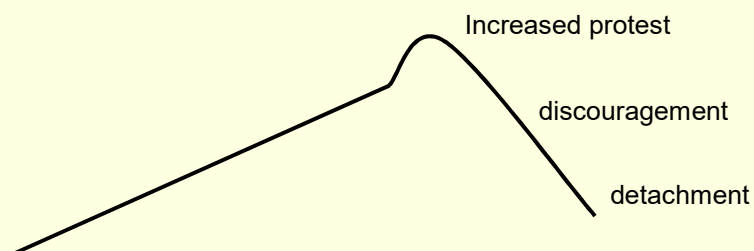
- Bowlby: Separation from the Caregiver
  - Increased Protest
  - Discouragement
  - Detachment

## Classic Learning Theory Model

- Slot machine ---- Unplug
  - Increased protest (aggression)
  - Discouragement
    - “This machine must be broken” but the person continues to play
  - Detachment
    - Walks away and goes to another machine

## Attachment Theory

- Separation from the caregiver



## Extinction - Detachment

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When applied to humans;

- Extinction strategies breach the communicative field and **induce detachment in the caregiver-child relationship**
- Extinction strategies breach the relational field, impairing the acquisition of emotional regulation skills, and exacerbating the development of impulsivity and hyperactivity

## Extinction and “Monkey”

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- In the language of “Monkey,” the message contained in turning your back and in walking away are clear...
  - I am rejecting you
  - I am not going to be involved with you, I am not a supportive caregiver to you
  - I will not help you
  - I don't care about what you're going through
  - You are on your own (I'm rejecting you)

Webster-Stratton, C. (1992). *The Incredible Years: A Trouble Shooting Guide for Parents of Children Aged 3-8*. Toronto, Ontario; Umbrella Press. (emphasis added)

### Barrier Time-Out

“For a younger child who gets off a Timeout chair, there should be one warning: If you get off the chair again, you will go to the Timeout room.”

“If the child comes out of the room, it may be necessary to hold the door shut or use a lock for a short time.” (p. 77)

(Webster-Stratton, 1992)

Webster-Stratton, C. (1992). *The Incredible Years: A Trouble Shooting Guide for Parents of Children Aged 3-8*. Toronto, Ontario; Umbrella Press. (emphasis added)

### Ignoring:

“The most powerful form of ignoring is a neutral expression, involving no eye contact, **no communication** and a turning away of the body.” (p. 65)

“When ignoring, it is best to physically move away by standing up and walking to another part of the room. If he follows you, **holding to your legs or arms**, it may then be necessary to leave the room.” (p. 65)

(Webster-Stratton, 1992)

## The language of childhood

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- The child's behavior is a communication...
  - "Excuse me, I'm having trouble regulating my emotions and organizing my behavior."
- that elicits caregiver involvement
  - "Can I please get your help, I'm not managing very well."

## The Hidden Secret of Behaviorism

Noncompliance with Time-Out

Roberts, M.W. & Powers, S.W. (1990). Adjusting chair timeout enforcement procedures for oppositional children. *Behavior Therapy*, 21, 247-271. (emphasis added)

“Unfortunately, our laboratory has demonstrated, noncompliant preschoolers often resist chair timeout (TO) despite our best efforts to prepare them for changed contingencies.”

“Fortunately, at least two viable procedures have been found to **suppress child escape efforts** from TO chairs: spanking and brief room TOs (i.e., barrier enforcement).” (p.257)

(Roberts & Powers, 1990)

Webster-Stratton, C. (1992). *The Incredible Years: A Trouble Shooting Guide for Parents of Children Aged 3-8*. Toronto, Ontario; Umbrella Press. (emphasis added)

### Barrier Time-Out

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(Webster-Stratton, 1992)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

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The Time-Out Procedure:

“In many cases when the time out procedure is implemented, children may throw temper tantrums lasting as long as **an hour or more**.

