
States of Arousal Are Related to Successful Working Guide Dogs

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Why?





Behavior Checklist (BCL)

Definition for each score for each of 51 items		Released for item?	
Absent	5	Yes	
Very Mild	4	No	
Mild	3		
Moderate	2		
Severe	1		
Not Applicable	0		

James Serpell, PhD

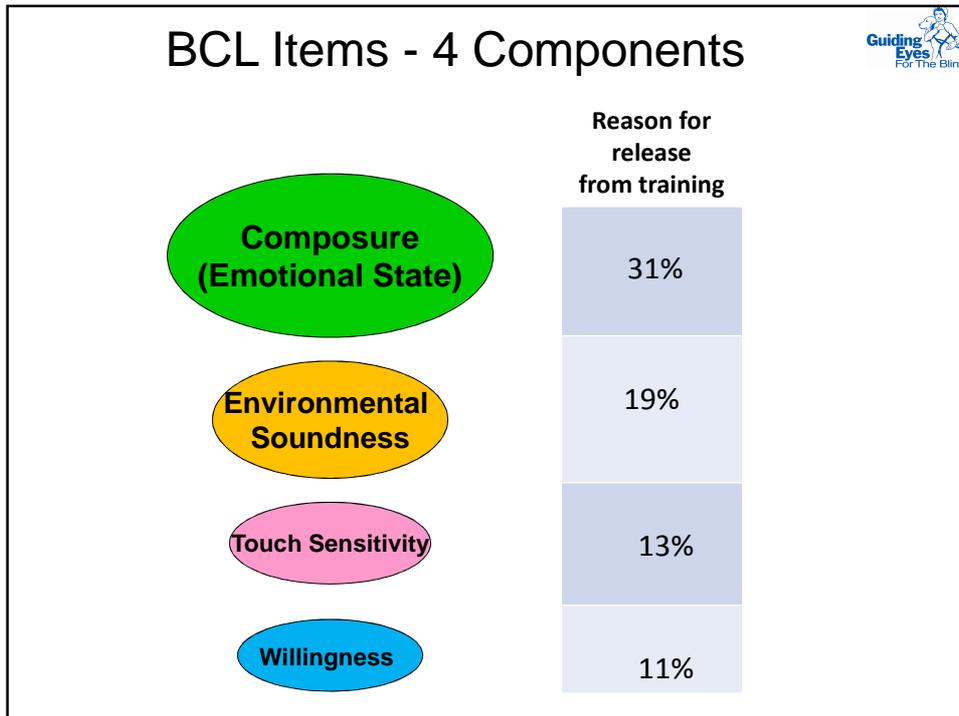


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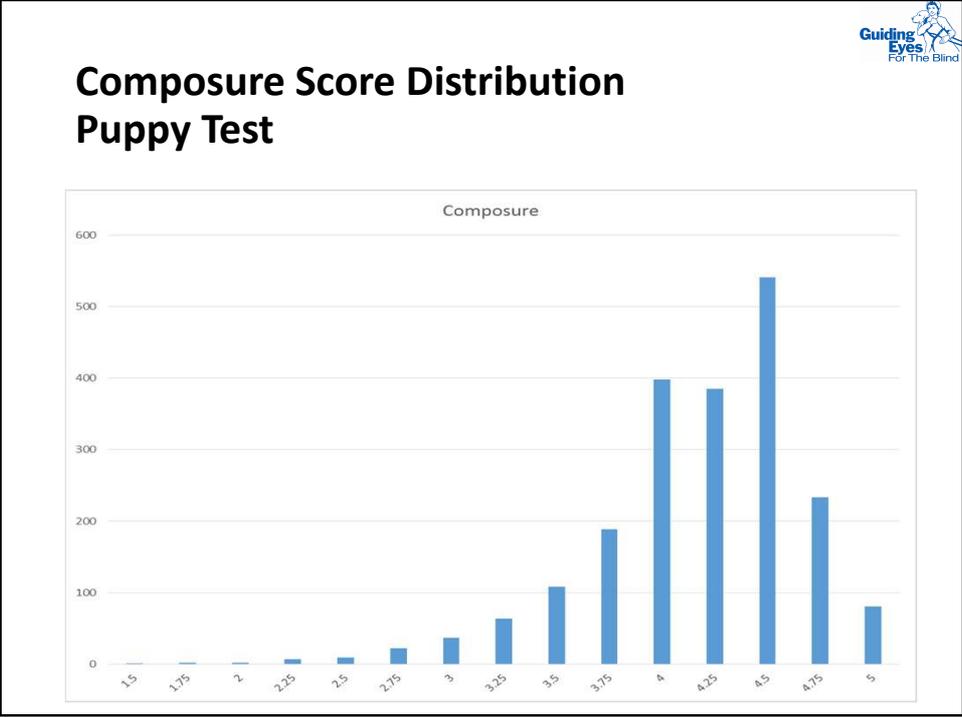
Collected Longitudinal Data

