

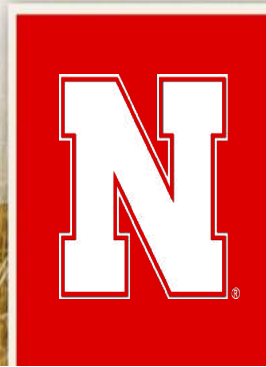
Profile-based observational coding:

Capturing children's patterns of responding to interpersonal threat

Meredith J. Martin, PhD

Spring 2017 Methodology Applications Series

April 14, 2017



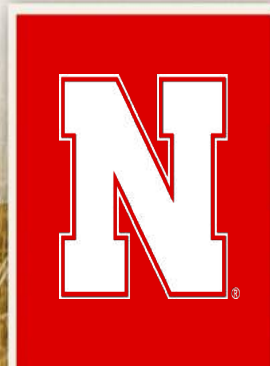
What is Observational Coding?

Behavioral Observation

- Seeing/hearing and systematically recording the behaviors of an individual or group within a social context of interest

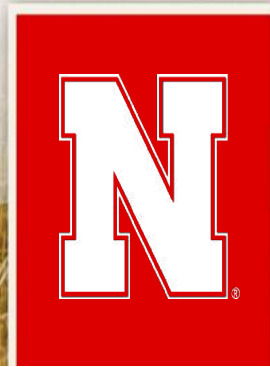
Observational Coding

- How we assess and quantify behaviors - turning them into data that can be examined statistically

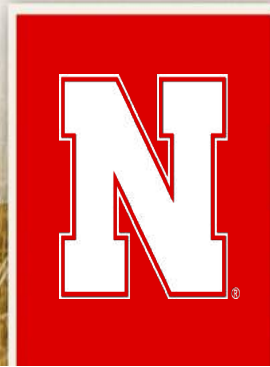


Today's Talk

1. Conceptual introduction:
 - Emotional Security Theory
2. An overview of Observational Research
 - What to observe (research design)
 - How to observe (research method)
 - Establishing interrater reliability
3. Profile-based observational coding

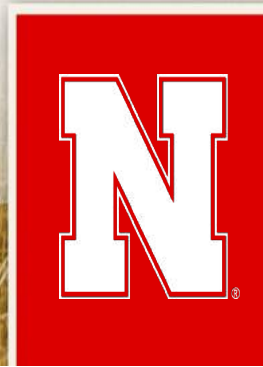
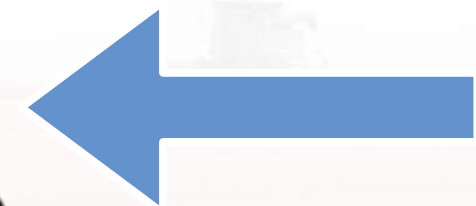


Conceptual Introduction: Emotional Security Theory



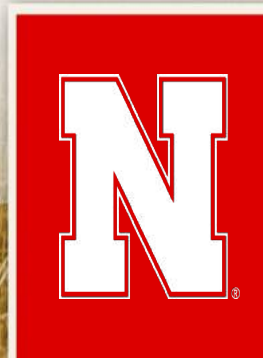
Emotional Security Theory (EST-R)

Maslow's Hierarchy of Needs



(Davies & Martin, 2008; 2013; 2014;
Davies, Martin, & Sturge-Apple, 2016)

Emotional Security Theory (EST-R)

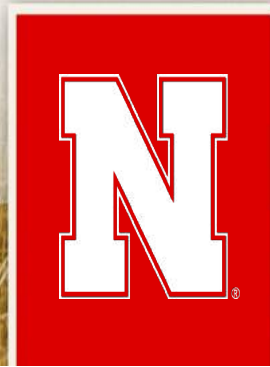


(Davies, Martin, & Sturge-Apple, 2016;
Martin, Davies, & MacNeill, 2014)

Security in the Peer Group



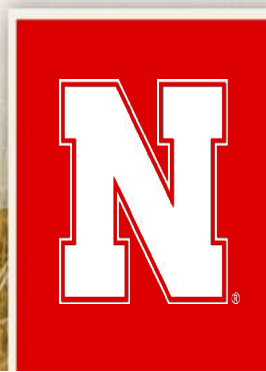
- Establishing positive peer relationships = developmental task of middle childhood
(Del Giudice, 2010; Rubin et al., 2006)
- Social challenges include:
 - Conflict, competition, hostility, rejection, victimization



Security in the Peer Group

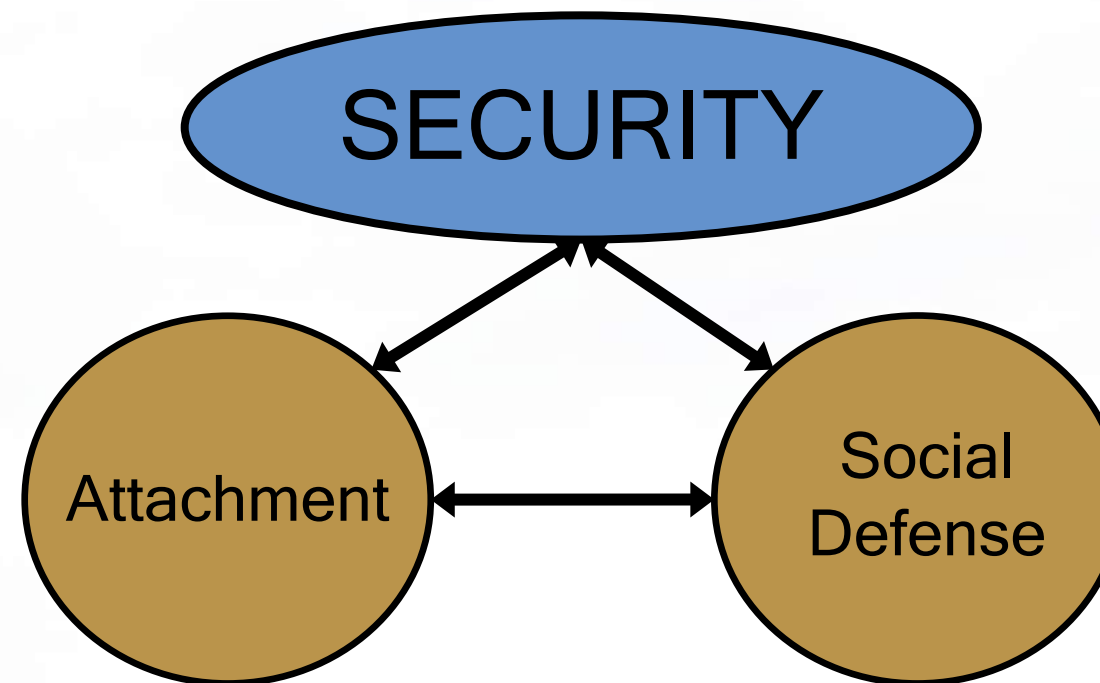


- Establishing positive peer relationships = developmental task of middle childhood
(Del Giudice, 2010; Rubin et al., 2006)
- Social challenges include:
 - Conflict, competition, hostility, rejection, victimization
- Difficulties → psychological consequences
 - Internalizing symptoms, externalizing problems, poor academic achievement, substance abuse
 - Negative consequences into adulthood
(e.g., Bagwell et al., 2005; Bierman, 2004; Parker et al., 2006)

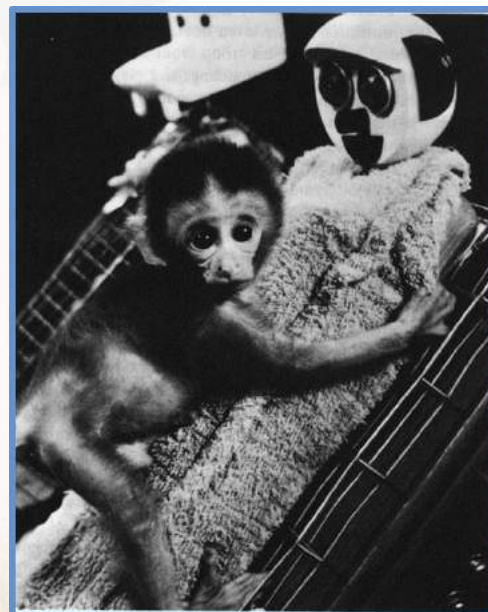


Security in the Peer Group

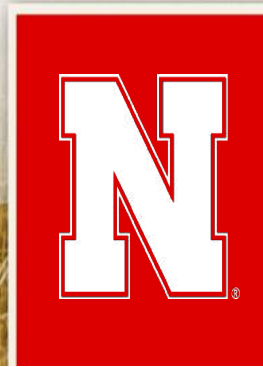
**Attachment
System**
Function:
Maximize
caregiver
protection



**Social Defense
System**
Function:
Minimize exposure
to and
consequences of
interpersonal threat



(Davies, Sturge-Apple, & Martin, 2013; Martin et al., 2014)



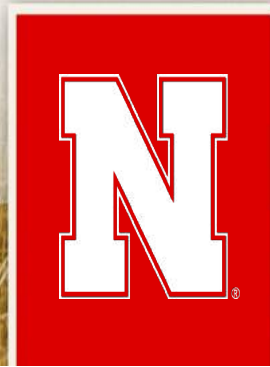
Security in the Peer Group

- **Function:** Minimize exposure to interpersonal threat (Davies & Martin, 2013; Gilbert, 1993; Sloman et al., 2002)
- **Emotional Character:** Fear (Davies, Cicchetti, & Martin, 2012)
- **Contextual Cues:** Threat signals (Davies, Martin, & Cicchetti, 2012)
- **Prototypical Behaviors:** Fight/flight, freeze, Camouflage, Social de-escalation strategies (Davies & Martin, 2013; 2016; Martin et al., 2014)

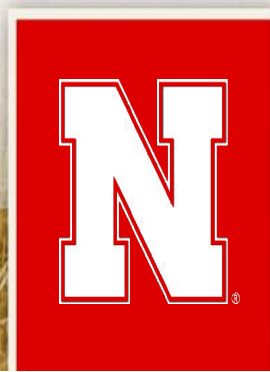
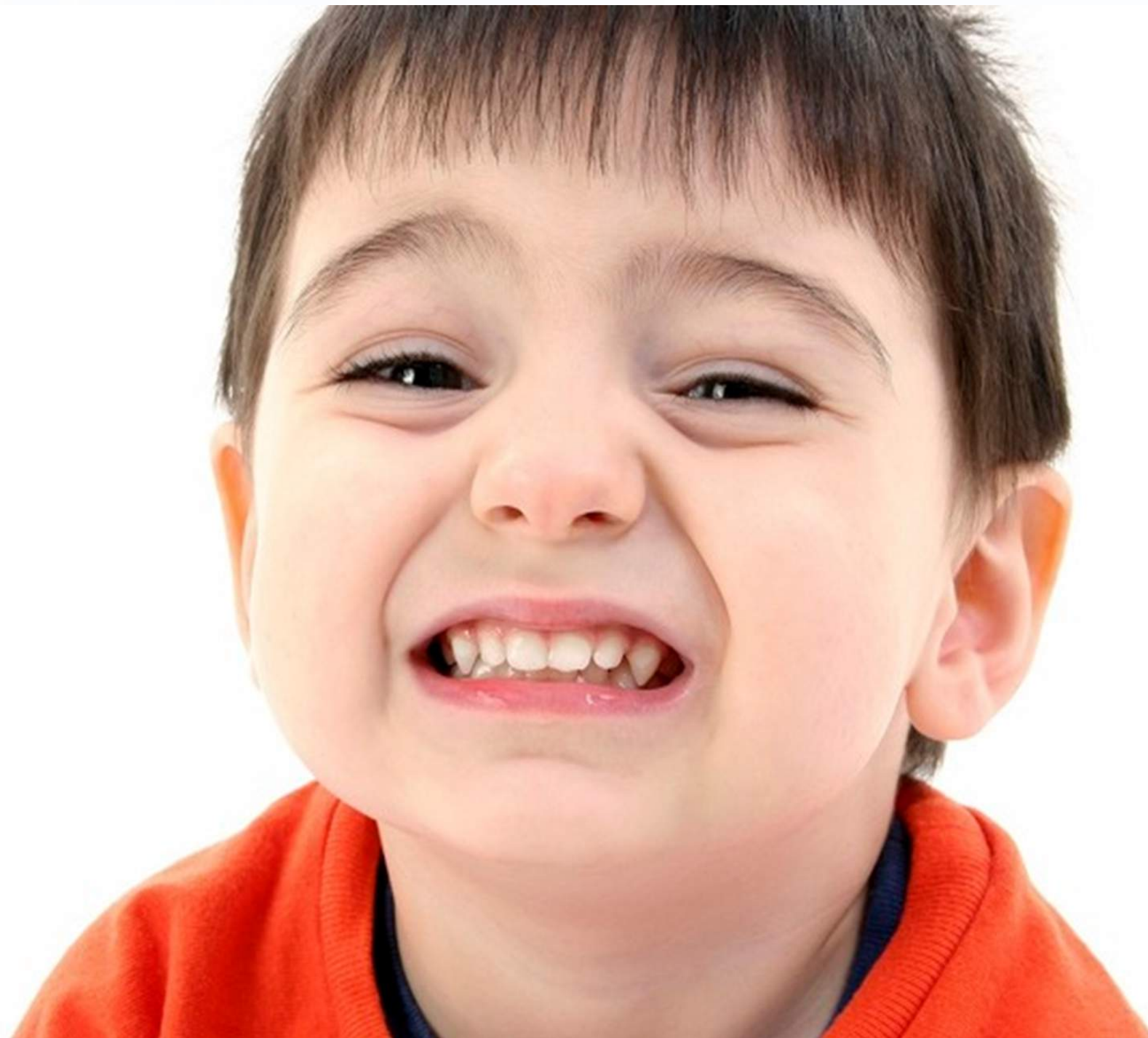


Security in the Peer Group

- Why observation?
 - Behaviors occur largely outside the awareness of participants
 - Adaptive function
 - Behavior in context