“During these tantrums, the parents may feel as if they should **capitulate** in order to terminate this unpleasant behavior.” (p.112)

(Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

---

The Time-Out Procedure:

“Although this parental response would certainly be effective at stopping such children from crying or becoming disruptive, it would merely serve to reinforce the future occurrence of such behavior.” (p. 112)

(Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

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**Beginning the Time-Out :**

The parent is instructed to make direct eye contact, **to raise the voice to a much louder level**, to adopt a firmer posture and stance, to point a finger at the child, and to present the child with the **warning**, "If you don't do as I say, then you are going to sit in that chair" (p.112)

(Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

---

**Beginning the Time-Out :**

"The entire display by the parent should be so constructed as to convey unequivocally to the child that the parent means what is **threatened** and will not hesitate to place the child in the chair." (p.113)

(Barkley, 1987)



Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

---

#### Beginning the Time-Out :

- The therapist should decide on how loud, firm, and theatrical the parent's display of the warning is to be for the level of severity of the child's behavioral disorder.
- Mildly disordered children may not require or deserve as loud a warning or intense a parental display over noncompliance as more severely disordered children." (p. 113-114) (Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press.

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#### Enforcing the Time-Out :

"When the child first leaves the chair without permission, the parent is to provide a **warning**."

"The parent returns the child to the chair and states, "If you get out of that chair again, I am going to **spank** you!" (p. 114)

(Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

---

#### Enforcing the Time-Out:

- This is said **quite loudly** as the parent points a finger at the child, again adopting a firm stance and posture.
  - While saying the word “spank,” the parent should **clap their hands** loudly in front of the child for dramatic effect.” (p. 114)
- (Barkley, 1987)

Barkley, R.A. (1987). Defiant Children: A **Clinician's** Manual for Parent Training. New York: The Guilford Press. (emphasis added)

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#### Spanking Enforcement of the Time-Out :

“Thereafter, should the child ever leave the chair again without permission, the parent sits in the chair, places the child over a knee, and delivers two (and only two!) swift spanks with an open hand to the child’s buttocks.”  
(p. 114)

(Barkley, 1987)

## C.A. Childress, Psy.D.

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- Locking children in a room
  - Threatening children with physical violence
  - And physically assaulting young children...
- ...are **not**, in the view of this psychologist, appropriate “therapy” for children
- ...and are **not** an appropriate response to children’s communicative signaling through protest behavior of unmanageable developmental challenges

## Extinction Side-Effects and Legal Liability

Risk Management Recommendations

Lerman, D.C., Wata, A.I., and Allace, M.D. (1999). Side effects of extinction: prevalence of bursting and aggression during the treatment of self-injurious behavior. *Journal of Applied Behavioral Analysis*, 32(1), 1-8. (emphasis added).

“Results of basic and applied studies suggest that extinction may be associated with a number of undesirable effects.”

“The two most common side effects described in applied texts and literature reviews are the extinction burst, which is a temporary increase in the frequency, duration, or magnitude of the target response, and extinction-induced aggression, which is an increase in aggression.” (p.1)

(Lerman, Wata, & Allace, 1999)

## Preparing Parents for Side Effects

### Extinction Burst

- “Remember, when you first start ignoring a misbehavior it will usually get worse. You must be prepared to wait out this period if the behavior is to improve” (Webster-Stratton, 1992, p.65)
- “Remember, when you first use Timeout the inappropriate behavior will get worse before it gets better” (Webster-Stratton, 1992, p.65)

### Extinction Induced Aggression

- ???

Azrin, N. H., Hutchinson, R. R., & Hake, D. F. (1966). Extinction-induced aggression. *Journal Of The Experimental Analysis Of Behavior*, 9, 191-204. (emphasis added)

### Extinction-induced Aggression

“Pigeons were conditioned to peck a response key under a procedure that alternated periods of food reinforcement with periods of extinction. The pigeons **attacked** a nearby pigeon at the onset of extinction. Some also **attacked** a stuffed model of a pigeon...

“The results indicated that the transition from food reinforcement to extinction was an aversive event that produced **aggression**. (p. 191)

(Azrin, Hutchinson, & Hake, 1966)

Lerman, D.C., Wata, A.I., and Allace, M.D. (1999). Side effects of extinction: prevalence of bursting and aggression during the treatment of self-injurious behavior. *Journal of Applied Behavioral Analysis*, 32(1), 1-8. (emphasis added).

### Extinction-induced Aggression

“Although few studies have systematically examined either phenomenon, both side effects have been reported in applied research findings (e.g., France & Hudson, 1990; Goh & Iwata, 1994; Herbert, Pinkston, Cordua, & Jackson, 1973).”