Age in Months	What observed	Stored	Number
2	<ul style="list-style-type: none"> • Socialization and training • Puppy test 	BCL & Video	1500
4,8,13	<ul style="list-style-type: none"> • Puppies with raisers 	BCL & Video	1000
14-18	<ul style="list-style-type: none"> • Training induction test 	BCL & Video	1200
>14	<ul style="list-style-type: none"> • Preliminary blindfold test and trainer's observations –first 2 months or when rejected • Final blindfold test and trainer's observations 	BCL	1200



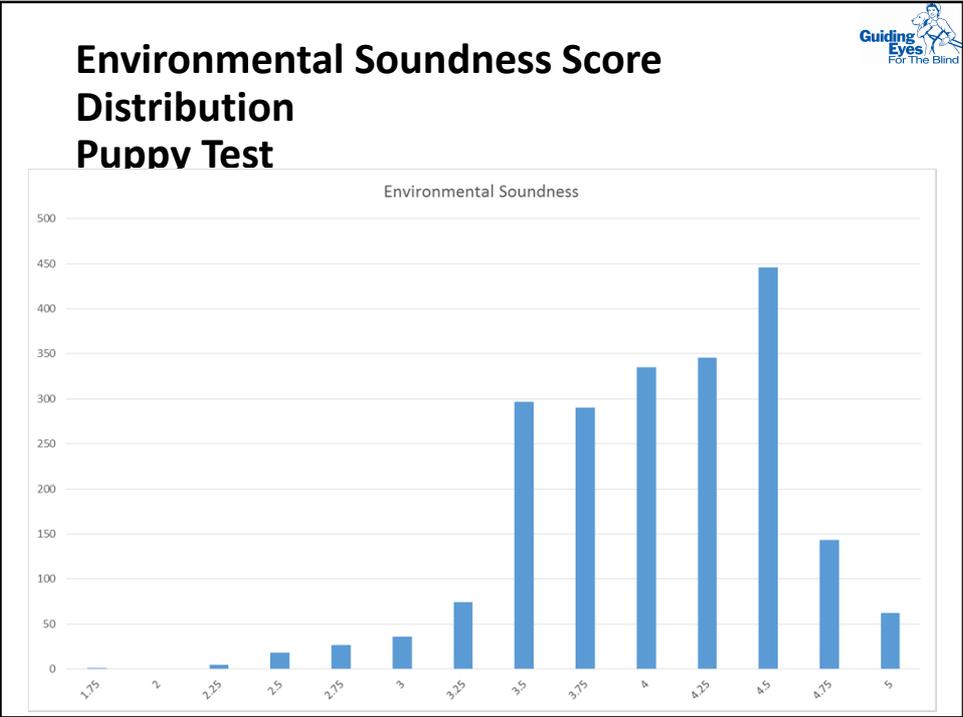
Composure

Composure	Causes	What % Release from Training
Activated With Stress		15%
Slow Return to Productive State		9%
Excitable		4%
Inability to Focus		3%
Slow to Settle When Handler Idle		3%
Barks Excessively		2%
Movement Excites		2%
Distraction Dogs		2%
Poor Social Manners		1%
High Energy		0