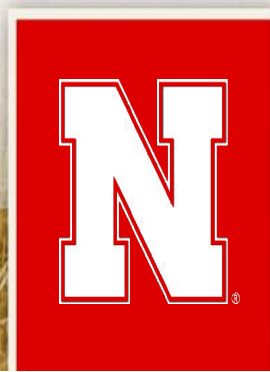


UNIVERSITY OF
Nebraska
Lincoln





UNIVERSITY OF
Nebraska
Lincoln



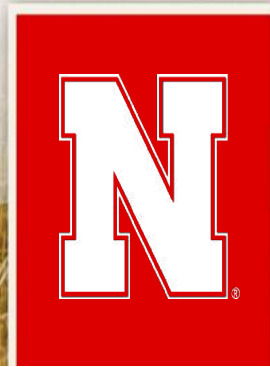
Advantages of observation

- Flexibility



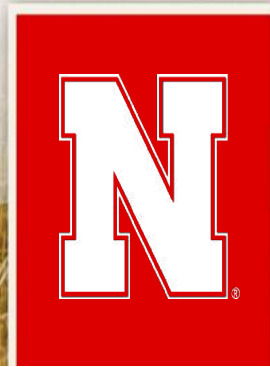
Advantages of observation

- Flexibility
- Theory-building



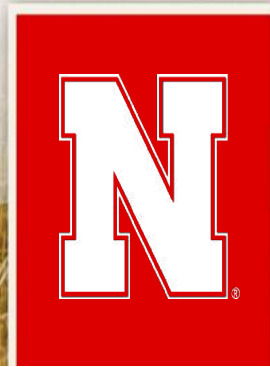
Advantages of observation

- Flexibility
- Theory-building
- Capture behaviors outside of awareness of participants



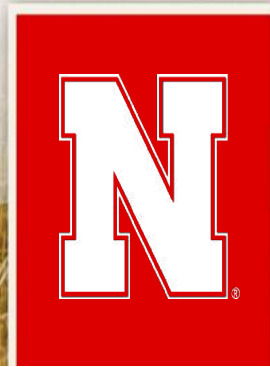
Advantages of observation

- Flexibility
- Theory-building
- Capture behaviors outside of awareness of participants
- Less susceptible to interpretive errors, defensive processes, & social desirability



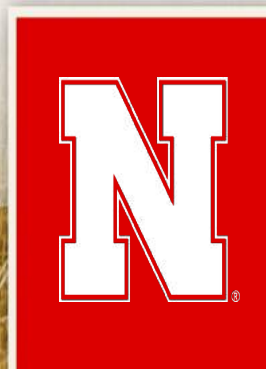
Disadvantages of observation

- Limited Measurement Window



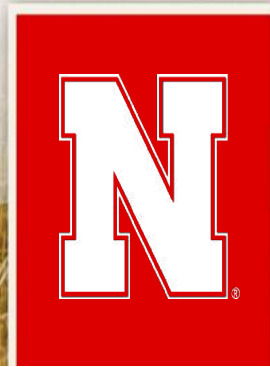
Disadvantages of observation

- Limited Measurement Window
 - May miss rare, but meaningful behaviors



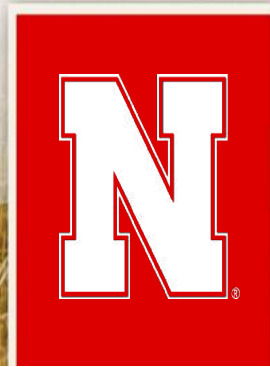
Disadvantages of observation

- Limited Measurement Window
 - May miss rare, but meaningful behaviors
- Resulting error → underestimates stability

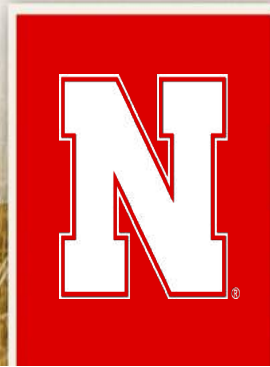


Disadvantages of observation

- Limited Measurement Window
 - May miss rare, but meaningful behaviors
- Resulting error → underestimates stability
- High cost of work & time



What to Observe (Design)

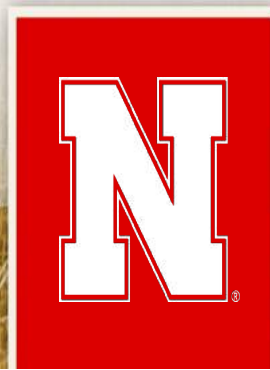


What to Observe

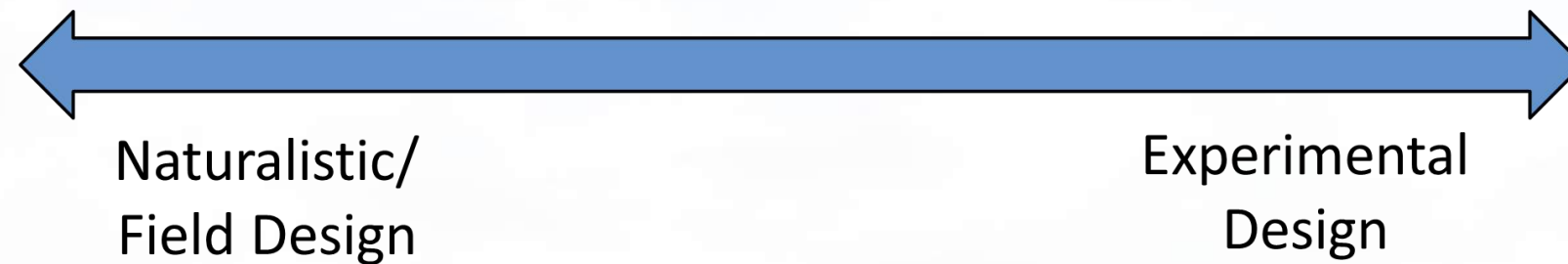


Naturalistic/
Field Design

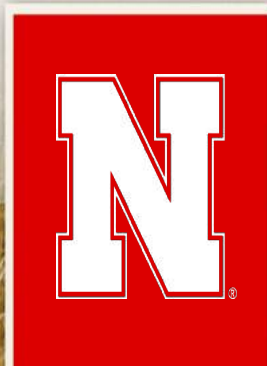
Experimental
Design



What to Observe



- How do children respond to interpersonal threat?
 - Development:
 - Stage-salient task of middle childhood
 - Context:
 - Peer Group
 - Function:
 - Reduce exposure to threat



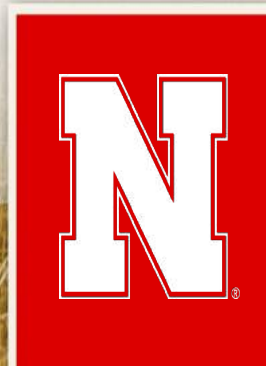
Naturalistic/Quasi-Naturalistic Design



(Peplar & Craig, 1995)



(Cicchetti & Manly, 1990;
Cicchetti et al., 1993)

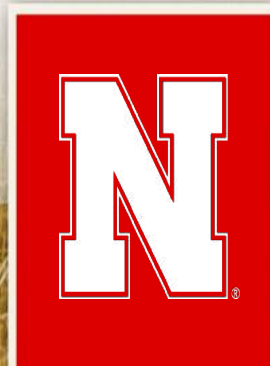




Naturalistic/
Field Design

Experimental
Design

- ↑ Ecological validity
- ↓ Internal validity
 - Multiple, interdependent causes of behavior
- Length of assessment



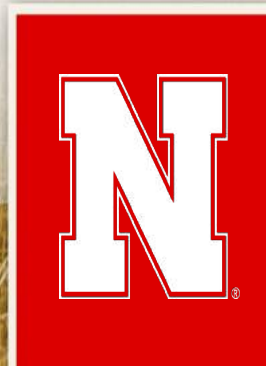
Quasi-Experimental/Experimental Design



(Ostrov et al., 2004)



(Cicchetti & Manly, 1990;
Cicchetti et al., 1993)



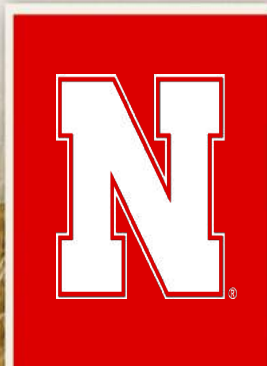


Naturalistic/ Field Design

- ↑ Ecological validity
- ↓ Internal validity
 - Multiple, interdependent causes of behavior
- Length of assessment

Experimental Design

- ↑ Internal validity
- Shorter assessments
- Control over confounding variables
 - Random assignment = causal inference





Naturalistic/ Field Design

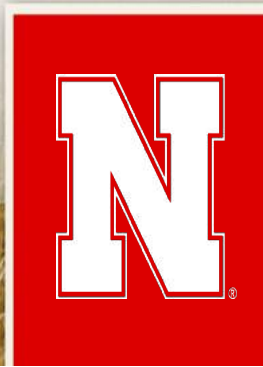
- ↑ Ecological validity
- ↓ Internal validity
 - Multiple, interdependent causes of behavior
- Length of assessment

Experimental Design

- ↑ Internal validity
- Shorter assessments
- Control over confounding variables
 - Random assignment = causal inference



(Davies, et al., 2006; 2008)



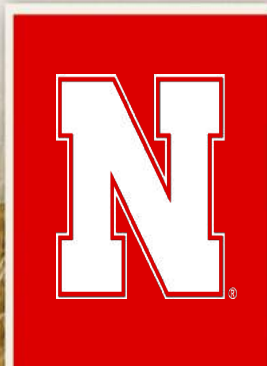


Naturalistic/ Field Design

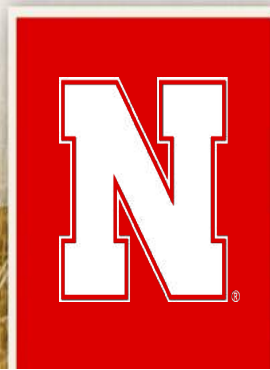
- ↑ Ecological validity
- ↓ Internal validity
 - Multiple, interdependent causes of behavior
- Length of assessment

Experimental Design

- ↑ Internal validity
- Shorter assessments
- Control over confounding variables
 - Random assignment = causal inference
- ↓ Ecological Validity?
 - Realism

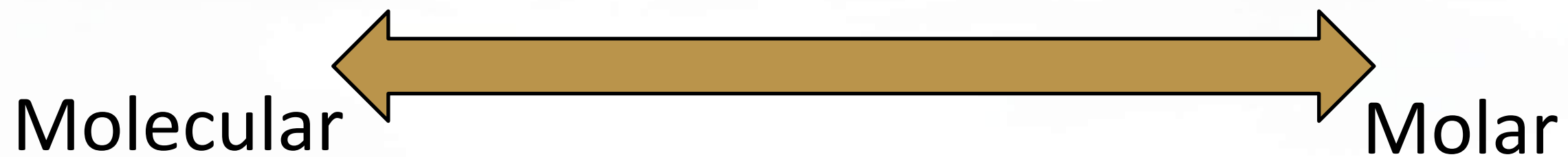


How to Observe

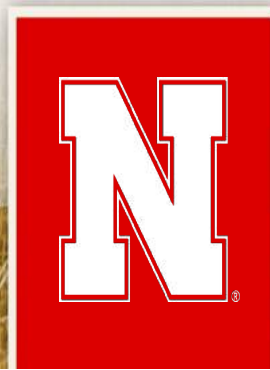


Development & Selection of Codes

- The Molar-Molecular Continuum

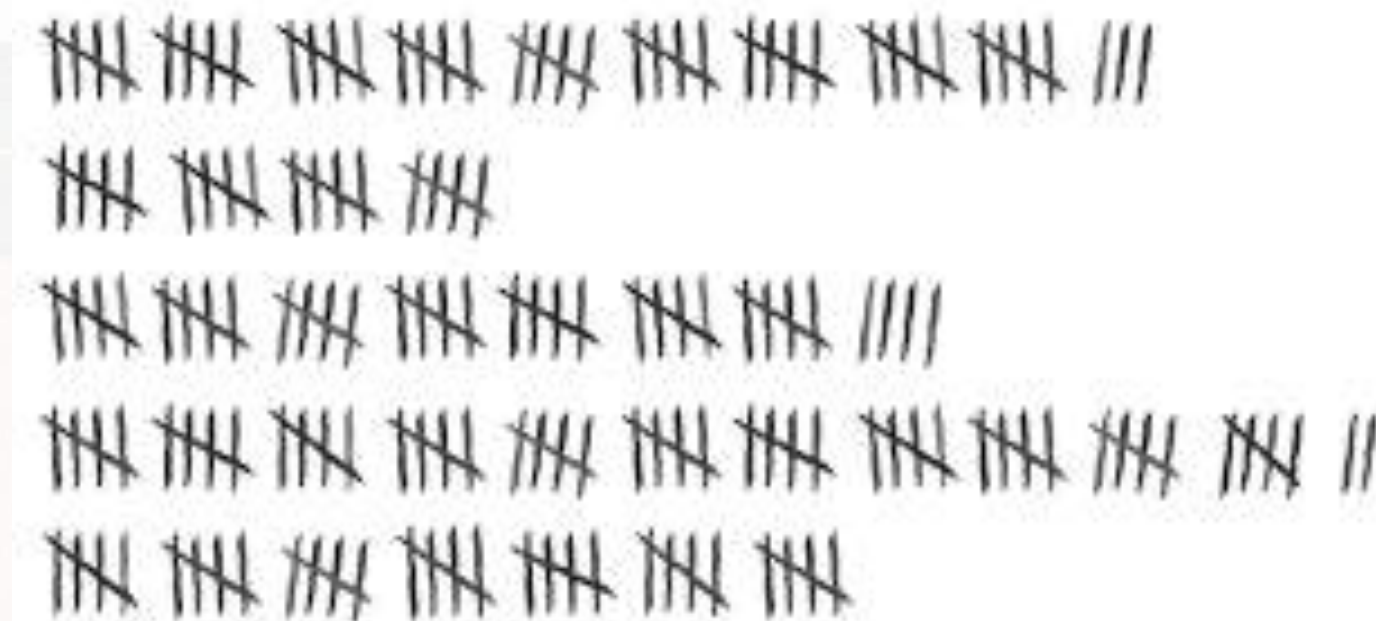


- Complementary approaches

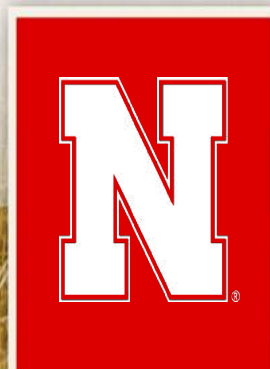


Molecular Coding

- Key task:
 - Accurately recognize and record relevant actions in behavior streams
- Uses
 - Tallies and assessment of contingencies

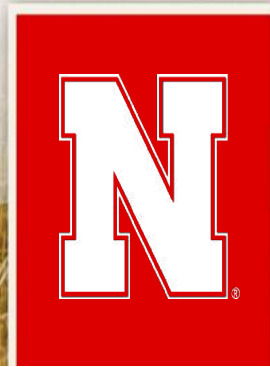


A collection of handwritten tally marks arranged in six rows. The first row contains ten groups of four diagonal strokes followed by three vertical strokes. The second row contains four groups of four diagonal strokes. The third row contains seven groups of four diagonal strokes followed by three vertical strokes. The fourth row contains eight groups of four diagonal strokes followed by two vertical strokes. The fifth row contains six groups of four diagonal strokes. The sixth row contains four groups of four diagonal strokes.