“For this reason, a **number of authors** (e.g., LaVigna & Donnellan, 1986) have cautioned **against** using extinction in clinical settings.” (p.1)

(Lerman, Wata, & Allace, 1999)

Lerman, D.C., Wata, A.I., and Allace, M.D. (1999). Side effects of extinction: prevalence of bursting and aggression during the treatment of self-injurious behavior. *Journal of Applied Behavioral Analysis*, 32(1), 1-8. (emphasis added).

### Extinction-induced Aggression

“Treatment with extinction may indeed be **contraindicated** for use outside laboratory settings if response bursts and extinction-induced aggression occur frequently and **increase the risk of physical harm to the individual or to the caregiver.**” (p.1)

(Lerman, Wata, & Allace, 1999)

Lerman, D.C., Wata, A.I., and Allace, M.D. (1999). Side effects of extinction: prevalence of bursting and aggression during the treatment of self-injurious behavior. *Journal of Applied Behavioral Analysis*, 32(1), 1-8. (emphasis added).

### Moderating Treatments

“On the other hand, extinction typically is combined with reinforcement or other procedures in applied studies, and several authors have suggested that these alternative procedures (e.g., differential reinforcement of alternative behavior [DRA], antecedent manipulations) may mitigate the undesirable effects of extinction (Kazdin, 1994). (p.1)

(Lerman, Wata, & Allace, 1999)

## C.A. Childress, Psy.D.

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- Extinction procedures provoke increased protest behaviors and aggression in children.
- This increased protest behavior and aggression can place the child at an increased risk of emotional and physical injury from the caregiver's response
  - Particularly with caregivers who are vulnerable to dyscontrol and who have problems with frustration tolerance.

## C.A. Childress, Psy.D.

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- The use of extinction procedures with children raises serious professional concerns for the emotional and physical safety of the client children
- Because of the documented negative side effects of extinction procedures, the use of extinction procedures with children may open the therapist to legal liability issues should injury to the child occur as a result of a caregiver's use of the extinction procedure recommendations of the therapist

## C.A. Childress, Psy.D.

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### Risk Management

1.) If extinction procedures are used, therapists should:

- Document their reasons for employing an intervention with high-risk side-effects
- Document their assessment of relevant risk factors associated with increasing the protest behavior and aggression in the client child

## C.A. Childress, Psy.D.

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### Risk Management

2.) If extinction procedures are used, therapists should :

- Document the steps taken to mitigate the risk of emotional and physical injury to the child from provoking the child into an increased display of protest behavior and aggression



## C.A. Childress, Psy.D.

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### Risk Management

3.) If extinction procedures are used, therapists should :

- Explain the risks from the side-effects to the child's parents and document their consent to the procedures and to the risks
- Discuss with parents alternative available treatments that do not involve the risks associated with extinction procedures

## C.A. Childress, Psy.D.

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### Risk Management

4.) If extinction procedures are used, therapists should :

- Provide the parent with clear and documented instructions on the use and misuse of extinction procedure contingencies,  
e.g., procedures for physically escorting the child to Time-Out, physical restraint procedures, barrier contingencies, and physical spanking contingencies

## C.A. Childress, Psy.D.

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- Barrier enforcement
  - Risk of physical injury to an unsupervised dyscontrolled child
  - Risk of emotional injury to a child “locked” away
- Holding restraint
  - Risk of physical injury to child and caregiver
- Spanking enforcement
  - Risk of physical and emotional injury to a child from the caregiver’s physical assault
- Response-Cost
  - Ineffective

## C.A. Childress, Psy.D.

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- The use of extinction procedures with children is **NOT** recommended by this psychologist.
- All “time-out” enforcement procedures are problematic and **NONE** are recommended by this this psychologist.

## Behaviorist Mythology

### Power Struggles and Praise

### Not a Power-Struggle

- Children do not “misbehave” in an effort to coerce adults... It is NOT a power struggle, it is a communication.
- In no social species on the planet do the very young challenge adults for social dominance in the group (alpha status)
- Given the clear and obvious power differential, young children do not engage in a “power” struggle, their protest behavior represents a [communicative](#) response regarding their psycho-neurological status (regulation).