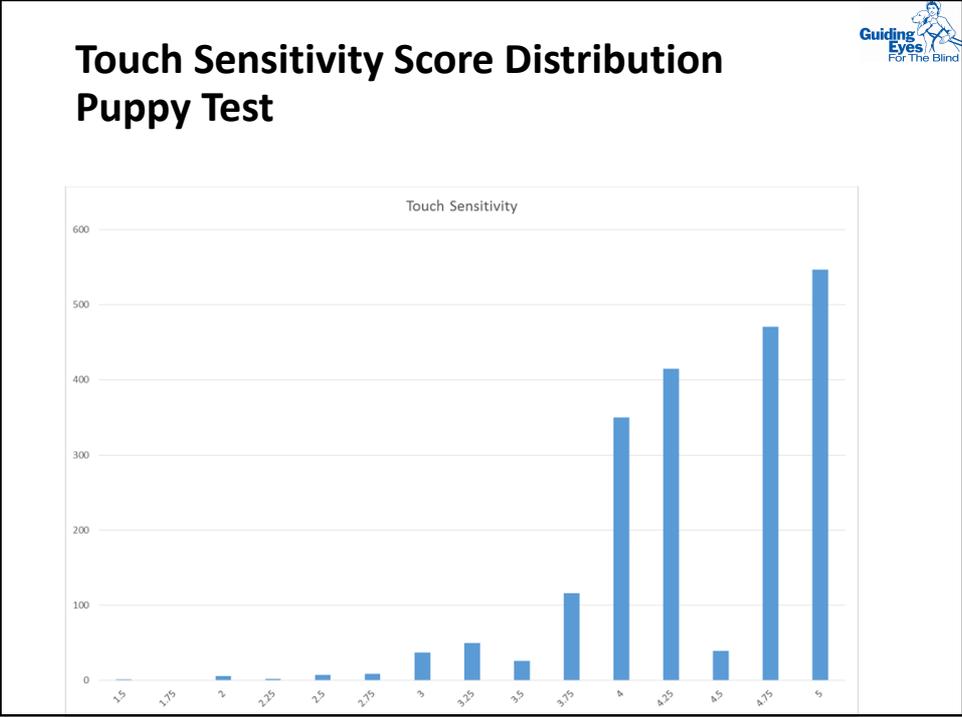


Environmental Soundness

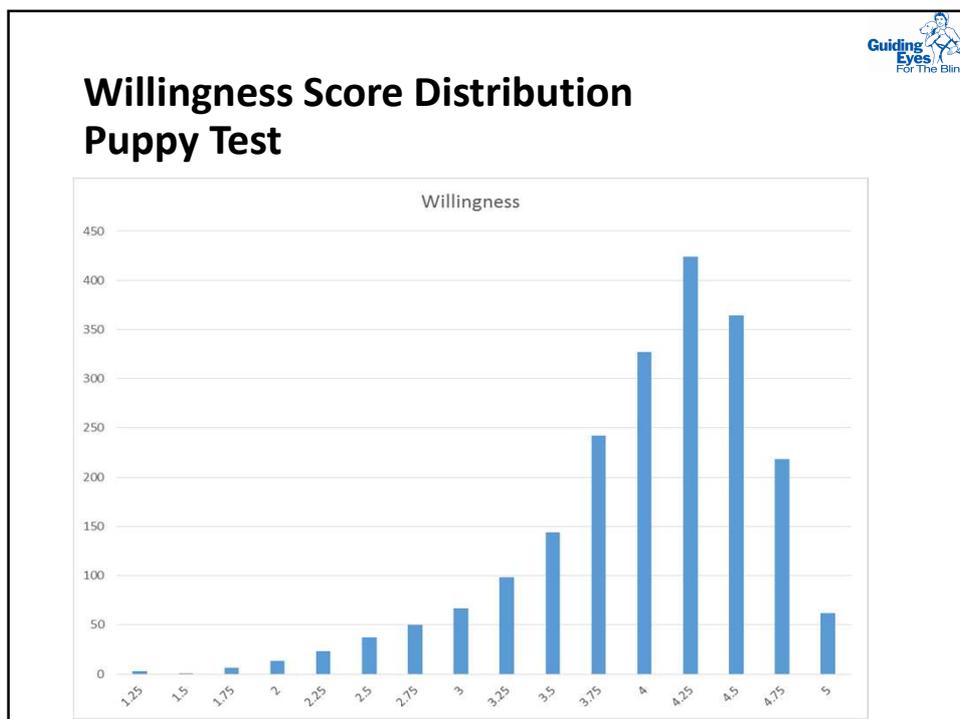
Causes	What % Release from Training
Anxious in New Places/Situations	7%
Fear of Noises	4%
Fear of Objects	3%
Fear of Stairs	3%
Fear of Underfootings	2%