Molecular Coding

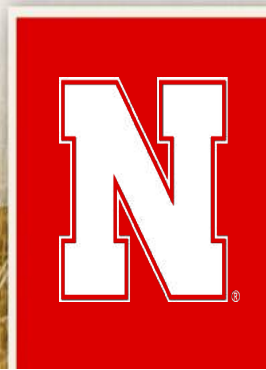
- Key task:
 - Accurately recognize and record relevant actions in behavior streams
- Uses
 - Tallies and assessment of contingencies
- Goal:
 - Assess individual events & states





Molecular Coding

- Events: Discrete behaviors of short duration
 - Frequency of occurrence
 - Examples: Number of hits, Occurrence of praise, Play bids
- States: Behavior patterns with relatively long duration
 - Mean or total duration
 - Proportion of time spent in an activity
 - Examples: Time spent engaged in play, talking



(Martin and Bateson 1995).



Molecular Coding

Sampling Methods

- **Focal-Animal Sampling**

- Record all relevant actions of a single individual for a specified time period. (events)

- **Instantaneous Sampling**

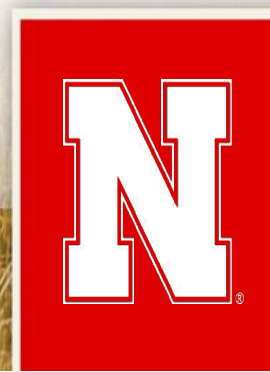
- Record the behavior of a single individual in a group at predetermined time intervals. (states)

- **Continuous Sampling**

- Recording all activity that occurs while individuals are being watched. (interactions between two or more individuals)

- **Scan Sampling**

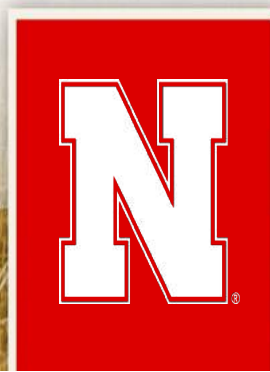
- Record behaviors of all individuals in a group at specified time intervals. (states)



(Altmann, 1974)

Molar Coding

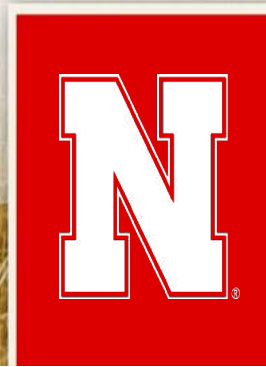
- Key task:
 - Place individuals on psychological dimensions
 - Intensity, frequency, quality of behavior





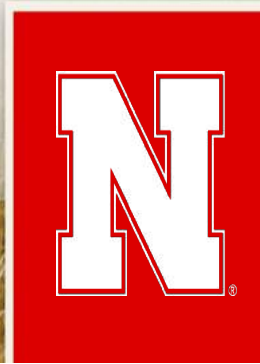
Molar Coding

- Key task:
 - Place individuals on psychological dimensions
 - Intensity, frequency, quality of behavior
- Conditions:
 - Coders must share a definition of the multiple indicators that constitute the construct
 - Coders make assumptions about what is normal or average on a scale
- Goal:
 - To assess stable characteristics of the child while controlling for characteristics of the context (or setting)



Submissive Disengagement: Submissive disengagement involves subtle, passive, or restrained forms of social distancing characterized by discreet withdrawal from peer interaction and play, physically turning away from peers, becoming quiet or withdrawn, avoiding direct eye contact, gingerly moving away from interaction, and attempts to hide or reduce physical presence or size (e.g., putting hood over the head; hugging pillow; covering parts of face with hand, shrinking into oneself). It may also involve very brief, “well-behaved” forms of responsiveness to bids or commands, often characterized by “wooden”, stiff, quick, and automatic answers to peer or adult questions. Note that these disengagement behaviors are subtle and highly unlikely to be judged by others as reflecting child attempts to be aggressive, hostile, or disparaging (in which case, they would be coded as “interpersonal hostility”). Rather, they reflect more polite, respectful, dysphoric, or anxious patterns that allow the child to avoid potential threat from interpersonal conflict or competition without evoking the ire of a peer.

1. **Not at all characteristic:** Child does not display any definitive signs of submissive disengagement.
- 2.
3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement that are weak in form, very mild in intensity (e.g., child is interpreted as experiencing distress somewhere between “very little” and “a little”), well-regulated, and inconsistent and brief across the free-play assessment. Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.
- 4.
5. **Somewhat characteristic:** Child shows some signs of submissive disengagement that are mild in form and intensity (e.g., child is interpreted as experiencing somewhere between “a little” and “some”) and generally well-regulated. Unlike the minimal characteristic designation, submissive disengagement is now interpreted as approaching what would be considered an organized pattern based on its duration and frequency of expression. Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions and is primarily encapsulated to instances of direct peer threat and, sometimes, indirect hostility in close proximity to the child.
- 6.
7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity (e.g., child is interpreted as experiencing somewhere between “some” and “a lot”). Based on the evaluation of the patterning, regularity, and chronicity of behaviors, the expressions of submissive disengagement are now judged to be modestly above the norm for interacting with peers. Taken together, the overall impression is that it takes considerable pains, effort, and resources on the part of the child to achieve some success in regulating the submissive disengagement. As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.
- 8.
9. **Mainly characteristic:** Child shows signs of submissive disengagement that are strong in form and intensity (e.g., child is interpreted as experiencing somewhere between “a lot” and “a whole lot”). The highly characteristic nature of the submissive disengagement is evidenced by the frequency (e.g., repeatedly occurs), chronicity (e.g., displayed throughout the free-play session), and/or the quality. Thus, in the subjective view of the coder, the child’s submissive disengagement takes on a relatively remarkable quality that is easy for virtually all individuals to identify as a key characteristic of the child and typically involves quiet, withdrawn, and/or submissive behavior even when the proximal context is relatively benign. Thus, in the subjective view of the coder, the child’s submissive behavior may commonly take on a relatively disturbing quality which may elicit a desire to intervene, comfort, or otherwise alleviate distress in the child.



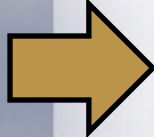


Submissive Disengagement: Submissive disengagement involves subtle, passive, or restrained forms of social distancing characterized by discreet withdrawal from peer interaction and play, physically turning away from peers, becoming quiet or withdrawn, avoiding direct eye contact, gingerly moving away from interaction, and attempts to hide or reduce physical presence or size (e.g., putting hood over the head; hugging pillow; covering parts of face with hand, shrinking into oneself). It may also involve very brief, “well-behaved” forms of responsiveness to bids or commands, often characterized by “wooden”, stiff, quick, and automatic answers to peer or adult questions. Note that these disengagement behaviors are subtle and highly unlikely to be judged by others as reflecting child attempts to be aggressive, hostile, or disparaging (in which case, they would be coded as “interpersonal hostility”). Rather, they reflect more polite, respectful, dysphoric, or anxious patterns that allow the child to avoid potential threat from interpersonal conflict or competition without evoking the ire of a peer.

1. **Not at all characteristic:** Child does not display any definitive signs of submissive disengagement.
- 2.
3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement that are weak in form, very mild in intensity (e.g., child is interpreted as experiencing distress somewhere between “very little” and “a little”), well-regulated, and inconsistent and brief across the free-play assessment. Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.
- 4.
5. **Somewhat characteristic:** Child shows some signs of submissive disengagement that are mild in form and intensity (e.g., child is interpreted as experiencing somewhere between “a little” and “some”) and generally well-regulated. Unlike the minimal characteristic designation, submissive disengagement is now interpreted as approaching what would be considered an organized pattern based on its duration and frequency of expression. Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions and is primarily encapsulated to instances of direct peer threat and, sometimes, indirect hostility in close proximity to the child.
- 6.
7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity (e.g., child is interpreted as experiencing somewhere between “some” and “a lot”). Based on the evaluation of the patterning, regularity, and chronicity of behaviors, the expressions of submissive disengagement are now judged to be modestly above the norm for interacting with peers. Taken together, the overall impression is that it takes considerable pains, effort, and resources on the part of the child to achieve some success in regulating the submissive disengagement. As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.
- 8.
9. **Mainly characteristic:** Child shows signs of submissive disengagement that are strong in form and intensity (e.g., child is interpreted as experiencing somewhere between “a lot” and “a whole lot”). The highly characteristic nature of the submissive disengagement is evidenced by the frequency (e.g., repeatedly occurs), chronicity (e.g., displayed throughout the free-play session), and/or the quality. Thus, in the subjective view of the coder, the child’s submissive disengagement takes on a relatively remarkable quality that is easy for virtually all individuals to identify as a key characteristic of the child and typically involves quiet, withdrawn, and/or submissive behavior even when the proximal context is relatively benign. Thus, in the subjective view of the coder, the child’s submissive behavior may commonly take on a relatively disturbing quality which may elicit a desire to intervene, comfort, or otherwise alleviate distress in the child.

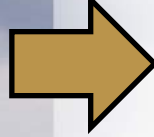


Submissive Disengagement: Submissive disengagement involves subtle, passive, or restrained forms of social distancing characterized by discreet withdrawal from peer interaction and play, physically turning away from peers, becoming quiet or withdrawn, avoiding direct eye contact, gingerly moving away from interaction, and attempts to hide or reduce physical presence or size (e.g., putting hood over the head; hugging pillow; covering parts of face with hand, shrinking into oneself). It may also involve very brief, “well-behaved” forms of responsiveness to bids or commands, often characterized by “wooden”, stiff, quick, and automatic answers to peer or adult questions. Note that these disengagement behaviors are subtle and highly unlikely to be judged by others as reflecting child attempts to be aggressive, hostile, or disparaging (in which case, they would be coded as “interpersonal hostility”). Rather, they reflect more polite, respectful, dysphoric, or anxious patterns that allow the child to avoid potential threat from interpersonal conflict or competition without evoking the ire of a peer.



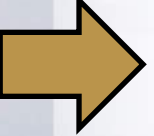
1. **Not at all characteristic:** Child does not display any definitive signs of submissive disengagement.

2.




3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement that are weak in form, very mild in intensity (e.g., child is interpreted as experiencing distress somewhere between “very little” and “a little”), well-regulated, and inconsistent and brief across the free-play assessment. Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.

4.




5. **Somewhat characteristic:** Child shows some signs of submissive disengagement that are mild in form and intensity (e.g., child is interpreted as experiencing somewhere between “a little” and “some”) and generally well-regulated. Unlike the minimal characteristic designation, submissive disengagement is now interpreted as approaching what would be considered an organized pattern based on its duration and frequency of expression. Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions and is primarily encapsulated to instances of direct peer threat and, sometimes, indirect hostility in close proximity to the child.

6.



7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity (e.g., child is interpreted as experiencing somewhere between “some” and “a lot”). Based on the evaluation of the patterning, regularity, and chronicity of behaviors, the expressions of submissive disengagement are now judged to be modestly above the norm for interacting with peers. Taken together, the overall impression is that it takes considerable pains, effort, and resources on the part of the child to achieve some success in regulating the submissive disengagement. As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.

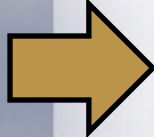
8.



9. **Mainly characteristic:** Child shows signs of submissive disengagement that are strong in form and intensity (e.g., child is interpreted as experiencing somewhere between “a lot” and “a whole lot”). The highly characteristic nature of the submissive disengagement is evidenced by the frequency (e.g., repeatedly occurs), chronicity (e.g., displayed throughout the free-play session), and/or the quality. Thus, in the subjective view of the coder, the child’s submissive disengagement takes on a relatively remarkable quality that is easy for virtually all individuals to identify as a key characteristic of the child and typically involves quiet, withdrawn, and/or submissive behavior even when the proximal context is relatively benign. Thus, in the subjective view of the coder, the child’s submissive behavior may commonly take on a relatively disturbing quality which may elicit a desire to intervene, comfort, or otherwise alleviate distress in the child.

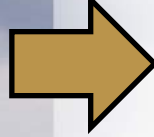


Submissive Disengagement: Submissive disengagement involves subtle, passive, or restrained forms of social distancing characterized by discreet withdrawal from peer interaction and play, physically turning away from peers, becoming quiet or withdrawn, avoiding direct eye contact, gingerly moving away from interaction, and attempts to hide or reduce physical presence or size (e.g., putting hood over the head; hugging pillow; covering parts of face with hand, shrinking into oneself). It may also involve very brief, “well-behaved” forms of responsiveness to bids or commands, often characterized by “wooden”, stiff, quick, and automatic answers to peer or adult questions. Note that these disengagement behaviors are subtle and highly unlikely to be judged by others as reflecting child attempts to be aggressive, hostile, or disparaging (in which case, they would be coded as “interpersonal hostility”). Rather, they reflect more polite, respectful, dysphoric, or anxious patterns that allow the child to avoid potential threat from interpersonal conflict or competition without evoking the ire of a peer.