## Caregiver Involvement

### Negative Attention Cycle?

- The negative attention cycle is a myth
- Children do not “misbehave” in order to be yelled at
- When a child’s neurological networks cannot **regulate** emotions or **organize** behavior, the child emits a behavior (protest behavior) to elicit the involvement of a more mature nervous system to help the child regain regulation

## Protest Behavior is Annoying

- The caregiver-child dyadic system is designed by evolution so that when the child is confronted with developmental challenges that overwhelm the child’s capacity to organize and regulate...
- The child emits a protest behavior to elicit the involvement of the caregiver...

AND

The protest behavior is designed to be annoying to the caregiver in order to motivate the caregiver to respond

## Children are annoying... that's normal

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- Caregiver's that were not annoyed by the child's protest behavior (typically crying) did not respond... their infants died... those "non-annoyance" genes didn't get passed on to future generations
- HOWEVER, if the caregiver is too annoyed, then there is the danger of abuse to the infant
  - Evolution also provides for attachment affection and love so we don't kill our children when they become annoying

## Protest Behavior

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Protest behavior is supposed to be annoying

## Revisiting Behaviorism

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- Behaviorism works through the Dominance - Submission network
  - Command structure (dominance cues)
  - Control of contingencies to achieve “compliance” (submission)
  - Producing a reduction in “behavior problems” (annoying protest behaviors)

## Suppression of Communication

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- However... to the extent that children’s behavior is a dyadic communication...
  - “Excuse me, I’m overwhelmed and need your help...”
- The **suppression** of child “behavior problems” represents a **suppression** of communication
  - This is **not** a developmentally appropriate recommendation for young children (or for any children... or even for adults)

## Caregiver Response

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- Our responsibilities are to:
  - Identify the developmental challenge that the child is struggling with
  - Help the child successfully navigate that challenge
  - Support the child's efforts to regain emotional and behavioral organization and regulation

## Appropriate Treatment Response

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- Children's protest behavior is supposed to be annoying in order to get our involvement
- Children are doing exactly what they're supposed to be doing... they are getting us involved
- Treatment involves the nature & quality of the involvement we provide to children.
- Treatment does **not** involve suppressing children's requests for our involvement because we find their requests annoying

## Building Regulatory Networks

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- With regard to building neurological networks, we build what we use
- In helping children develop (grow) the neurological networks for emotional and behavioral regulation, we have three brain system choices:
  - Dominance – Submission
  - Socially Coordinated Behavior
  - Explosion – Exhaustion

## Building Neural Networks

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We build what we use

- The **Dominance – Submission** network is very resilient and is typically intact
- It is the more complex **Socially Coordinated Behavior** network that is typically problematic in some facet
- It is typically the **Socially Coordinated Behavior** network that we want to build, i.e., use and scaffold
- Behaviorism uses the **Dominance – Submission** network. While it may reduce “behavior problems” – it is not supportive of healthy child development.



## Praise

---

There is no evidence to support praise as a significant influence on child behavior

IN FACT

There is evidence to indicate that it has minimal to no effect on child behavior

Roberts, M.W., Hatzenbuehler, L.C., and Bean, A.W. (1981). The effects of differential attention and time out on child noncompliance. *Behavior Therapy*, 12, 93-99.

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“Attention manipulation did not have a measurable effect on child behavior.” (p.98)

(Roberts, Hatzenbuehler, & Bean, 1981)

Roberts, M.W. (1985) Praising child compliance: Reinforcement or Ritual. *Journal of Abnormal Child Psychology*, 13(4), 611-629. (emphasis added)

---

“There are currently no studies documenting the independent contribution of the praise component to successful parent training programs.” (p. 611)

(Roberts, 1985)

Roberts, M.W. (1985) Praising child compliance: Reinforcement or Ritual. *Journal of Abnormal Child Psychology*, 13(4), 611-629. (emphasis added)

---

“It is reasonable to assume that contingent praise will reinforce child compliance. The assumed reinforcing effect, however, **lacks empirical support** (Budd, Green & Baer, 1976; Roberts, Hatzenbuehler, & Bean, 1981; Wahler, 1968, cited in Whaler, 1969; Wahler, Winkel, Peterson & Morrison, 1965 case 3).” (p. 612)

(Roberts, 1985)

Roberts, M.W. (1985) Praising child compliance: Reinforcement or Ritual. *Journal of Abnormal Child Psychology*, 13(4), 611-629.  
(emphasis added)

---

“For the children reported in this paper, however, praising child compliance **did not** appear to serve a reinforcement function.” (p. 627)

(Roberts, 1985)

Roberts, M.W. (1985) Praising child compliance: Reinforcement or Ritual. *Journal of Abnormal Child Psychology*, 13(4), 611-629.  
(emphasis added)

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“Praising child compliance appeared to be more of a **polite ritual** than an active therapeutic component for altering noncompliance.” (p. 611)

(Roberts, 1985)

## Children do not like to be yelled at

???