Touch Sensitivity		Causes What % Release from Training
Harness Sensitivity (drops rear)		10%
Body Sensitivity		3%
Poor Body Handling		0%
Moves away when reached for		0%



Willingness	Causes What % Release from Training
Inhibited By Stress	9%
Sniffing	2%
Unwilling	0
Handler Dog Team	0



What Influences Success

Age of dog Months	Evaluation	Composure (Emotional State)	Environmental Soundness	Touch Sensitivity	Willingness
2	Pup test & Observation	0.52**	0.81**	0.13	0.11
4	With raiser	0.28	1.07**	0.13	0.21
8	With raiser	0.23	0.94**	0.20	-0.02
13	With raiser	0.42*	1.02**	-0.13	0.15
15-18	In-for-training test	0.15	0.85**	-0.11	-0.20
21-24	Trainers observation	0.78**	0.21	0.21	-0.24
24+	Trainers observation	1.10**	-0.48	0.57*	-0.34

Numbers represent betas. * = p < 0.05, ** = p < 0.01*

Courtesy of Jamie Fratkin, U. Texas 2015, SPSP poster, 3112 March 2015



Puppy Test -2 Brothers



Axel- poor scores on pup test
Failed guide dog training

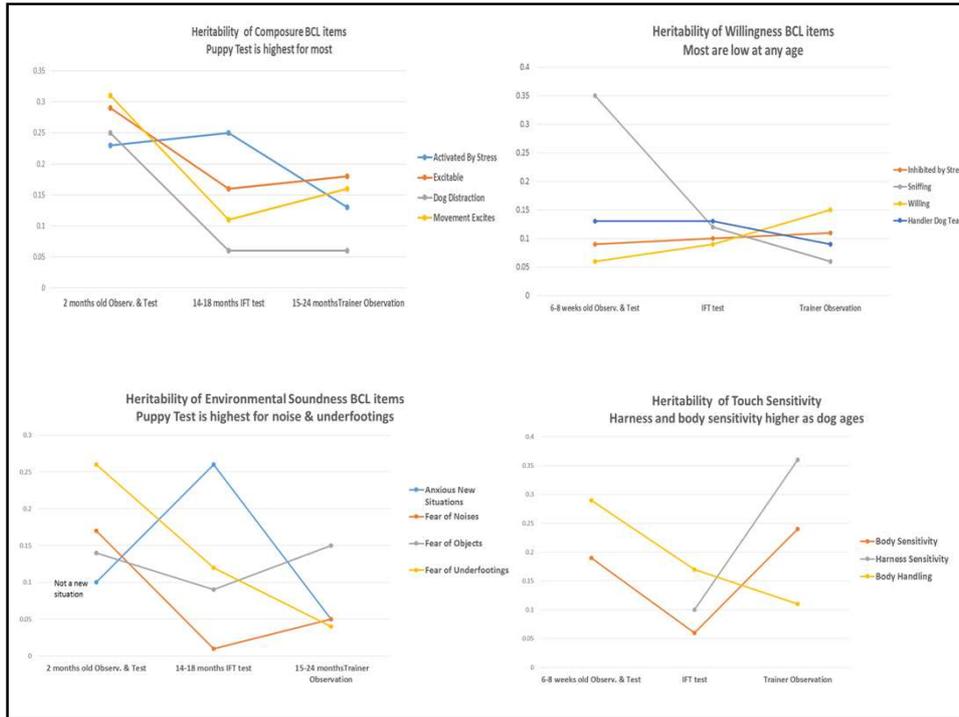


Anders- good scores on pup test
Successful as a guide dog



"What do you think ---
heredity or
environment?"