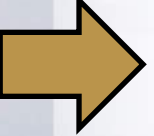
1. **Not at all characteristic:** Child does not display any definitive signs of submissive disengagement.

2.




3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement that are weak in form, very mild in intensity (e.g., child is interpreted as experiencing distress somewhere between “very little” and “a little”), well-regulated, and inconsistent and brief across the free-play assessment. Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.

4.




5. **Somewhat characteristic:** Child shows some signs of submissive disengagement that are mild in form and intensity (e.g., child is interpreted as experiencing somewhere between “a little” and “some”) and generally well-regulated. Unlike the minimal characteristic designation, submissive disengagement is now interpreted as approaching what would be considered an organized pattern based on its duration and frequency of expression. Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions and is primarily encapsulated to instances of direct peer threat and, sometimes, indirect hostility in close proximity to the child.

6.



7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity (e.g., child is interpreted as experiencing somewhere between “some” and “a lot”). Based on the evaluation of the patterning, regularity, and chronicity of behaviors, the expressions of submissive disengagement are now judged to be modestly above the norm for interacting with peers. Taken together, the overall impression is that it takes considerable pains, effort, and resources on the part of the child to achieve some success in regulating the submissive disengagement. As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.

8.



9. **Mainly characteristic:** Child shows signs of submissive disengagement that are strong in form and intensity (e.g., child is interpreted as experiencing somewhere between “a lot” and “a whole lot”). The highly characteristic nature of the submissive disengagement is evidenced by the frequency (e.g., repeatedly occurs), chronicity (e.g., displayed throughout the free-play session), and/or the quality. Thus, in the subjective view of the coder, the child’s submissive disengagement takes on a relatively remarkable quality that is easy for virtually all individuals to identify as a key characteristic of the child and typically involves quiet, withdrawn, and/or submissive behavior even when the proximal context is relatively benign. Thus, in the subjective view of the coder, the child’s submissive behavior may commonly take on a relatively disturbing quality which may elicit a desire to intervene, comfort, or otherwise alleviate distress in the child.



3. Minimally characteristic: Child shows minimal signs of submissive disengagement.... **Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.**

5. Somewhat characteristic: Child shows some signs of submissive disengagement that are mild in form and intensity... **Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions** and is primarily encapsul threat and, sometimes, indirect hostility in close proxim



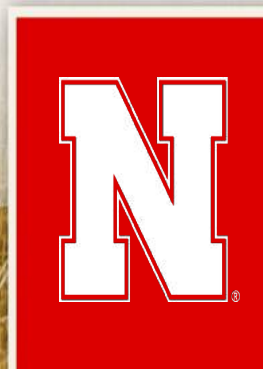
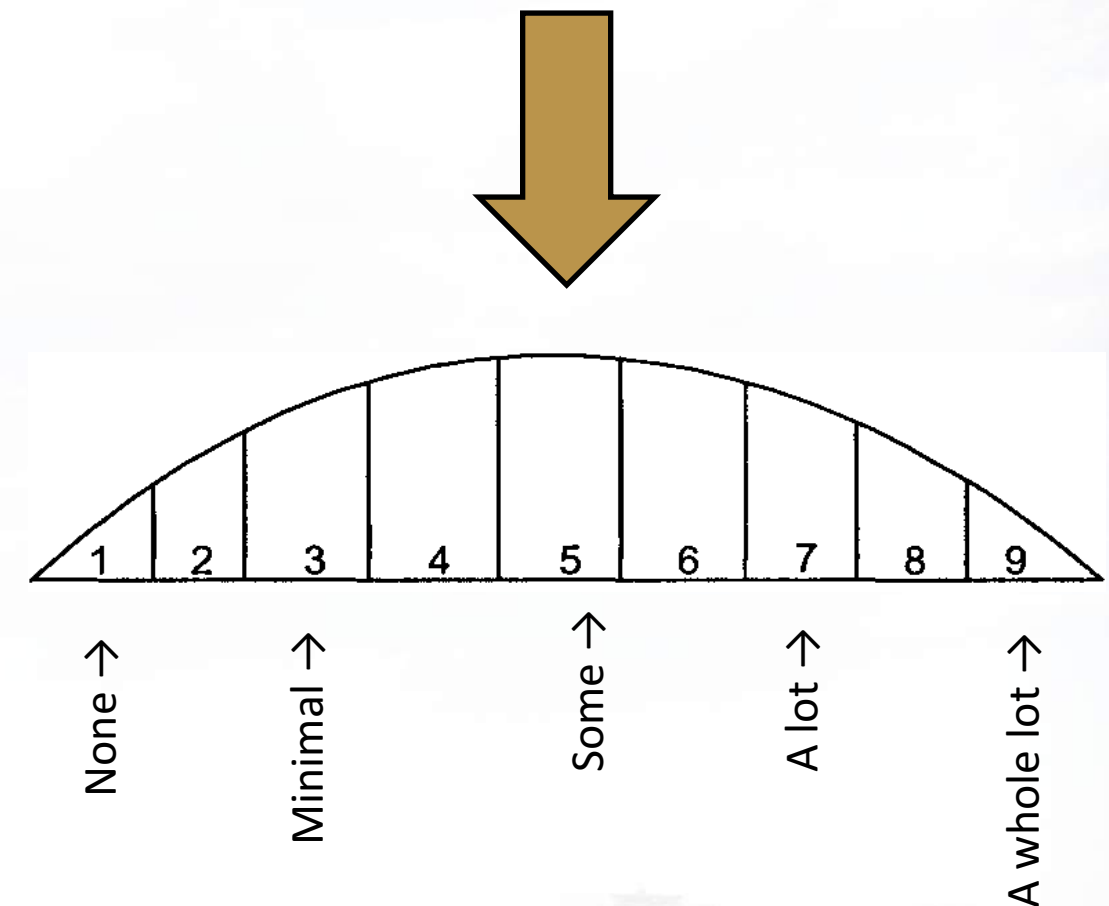
7. Moderately characteristic: Child shows signs of s moderate in form and intensity... Taken together, the c considerable pains, effort, and resources on the part of success in regulating the submissive disengagement. **As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child** and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.



3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement.... **Although trained coders notice signs of submissive disengagement, they would generally go unnoticed by the vast majority of laypeople and general occur only during periods of high, direct peer threat.**

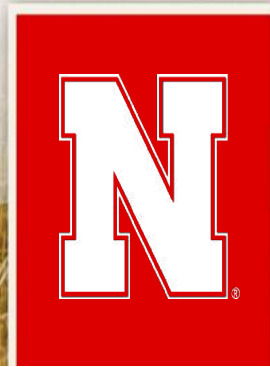
5. **Somewhat characteristic:** Child shows some signs of submissive disengagement that are mild in form and intensity... **Although there are some notable instances of submissive disengagement, the overall judgment of the coder is that only highly perceptible laypeople would notice. Thus, it is still commonly regarded as falling within the middle to upper range of normal for submissive disengagement in the context of peer interactions** and is primarily encapsulated to instances of direct peer threat and, sometimes, indirect hostility in close proximity to the child.

7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity... Taken together, the overall impression is that it takes considerable pains, effort, and resources on the part of the child to achieve some success in regulating the submissive disengagement. **As a result, many, if not most, laypeople who are attending to the interaction would be able to note submissive disengagement behaviors as a characteristic of the child** and signs of submissive disengagement tend to persist even outside of or persisting long after instances of direct peer threat.

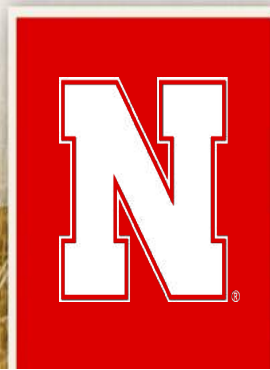


Molar Coding

- Iowa Family Interaction Rating Scales (IFIRS) - Melby & Conger
- Autonomy & Relatedness Scale – Joseph Allen
- The Classroom Assessment Scoring System (CLASS) - Pianta
- System for Coding Interactions in Dyads (SCID) – Malik & Lindahl
- Laboratory Temperament Assessment Battery (Lab-TAB) – Goldsmith & Rothbart



A brief note about interrater reliability



Achieving Interrater Reliability

- One of the challenges of completing observational coding is achieving and maintaining interrater reliability
- Categorical: Kappa > .60

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.508	.073	7.960	.000
N of Valid Cases		90			

a. Not assuming the null hypothesis.

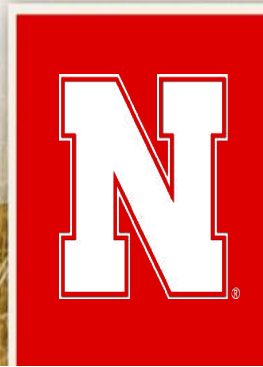
b. Using the asymptotic standard error assuming the null hypothesis.

Ethology Classification Lego88 Coder 4 VP * Ethology Classification Lego88 Coder 1 RS Crosstabulation

Count

		Ethology Classification Lego88 Coder 1 RS				Total
		1	2	3	4	
Ethology Classification Lego88 Coder 4 VP	1	36	3	1	1	41
	2	9	10	4	0	23
	3	2	0	8	0	10
	4	6	3	0	7	16
Total		53	16	13	8	90

(Cicchetti, 1994)



Achieving Interrater Reliability

- One of the challenges of completing observational coding is achieving and maintaining interrater reliability
- Continuous: Intraclass Correlation Coefficient (ICC) > .70

Intraclass Correlation Coefficient

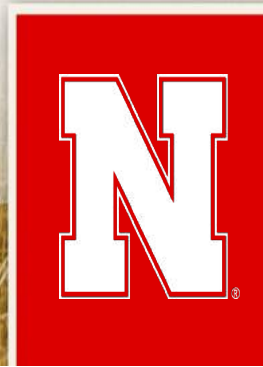
	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.556 ^a	.488	.622	6.002	197	591	.000
Average Measures	.833 ^c	.792	.868	6.002	197	591	.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
c1 Attachment total	10.39	22.543	.789	.728
c2 Attachment total	10.14	26.453	.577	.830
c3 Attachment total	9.81	25.696	.761	.748
c4 Attachment total	11.07	29.701	.549	.836

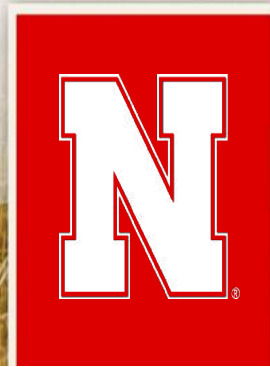
- However, both may be distorted by distributional asymmetries (i.e., high or low values of a behavior)...see alternatives

(Heyman, Lorber, Eddy, & West, 2014)



Achieving Interrater Reliability

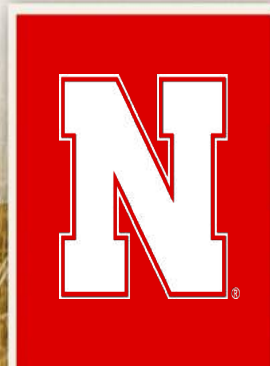
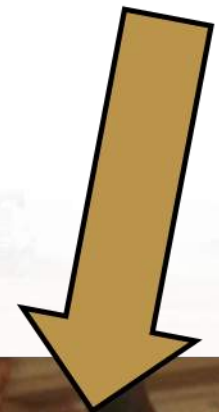
- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability



Achieving Interrater Reliability

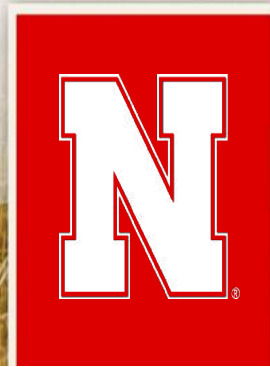
- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability

This guy.



Achieving Interrater Reliability

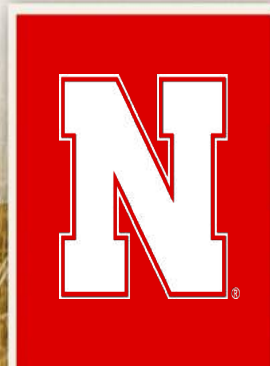
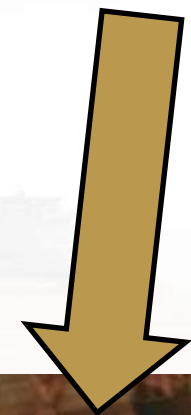
- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability



Achieving Interrater Reliability

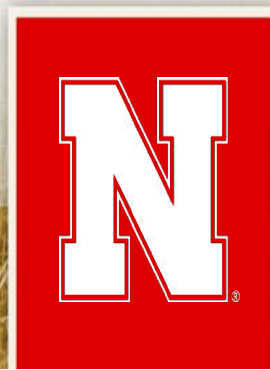
- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability

Again, this guy.