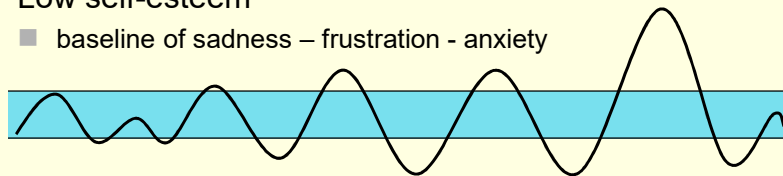
“Children’s behavior is maintained by the attention it receives. Even negative parental attention such as **nagging, yelling**, and **scolding** can be **rewarding** to children.” (Webster-Stratton, 1992, p. 64)

“For the children reported in this paper, however, praising child compliance **did not** appear to serve a reinforcement function.” (Roberts, 1985, p. 627)

## Regulation Constructs & Expands

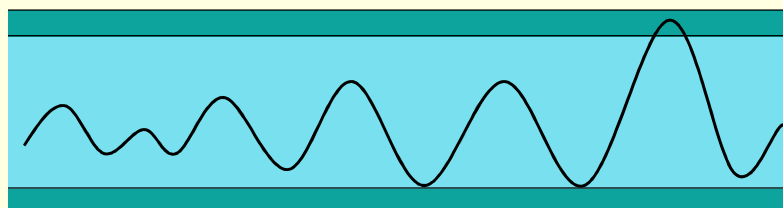
Low self-esteem

■ baseline of sadness – frustration - anxiety



High self-esteem

■ baseline of warmth – happiness - and affection



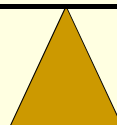
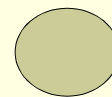
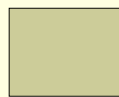
## Relationship-Based Treatment

- **Non-contingent** affection, warmth, support, compliments, smiles, hugs, encouragement, laughter, and authentic praise will improve regulatory capacity (behavior – cooperation - functioning).
- When the child is well-organized and regulated, and is absorbed in active exploratory learning... that activity is developmentally healthy... don't disrupt them
  - "Catch-them-being-good" can represent misattuned responding
- When a child seeks relationship, provide warm, positive, supportive relationship

## The Dynamic Balance

Environmental Demands

Relationship Demands



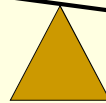
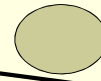
## Out of Balance Relationship Needs

- When relationship demands become more pressing, healthy involvement in exploratory learning is diminished
- Meeting relationship needs allows the child to resume healthy absorption in environmental learning

Environmental Demands



Relationship Demands



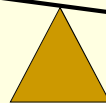
## Buying off Relationship Time

- We can “buy off” some of the child’s demand for our relationship by using **control** techniques (Dominance – Submission network).
- However, every time we do, we pay a price...

Environmental Demands



Relationship Demands



## Behavioral Techniques

### Punishment's Limitations

### Response-Cost taking something away

- One-time efficacy
  - Encourages threatening without follow-through
- It is only effective if the child cares about and wants what's taken away
  - Puts parents in the role of identifying and taking away what their child most loves (mean parents)
  - Contributes to a significantly hostile parent-child relationship (coercive control)
  - Interferes significantly with positive parent-child bonding (angry and threatening environment)

## Punishment Limitations

- Promotes escape behaviors (lying)
  - Punishment is only effective as long as it can't be escaped, and only for as long as the dominance cue (the parent) is present
- Punishment techniques lose effectiveness with increasing child age
- Requires that the **fear** of punishment be active as a cue to influence decisions (a few severe punishments, or continual low-level punishments)