" Maybe a little of
both."



Arousal





Important For:

- Motivation
- Fight-or-flight response

Regulates:

- Awareness
- Attention
- Information processing



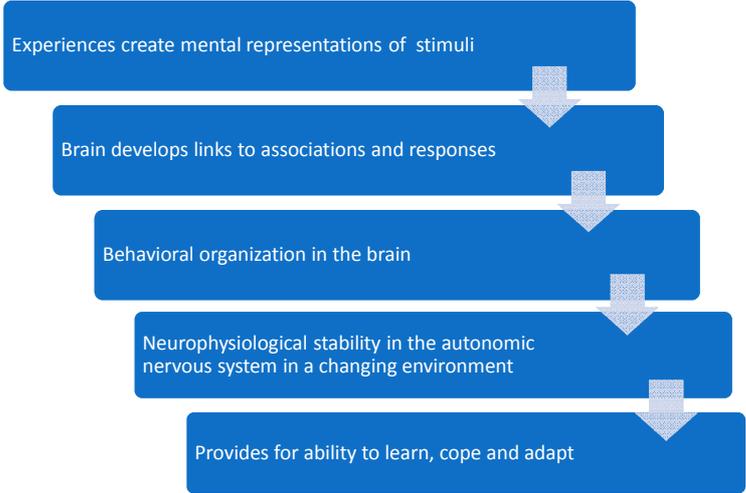



Productive State of Arousal

- Willing to learn
- Alert to environmental cues
- Have the initiative to perform
- Able to respond to handler