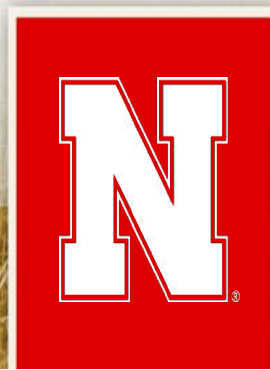
Achieving Interrater Reliability

- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability



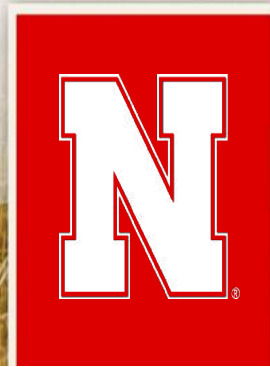
Achieving Interrater Reliability

- Achieving reliability
 - Choosing “good” coders
 - Establishing a team
 - Initial phases of training
 - Continuing to maintain reliability



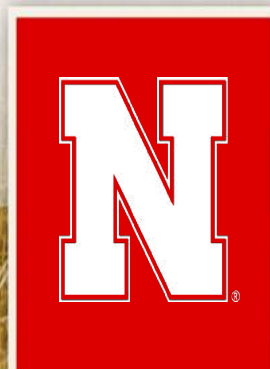
Achieving Interrater Reliability

- Interrater reliability isn't everything
 - Reliability across time, context, and lab
 - Construct Validity
 - Convergent/discriminate
 - Predictive
- Most convincing evidence – multi-method, multi-information design

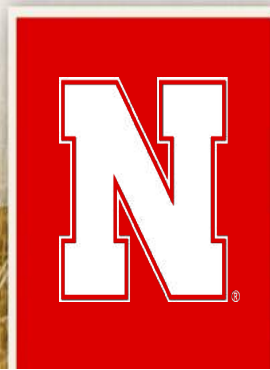


Achieving Interrater Reliability

- Interrater reliability isn't everything
 - Reliability across time, context, and lab
 - Construct Validity
 - Convergent/discriminate
 - Predictive
- Most convincing evidence – multi-method, multi-information design

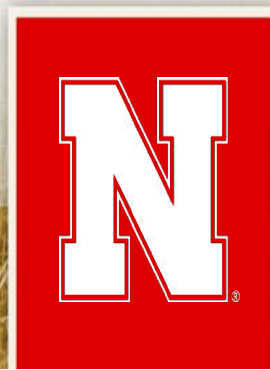


Moving towards a person-based approach



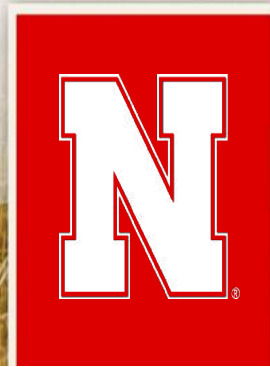
Variable-based vs. Person-based

- Variable-based:
 - Each variable (or characteristic) is related to another
 - Assumes that populations are homogenous
 - Common Analytic Approach: regression, ANOVA, path models

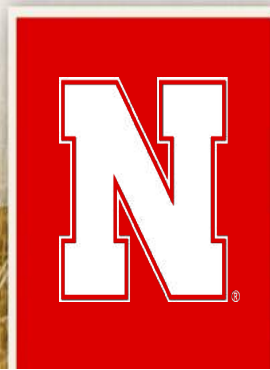


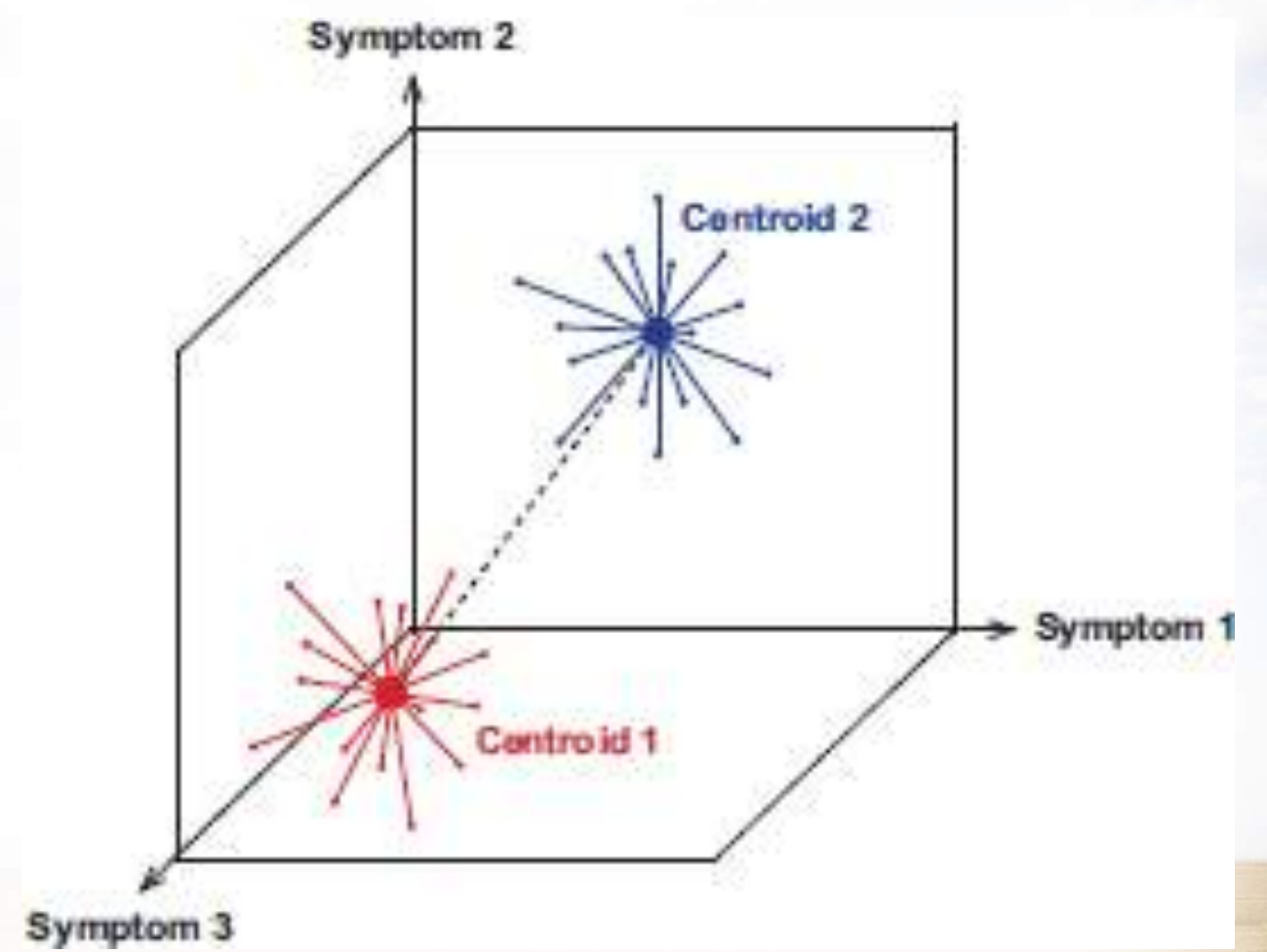
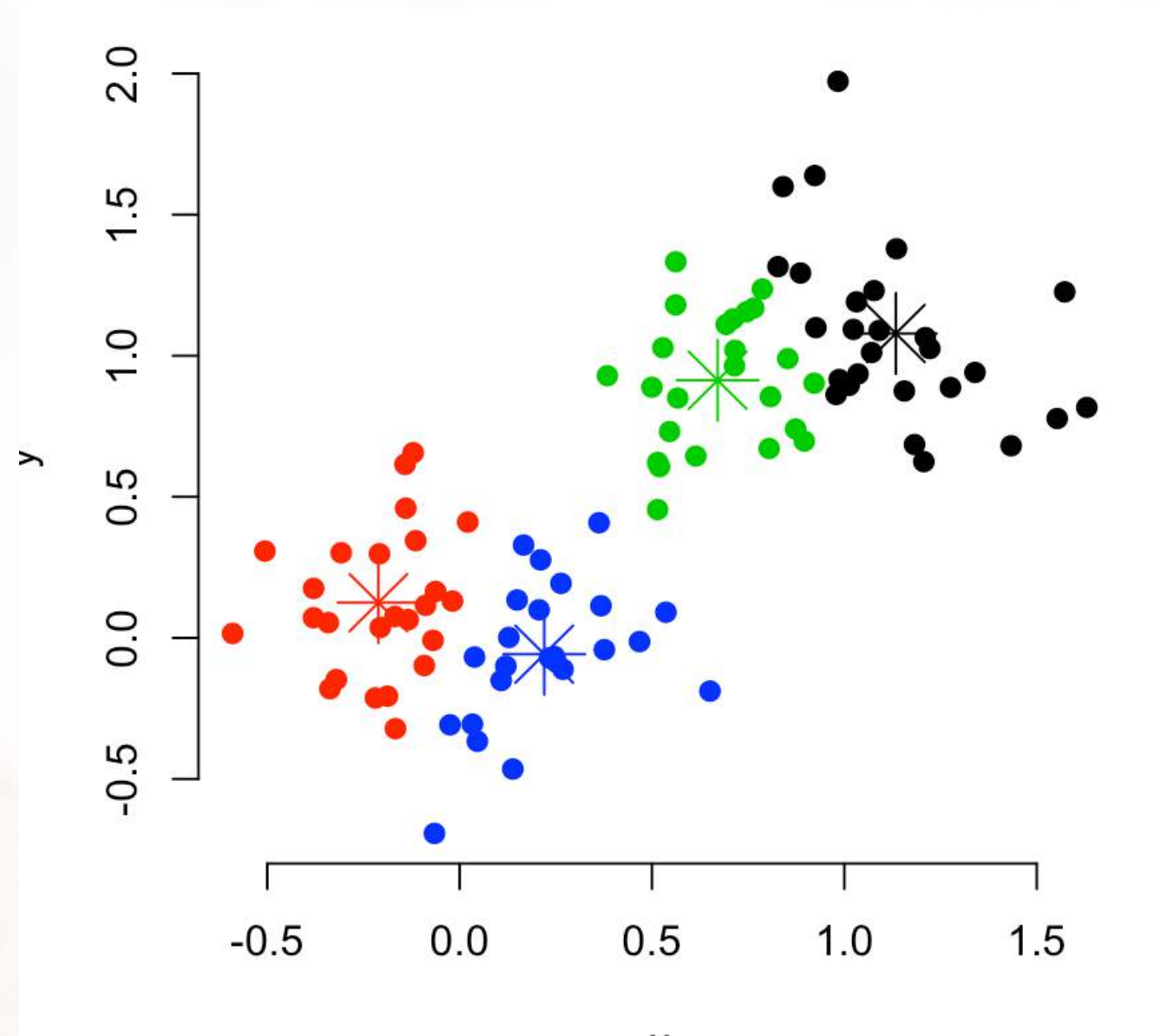
Variable-based vs. Person-based

- Variable-based:
 - Each variable (or characteristic) is related to another
 - Assumes that populations are homogenous
 - Common Analytic Approach: regression, ANOVA, path models
- Person-based:
 - Differences in the way variables combine within individuals
 - Assumes distinct subgroups within a population
 - Common Analytic Approach: cluster analysis, LCA, LPA

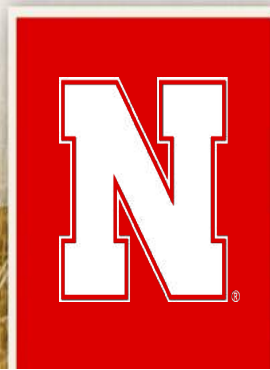


UNIVERSITY OF
Nebraska
Lincoln





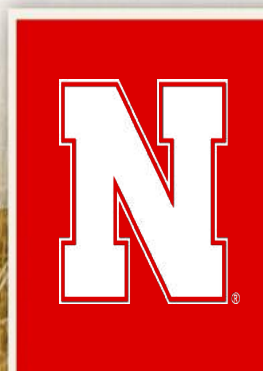
Profile-Based Coding: Social Defense Strategies



Subtypes of Insecurity

	Function	Form
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric

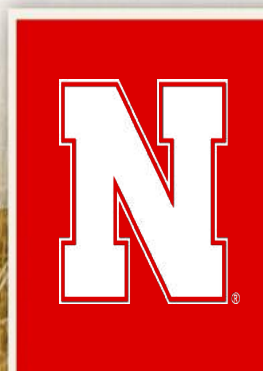
(Martin, Davies, & MacNeill, 2014)



Subtypes of **Insecurity**

	Function	Form
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none">• Dramatic, overt distress• Active fight/flight• Social de-escalation

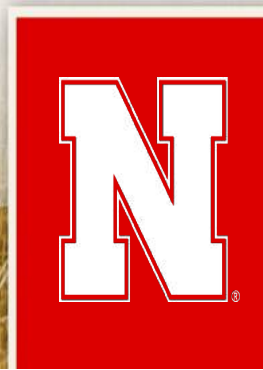
(Martin, Davies, & MacNeill, 2014)



Subtypes of Insecurity

	Function	Form
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability

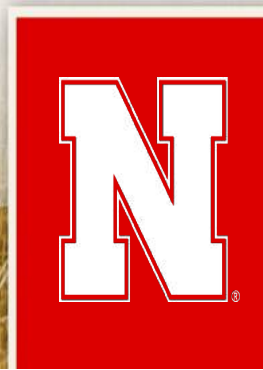
(Martin, Davies, & MacNeill, 2014)