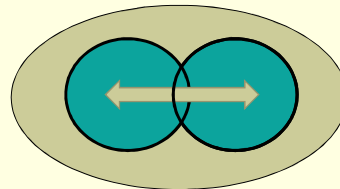
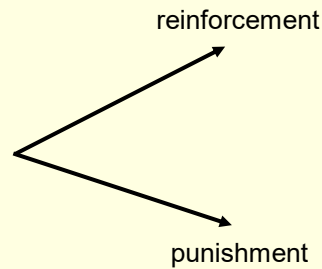
## Empirically Validated vs. Scientifically Valid

Evidence-Based Practice vs.  
Scientifically-Based Practice



## Linear vs. Nonlinear

Linear models are valued because research statistics use linear mathematics



Complex nonlinear systems are much harder to mathematically model, although they are more ecologically valid

## Evidence Based - Evidence of What?

- Research has demonstrated that behavioral interventions can reduce “oppositional” and “defiant” behavior (although **not** core ADHD symptoms)
  - The outcome target of this research has variously been labeled “problem behavior,” “negative behavior,” “noncompliance,” and “inappropriate behavior”
  - When presented as a reduction in “problem behavior” etc., this clearly sounds like an admirable accomplishment...

## Treatment Goal?

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However...

- Protest behavior is a behavioral **communication**. Behavioral interventions suppress child communication. Is that our treatment goal?
- Extinction procedures like time-out and ignoring lead to detachment. **Behavioral** interventions create detachment in the caregiver-child relationship. Is that our treatment goal?
- Behavioral techniques build the Dominance-Submission network. Is that our treatment goal?

## Alternative Intervention Target

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- In the treatment of neuro-developmental challenges, we would rather want to build the dysfunctional **Socially Coordinated Behavior** network; reading social cues, interpreting social cues, emitting social cues, and developing a socially organized plan for getting one's needs met in a social context
- So, while we can **intimidate** children into submission using **coercive** control techniques... is this our treatment goal?

## Domination and Violence

---

And...

- If we must impose our will and enforce obedience upon small children by locking them in rooms as they cry and scream, and by turning our backs and walking away from children as they clutch at the arms and legs of their caregiver (Webster-Stratton),

And

- By intimidating children through threats of physical violence, and then by physically assaulting them when they do not submit (Barkley)... is this our "treatment" approach?

Wampold, B.E. (2001). The great psychotherapy debate: Models, methods, and findings. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers

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Scientific meta-analysis of psychotherapy research:

- "The evidence indicates that, at most, **specific ingredients** account for **only 1%** of the variance in outcomes." (Wampold, 2001, p. 205)
- At least **70%** of the psychotherapeutic effects are **general effects** (i.e., effects due to common factors). (Wampold, 2001, p. 207)

Wampold, 2001)

Wampold, B.E. (2001). The great psychotherapy debate: Models, methods, and findings. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

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“Giving primacy to an EST [Empirically Supported Treatment] ignores the scientific finding that all treatments studied appear to be uniformly beneficial as long as they are intended to be therapeutic.”

Wampold, 2001)

Wampold, B.E. (2001). The great psychotherapy debate: Models, methods, and findings. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

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“Although apparently harmless, the EST movement has immense detrimental effects on the science and practice of psychotherapy, as it legitimizes the medical model of psychotherapy and suggests that some treatments are more effective than others when in fact treatments are equally effective.” (p. 216)

Wampold, 2001)

Wampold, B.E. (2001). *The great psychotherapy debate: Models, methods, and findings*. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

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■ Recommendation 5: Abolish the EST Movement as Presently Conceptualized.

“...the EST criteria and list of therapies so designated are saturated with the medical model conceptualization of psychotherapy. The **bias** is distinctly toward behavioral and cognitive-behavioral treatments, reducing the likelihood of acceptance of humanistic, experiential, or psychodynamic therapies. (p. 225)

Wampold, 2001)

Wampold, B.E. (2001). *The great psychotherapy debate: Models, methods, and findings*. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

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“Because clinical trials are shaped by the medical model as well as the EST criteria, there exists further prejudice against therapies other than behavioral and cognitive therapies.” (p. 225)

Wampold, 2001)

Wampold, B.E. (2001). The great psychotherapy debate: Models, methods, and findings. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

“Clinical scientists, in the hopes of promoting what are the ‘scientific therapies’ (i.e., behavioral and cognitive-behavioral therapies), have developed criteria that, from a medical model perspective, would be valid and informative, but, when taken in light of the evidence presented in this book, are **ill-conceived** and **misleading**.” (p. 225)