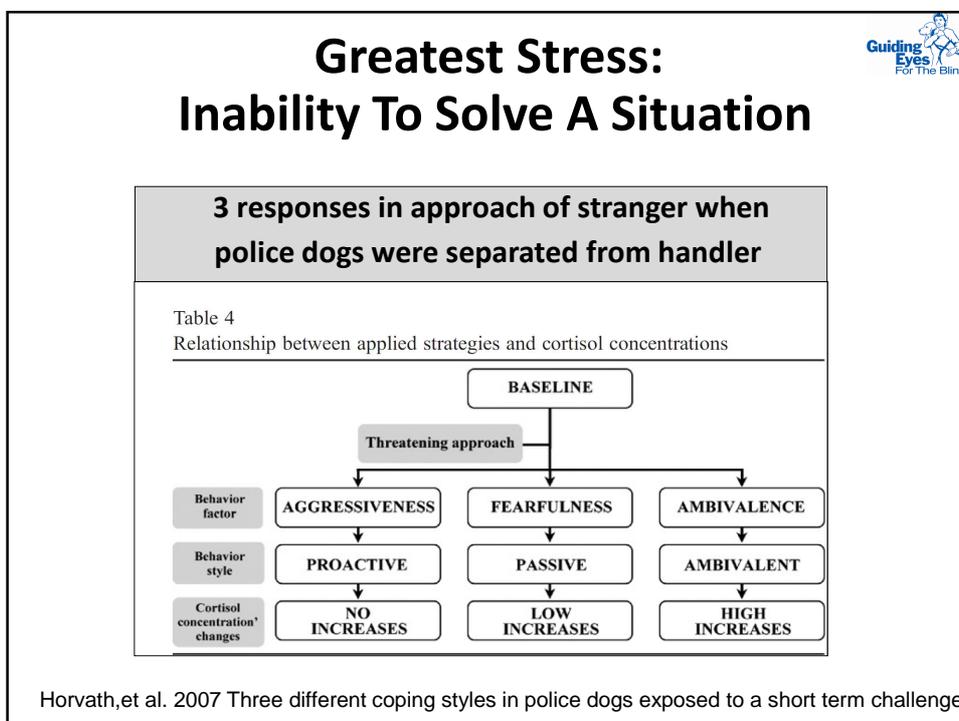
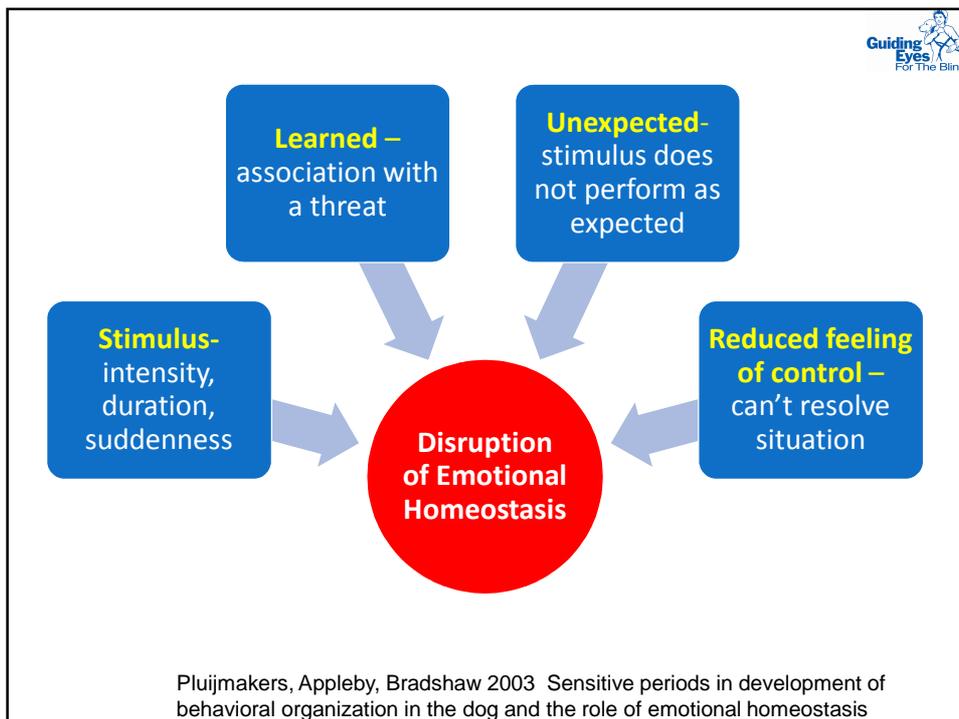
Developing Emotional Homeostasis



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graph TD
    A[Experiences create mental representations of stimuli] --> B[Brain develops links to associations and responses]
    B --> C[Behavioral organization in the brain]
    C --> D[Neurophysiological stability in the autonomic nervous system in a changing environment]
    D --> E[Provides for ability to learn, cope and adapt]
  
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Pluijmakers, Appleby, Bradshaw 2003 Sensitive periods in development of behavioral organization in the dog and the role of emotional homeostasis