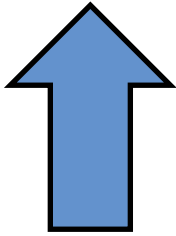
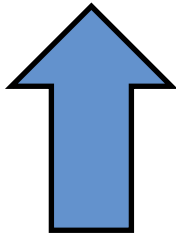
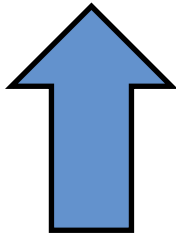
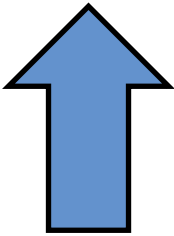
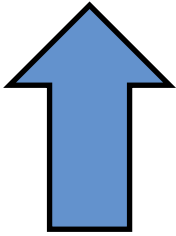
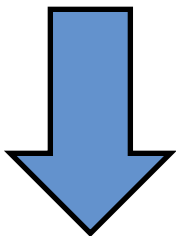
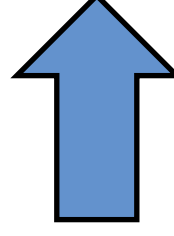
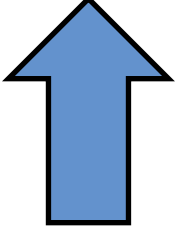
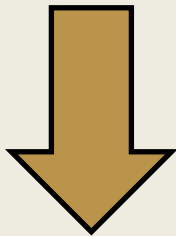
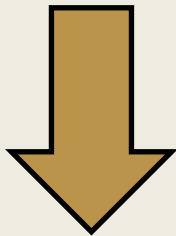
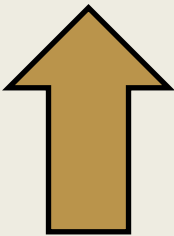
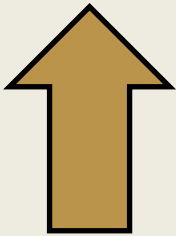
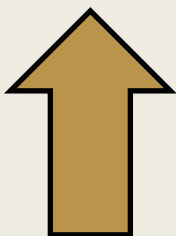
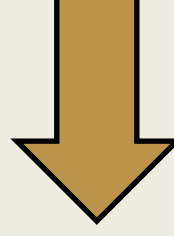
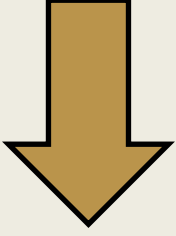
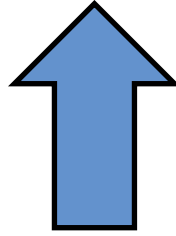
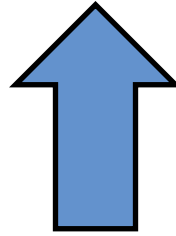
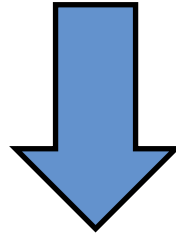
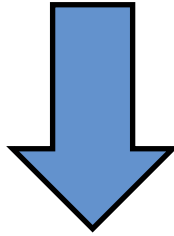
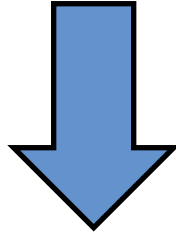
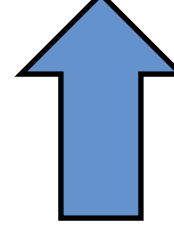
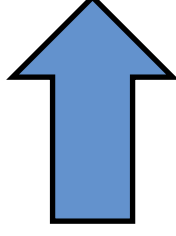


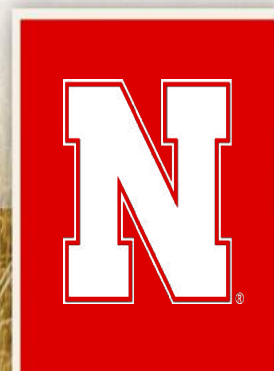
Subtypes of Insecurity

	Function	Form
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric

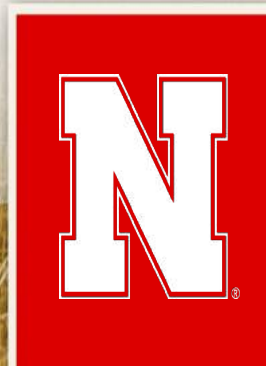
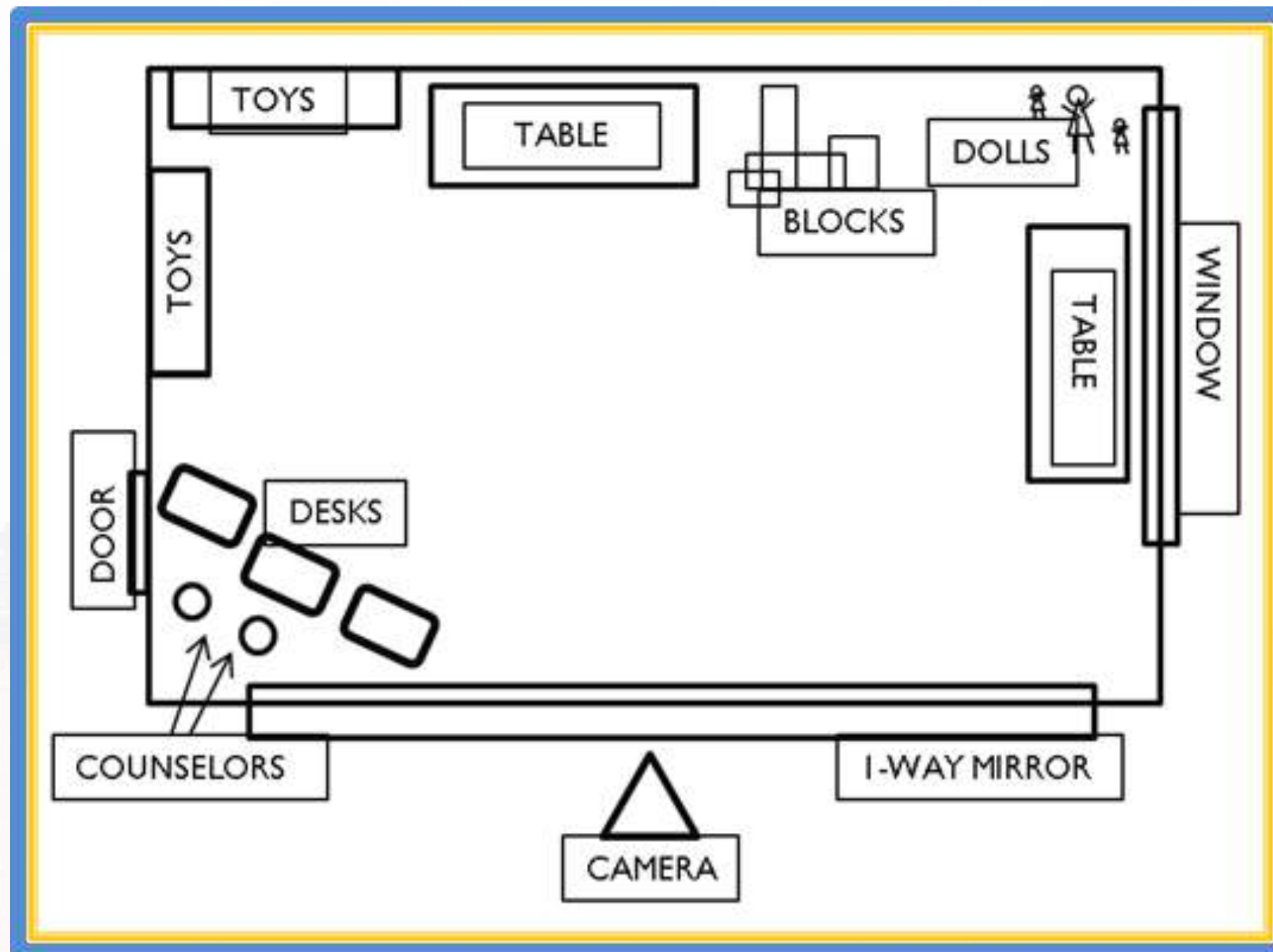
(Martin, Davies, & MacNeill, 2014)



	Fear	Appeasing Bx	Affected Bx	Anger	Aggression	Indifference	Dysphoria	Submission
Mobilizing								
Dominant	—							
Demobilizing						—		



PEP - Molecular Coding





PEP - Molecular Coding

- “Threat” =
 - Signals potential for harm
 - Threats to individual’s access to resources (e.g., toys, privileged play space)
- Examples include:
 - Overt expressions of direct hostility and aggression
 - Rejection
 - Angry facial expression & gestures
 - Yelling, screaming, threats

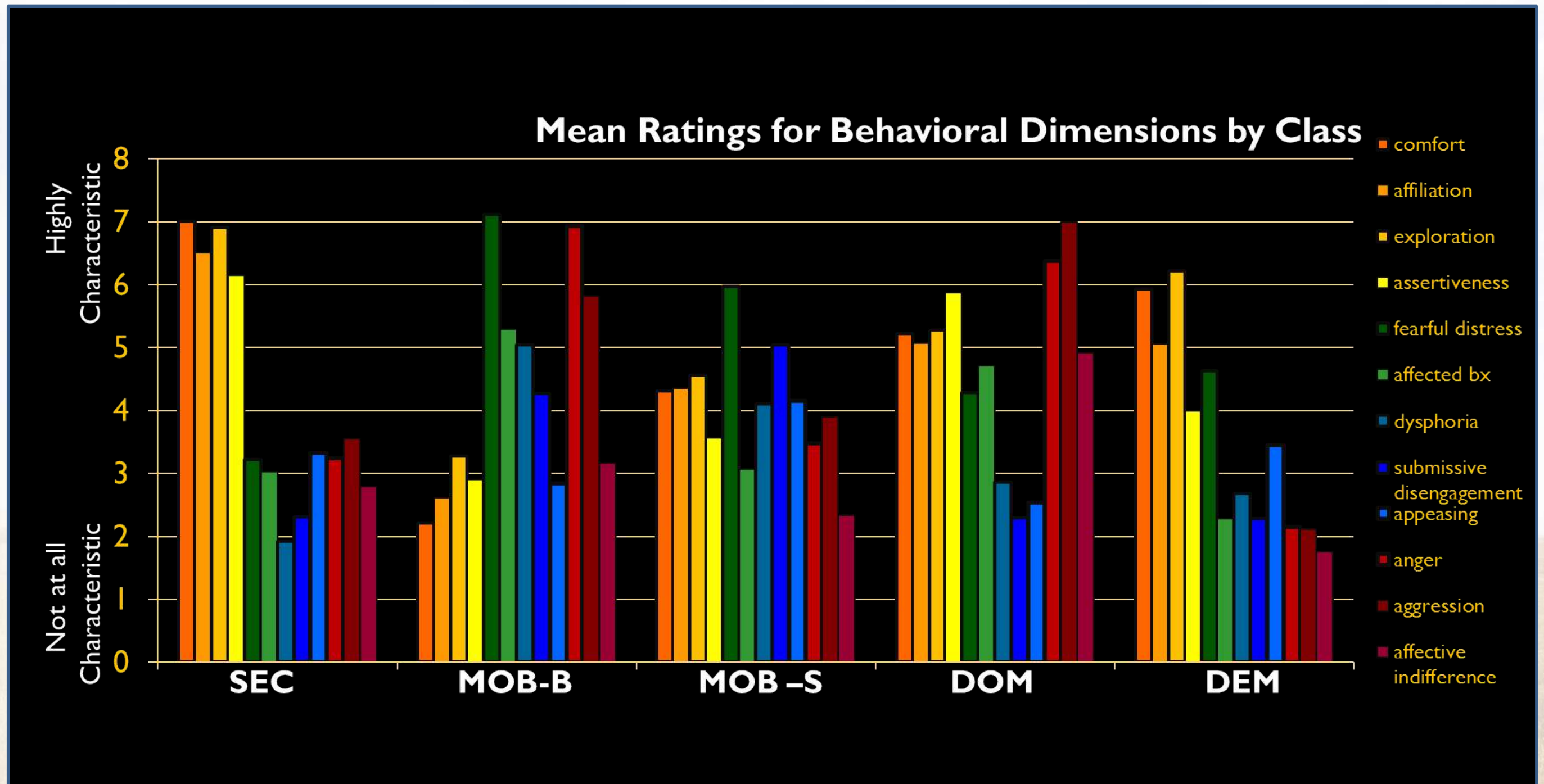
Ethogram

Intervals

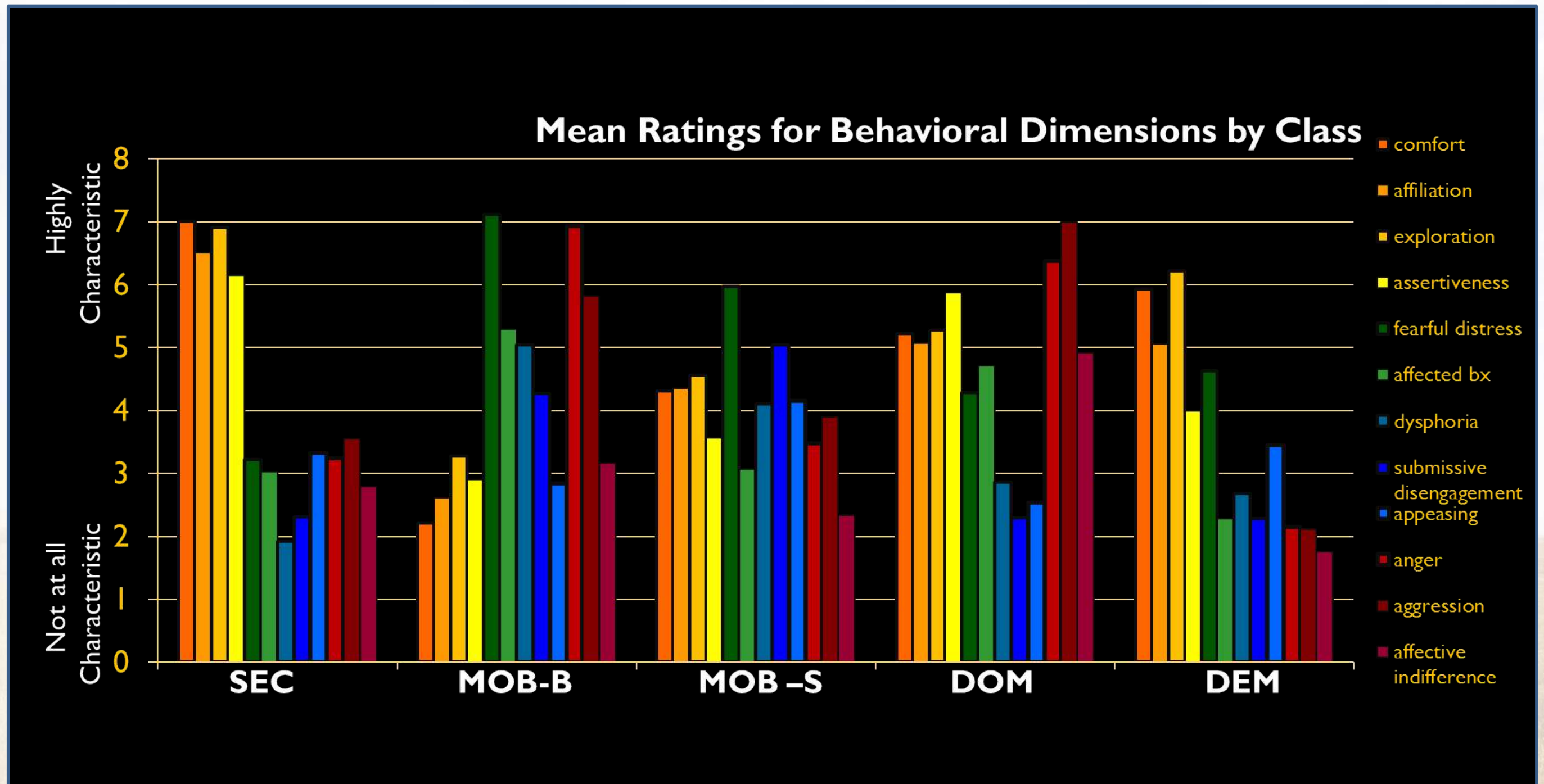
Behavior	1	2	3	4	5
1. Anxious Face/Gesture					
2. Freezing					
3. Active Flight					
4. Comfort-seeking					
5. Submissive Disengagement					
6. Appeasing behavior					
7. Hovering					
8. Angry face/Dominant posture					
9. Verbal dominance					
10. Verbal aggression					
11. Physical aggression					
12. Relational aggression					
13. Tattling					
14. Sad Face/Posture					
15. Crying					
16. Whining					
19. Happy Face/Behavior					
20. Play Bid					
21. Solitary play					
22. Social engagement & Play					
23. Rough & Tumble play					