Wampold, 2001)

Wampold, B.E. (2001). The great psychotherapy debate: Models, methods, and findings. Mahwah, New Jersey Lawrence Erlbaum: Associates, Publishers [emphasis added]

“Designated empirically supported treatments should not be used to mandate services, reimburse service providers, or restrict or guide the training of therapists.” (p. 225)

Wampold, 2001)

## Ethical Considerations

Protection of the Vulnerable  
and Informed Consent

## APA Ethics Code

### Principle E: Respect for People's Rights and Dignity

- Psychologists respect the dignity and worth of all people, and the rights of individuals to privacy, confidentiality, and self-determination. Psychologists are aware that **special safeguards** may be necessary to protect the rights and welfare of persons or communities whose **vulnerabilities** impair autonomous decision making.

(American Psychological Association, 2003; emphasis added)

## Treatment Choices?

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“Fortunately, at least two viable procedures have been found to suppress child escape efforts from TO chairs: spanking and brief room TOs (i.e., barrier enforcement).”  
(Roberts, & Powers, 1990. p.257)

“If you get out of that chair again, I am going to spank you!”... While saying the word “spank,” the parents should clap their hands loudly in front of the child for dramatic effect... the parent sits in the chair, places the child over a knee, and delivers two (and only two!) swift spanks...” (Barkley, 1987 p. 114)

## Principle E: Respect for People's Rights and Dignity

---

- ...special safeguards may be necessary to **protect the rights and welfare** of persons... whose vulnerabilities impair autonomous decision making.



## APA Ethics Code

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### Standard 3.10 Informed Consent

- (b) For persons who are legally incapable of giving informed consent, psychologists nevertheless (1) provide an appropriate explanation, (2) **seek the individual's assent**, (3) **consider such persons' preferences and best interests**, and (4) obtain appropriate permission from a legally authorized person, if such substitute consent is permitted or required by law. When consent by a legally authorized person is not permitted or required by law, psychologists take reasonable steps to protect the individual's rights and welfare.

(American Psychological Association, 2003; emphasis added)

## Alternative Treatment

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- Alternative treatment approaches exist that involve treating the child's neurological development through **attuned, sensitive, and responsive** caregiving
- Or we can dominate the child through intimidation, punishment, and physical violence
- Which treatment would our client want us to adopt?
- If we have to "suppress the child's escape efforts" do we have the child's assent to our treatment plan?

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

“With respect to hyperactivity, current behavioural treatment for this disorder may need modification in the light of the findings of the possible role of coercive parenting in this study.” (p. 503).

(Morrell & Murray, 2003)

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

“It is of interest that the MTA trial failed to find an appreciable effect of behavioural intervention for core ADHD symptoms, although showing effects for related non-ADHD areas of functioning. However, the child-focused component of the behavioural intervention arm of the trial involved a summer holiday treatment programme of 9 hours per day, 5 days a week for 8 weeks of intensive behavioural intervention, and a schoolbased programme of 12 weeks of a part-time behaviourally trained aide working directly with the child (MTA Cooperative Group, 1999a). This represented a massive level of intervention, and if, as suggested by the current study, early coercive parental interactions are implicated in the subsequent development of hyperactivity, may actually be counterproductive.” (p. 503).

(Morrell & Murray, 2003)

Morrell, J. and Murray, L. (2003). Parenting and the development of conduct disorder and hyperactive symptoms in childhood: a prospective longitudinal study from 2 months to 8 years. *Journal of Child Psychology and Psychiatry*, 44(4), 489-508. (emphasis added).

“In contrast, a recently conducted randomised controlled trial of a modified parenting programme for parents of pre-school children with hyperactive symptoms, focusing on [encouraging parental acceptance](#) of, and [respect](#) for, child characteristics through a [psycho-educational approach](#), has shown effect sizes for reduction in hyperactive symptoms of .87 on the Parental Account of Childhood Symptoms (PACS), and .69 on direct observation (Sonuga-Barke, Daley, Thompson, Laver-Bradbury, & Weeks, 2001)” (p. 503).

(Morrell & Murray, 2003)

“Power is of two kinds. One is obtained by the fear of punishment and the other by acts of love.

Power based on love is a thousand times more effective and permanent than the one derived from fear of punishment”.

Mahatma Gandhi