Unproductive State of Arousal

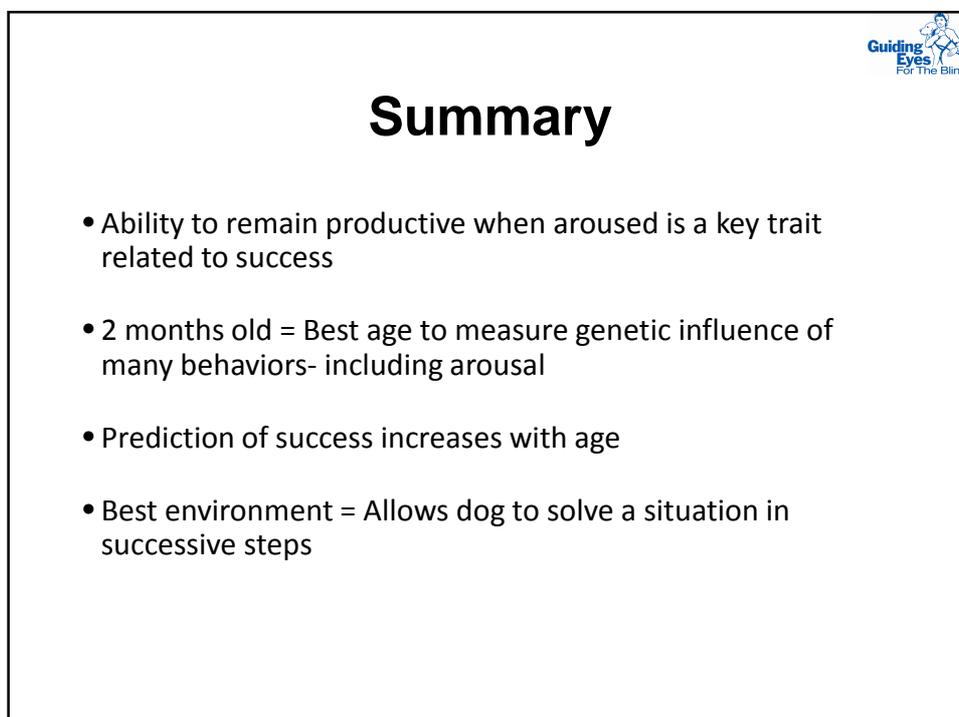
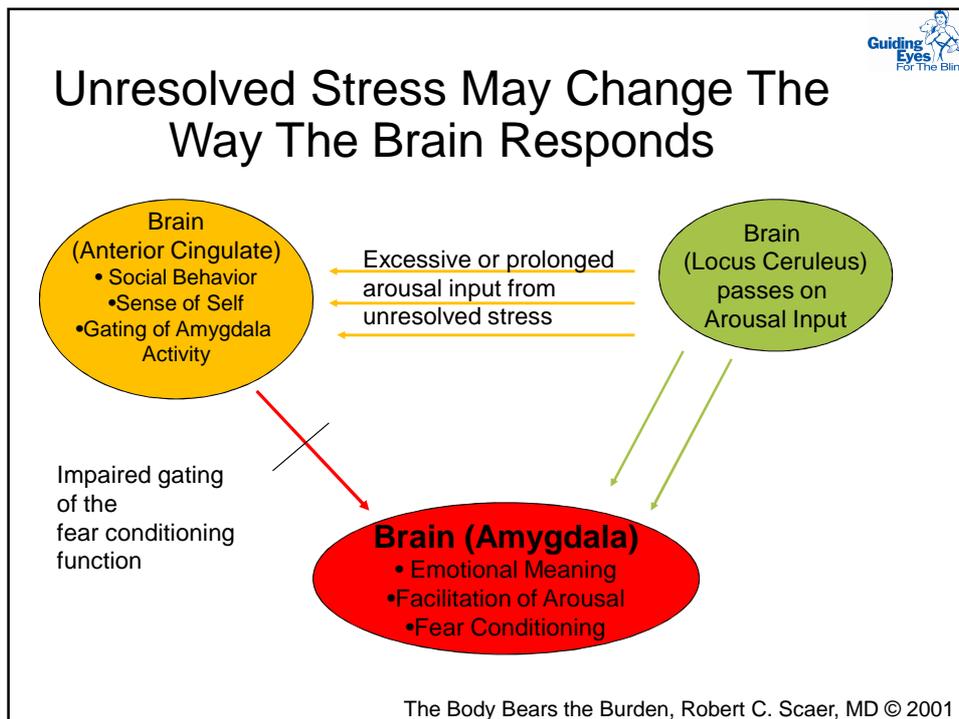


- Decreased ability to pay attention to cues
- Decreased fine motor control
- Over-reaction to stimuli (impacts excitability, environmental soundness)



Environmental Influence

<p>New Raiser: Unresolved stress</p> <ul style="list-style-type: none"> • Not adjusting approach based dog's arousal level • Confusing communication 	<p>Experienced Raiser: Resolves stress</p> <ul style="list-style-type: none"> • Adjusts approach • Clear communication 
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