PEP – Latent Class Analysis



PEP – Latent Class Analysis

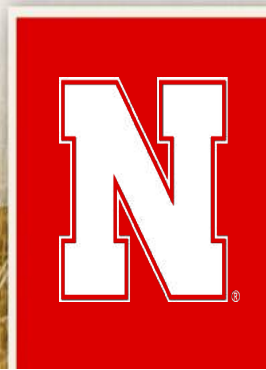


Dimensional

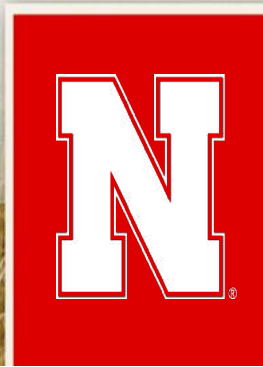
1. **Not at all characteristic:** Child does not display any definitive signs of submissive disengagement.
- 2.
3. **Minimally characteristic:** Child shows minimal signs of submissive disengagement.
- 4.
5. **Somewhat characteristic:** Child shows some signs of submissive disengagement
- 6.
7. **Moderately characteristic:** Child shows signs of submissive behavior that are moderate in form and intensity
- 8.
9. **Mainly characteristic:** Child shows signs of submissive disengagement that are strong in form and intensity

Profile-based

1. **Not at all characteristic:** Child displays no signs or rare signs of mobilizing-insecure profile.
- 2.
3. **Relatively uncharacteristic:** The child's level, quality, and patterning of responses indicates that the child shows minimal signs of mobilization.
- 4.
5. **Neither characteristic nor uncharacteristic:** Across the interaction, the intensity, frequency, and quality of child responses is neither characteristic nor uncharacteristic of mobilizing strategies.
- 6.
7. **Relatively characteristic:** The patterning, intensity, and consistency of child responses across the interaction are relatively characteristic of the mobilizing profile.
- 8.
9. **Highly characteristic:** The child overwhelmingly (i.e., always or almost always) exhibits prototypical signs of mobilization across the interaction.

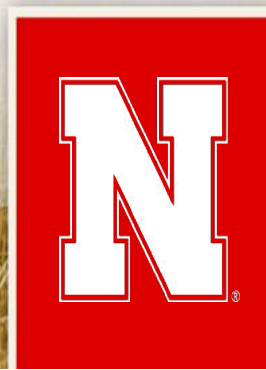


Mobilizing-Insecure: Mobilizing patterns of responding to peer threat are theorized to reflect sensitization of the SDS. The pattern specifically reflects a high sensitivity to interpersonal threat (i.e., high avoidance motivation) in conjunction with relatively high psychological stakes in maintaining social ties (i.e., moderate to high approach motivation). The significance of the threat and high stakes in social relationships are specifically reflected in unvarnished, blatant, and direct expressions of mobilizing (i.e., arousing) forms of distress (e.g., multiple anxious facial expressions and gestures), as well as behaviors reflecting the dynamic between approach and avoidance (i.e., hovering behavior). High levels of vulnerable forms of affect are also typically displayed in intense, dramatic, and demonstrative ways (i.e., affected behaviors; appealing) that may involve clinginess, whining, anguish (e.g., fretting, crying), and immature (e.g., babyish tone of voice or verbalizations) behavior that serve to draw peer or adult attention in a dramatic but largely nonthreatening manner. Although these behaviors may be aversive or annoying to many individuals in the peer group, but their purpose is to forge, maintain, and/or intensify alliances and support from a few social group members. This pattern of behavior commonly, but not always, occurs in conjunction with: (a) bouts of submissive, appealing, overbright, or ingratiating behavior towards peers (especially high-status peers), (b) attempts to solicit comfort from adults in the classroom, gain peers' sympathy, or form alliances with one peer against another, and/or (c) some aggressive or hostile behaviors, typically expressed in vulnerable, immature ways. On the other hand, high levels of masking, preoccupation, or social disengagement do not commonly distinguish children who are high and low on mobilizing behavior because the assessment reflects withdrawal or masking of affect and, thus, do not signify the exaggerated, direct, or blatant expressions of distress and immersion in peer problems.



Preliminary Validity Tests

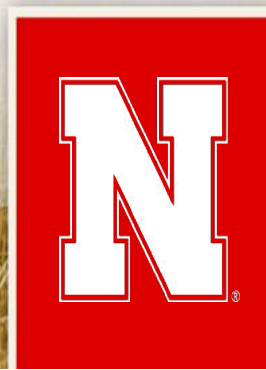
	Function	Form		Adjustment
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation 	→	<ul style="list-style-type: none"> • ADHD symptoms • Behavioral Undercontrol
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability 	→	<ul style="list-style-type: none"> • Aggression • Low Vulnerability • Behavioral Undercontrol
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric 	→	<ul style="list-style-type: none"> • High internalizing • Behavioral over-control • Social withdrawal



(Martin, Davies, & MacNeill, 2014)

Preliminary Validity Tests

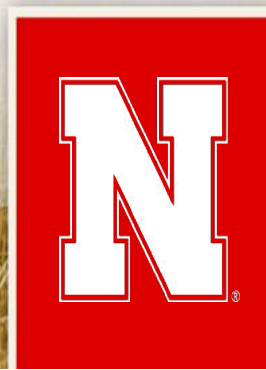
	Function	Form		Adjustment
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation 	→	<ul style="list-style-type: none"> • ADHD symptoms • Behavioral Undercontrol
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability 	→	<ul style="list-style-type: none"> • Aggression • Low Vulnerability • Behavioral Undercontrol
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric 	→	<ul style="list-style-type: none"> • High internalizing • Behavioral over-control • Social withdrawal



(Martin, Davies, & MacNeill, 2014)

Preliminary Validity Tests

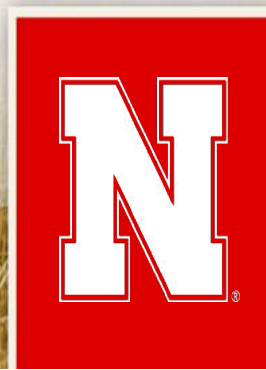
	Function	Form		Adjustment
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation 	→	<ul style="list-style-type: none"> • ADHD symptoms • Behavioral Undercontrol
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability 	→	<ul style="list-style-type: none"> • Aggression • Low Vulnerability • Behavioral Undercontrol
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric 	→	<ul style="list-style-type: none"> • High internalizing • Behavioral over-control • Social withdrawal



(Martin, Davies, & MacNeill, 2014)

Preliminary Validity Tests

	Function	Form		Adjustment
Mobilizing	Stay ready for threat or opportunity	<ul style="list-style-type: none"> • Dramatic, overt distress • Active fight/flight • Social de-escalation 	→	<ul style="list-style-type: none"> • ADHD symptoms • Behavioral Undercontrol
Dominant	Defeat threat	<ul style="list-style-type: none"> • Aggression • Hostile volatility • Minimize vulnerability 	→	<ul style="list-style-type: none"> • Aggression • Low Vulnerability • Behavioral Undercontrol
Demobilizing	Lay Low	<ul style="list-style-type: none"> • Freezing • Restrained fear • Subtle disengagement • Submissive • Dysphoric 	→	<ul style="list-style-type: none"> • High internalizing • Behavioral over-control • Social withdrawal



(Martin, Davies, & MacNeill, 2014)

Preliminary Validity Tests

Sample:

- 109 boys (ages 6-11); Groups of 8
- 63% had minority backgrounds; High risk
- 40-minute free-play session



Ratings

- Ratings from 1 (*Not at all characteristic of profile*) to 9 (*Highly characteristic of profile*)
- ICC ranged from .80 -.87



Mobilizing
 $M = 3.74$,
 $SD = 1.96$



Dominant
 $M = 3.32$,
 $SD = 2.18$



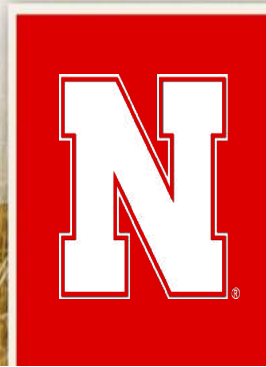
Demobilizing
 $M = 3.32$,
 $SD = 1.94$

Preliminary Validity Tests

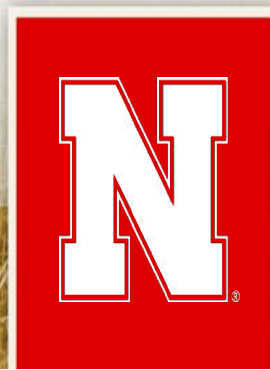
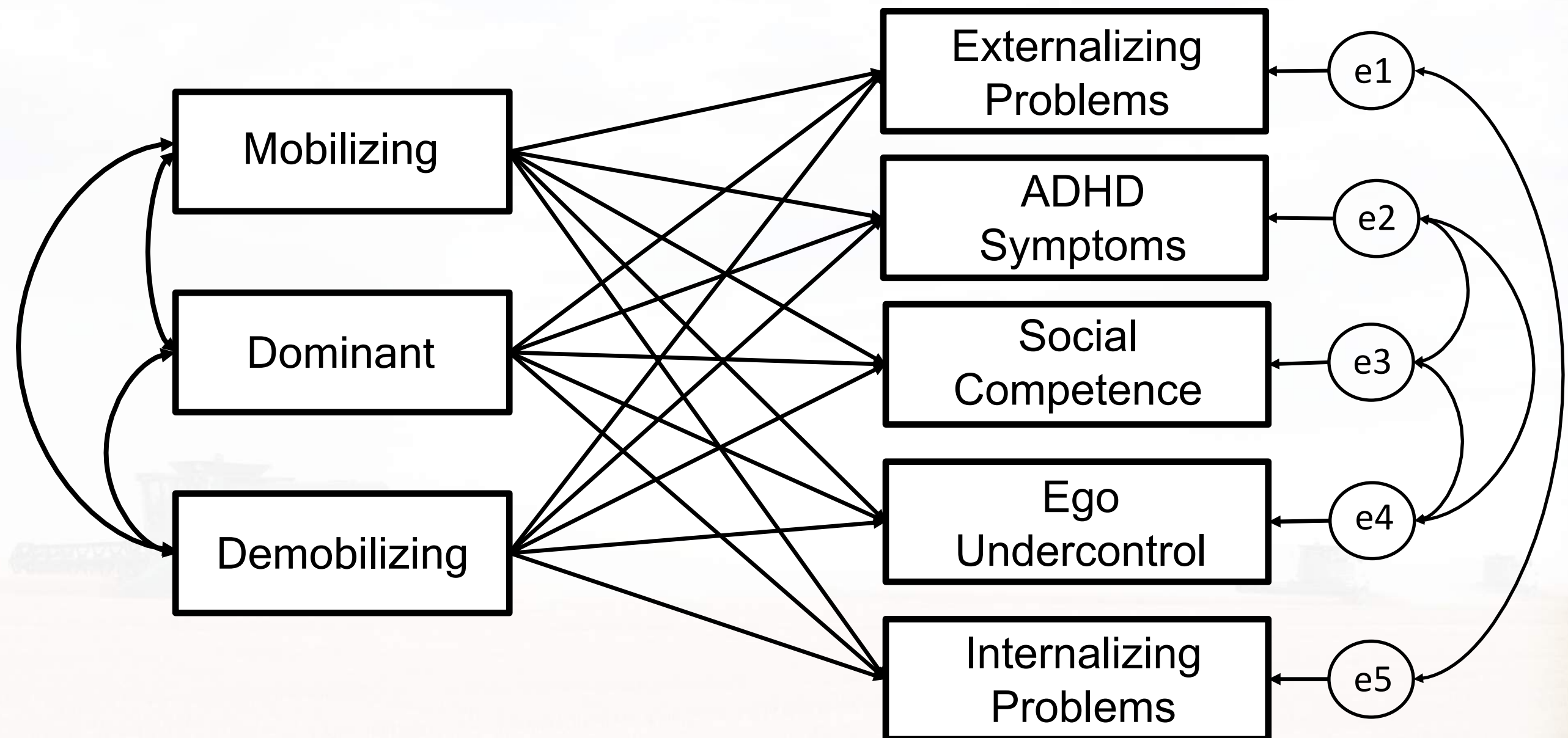
Counselor Reports



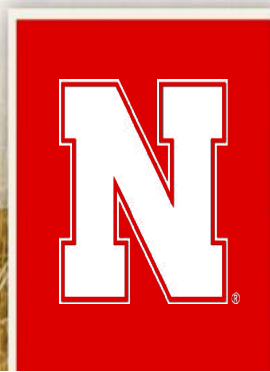
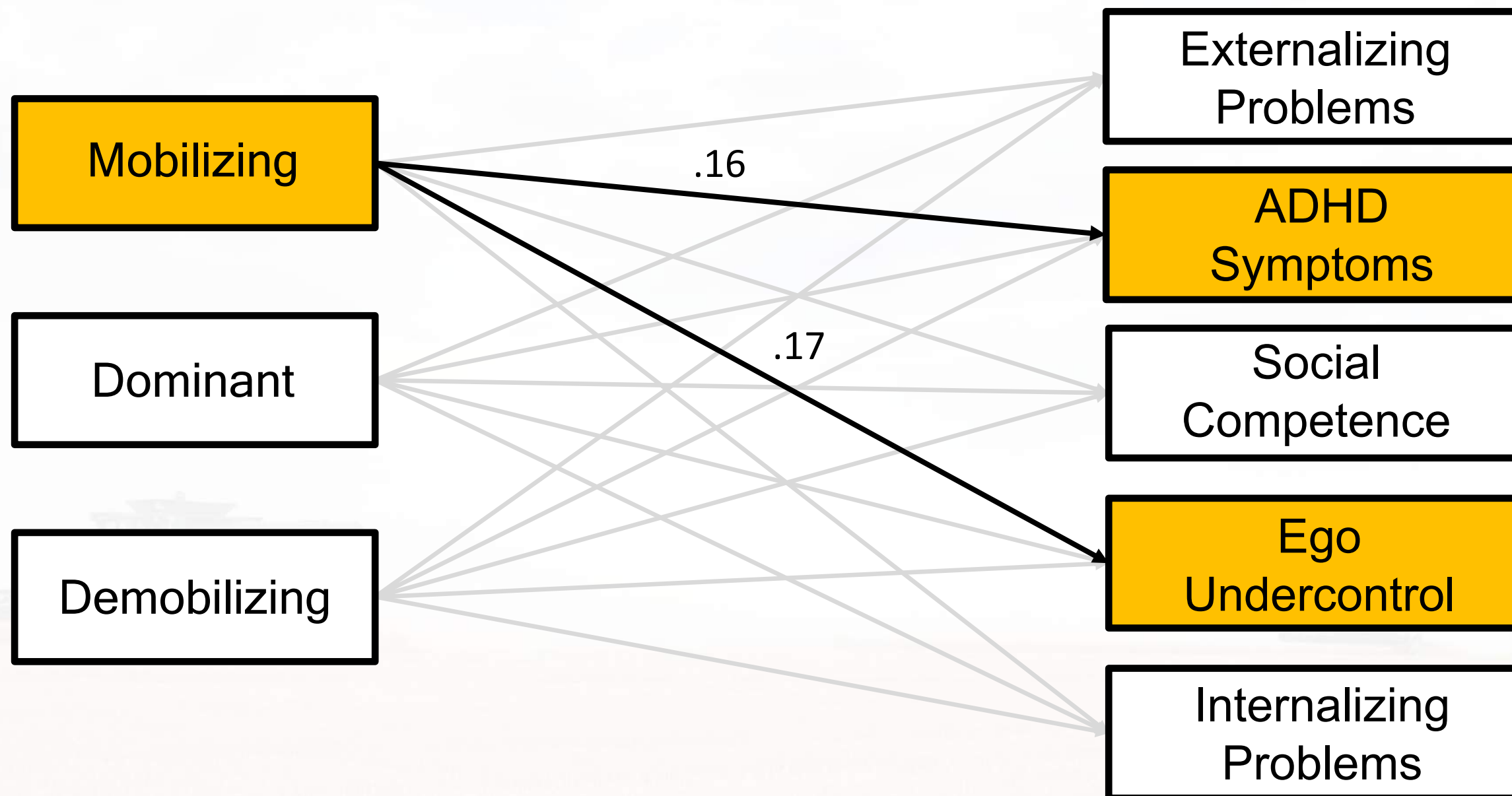
- California Child Q-set (Block & Block, 1980)
 - ADHD Symptoms
 - Hyperactive, Can't hold attention
 - Ego Undercontrol
 - Poor control of emotions and behavior, Can't wait
 - Social Competence
 - Behaves in a socially acceptable way
 - Teacher Report Form
 - Externalizing Problems
 - Aggression, delinquency
 - Internalizing Symptoms
 - Anxiety/Depression, Withdrawal
- (Achenbach & Edlebrock, 1983)



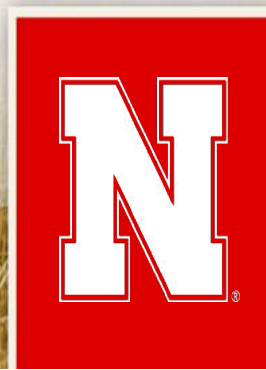
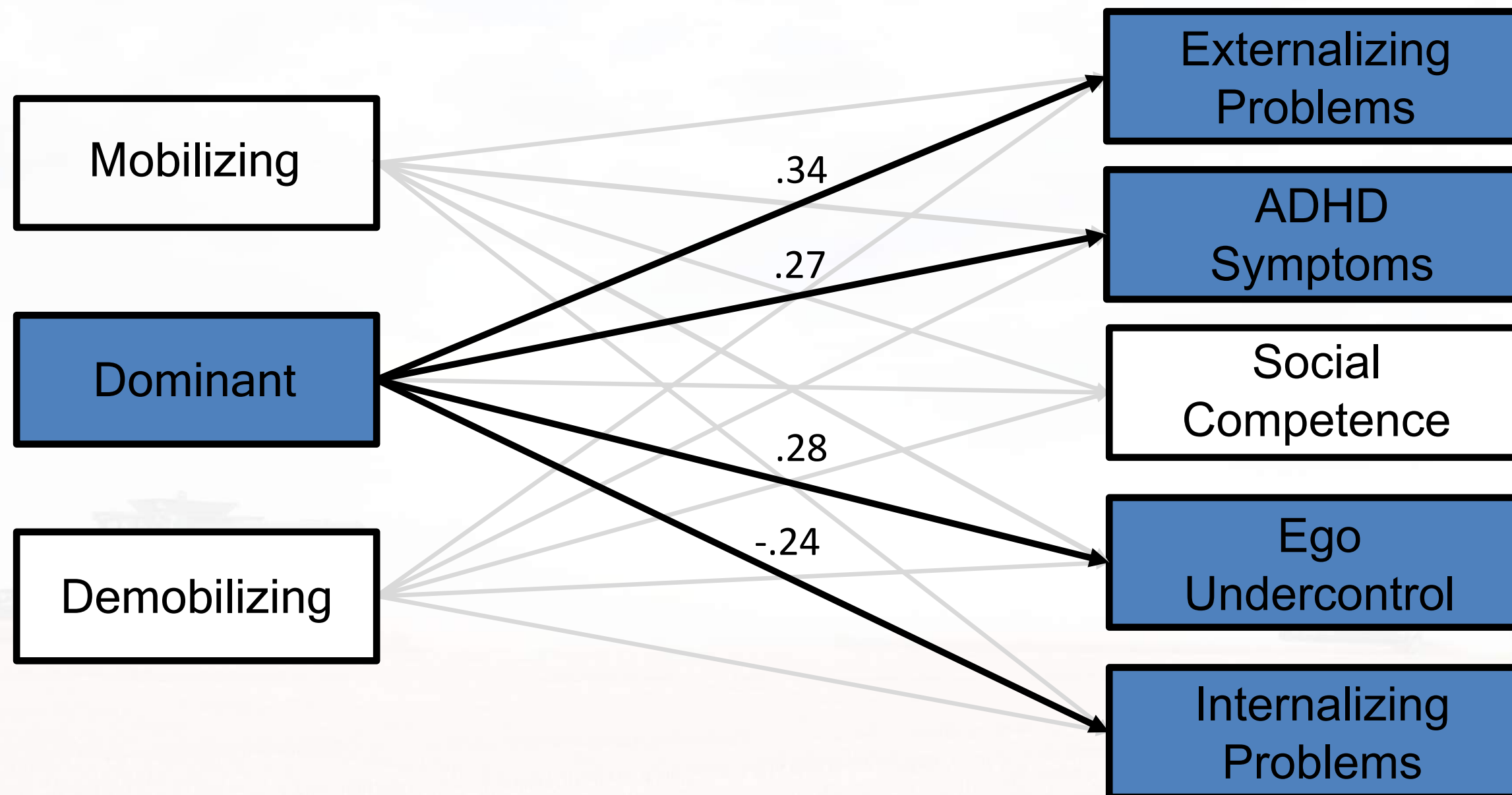
Preliminary Validity Tests



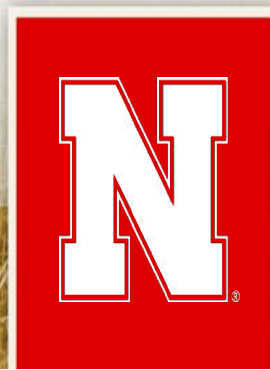
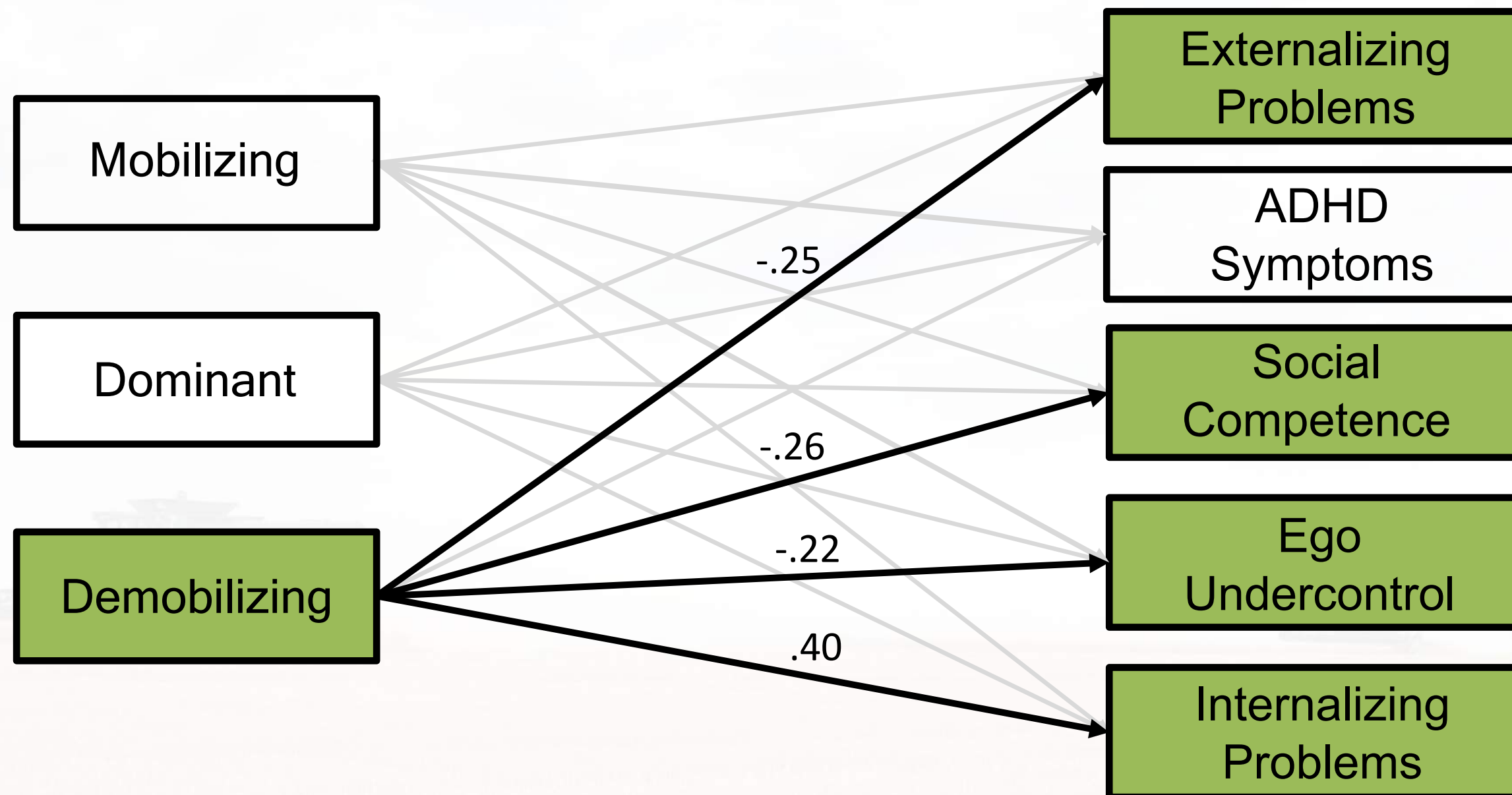
Preliminary Validity Tests



Preliminary Validity Tests

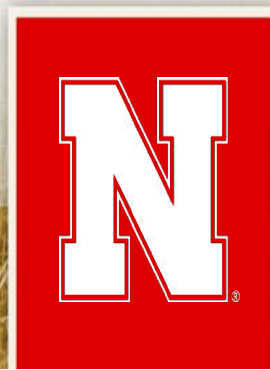


Preliminary Validity Tests

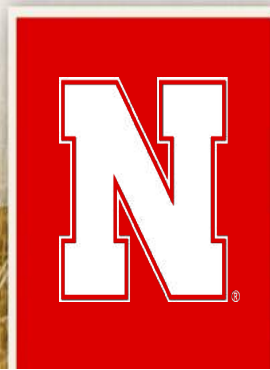


Why might this matter?

- Theory-testing
- If we can accurately identify meaningful social defense patterns:
 - Increase precision & specificity in identifying children at risk for particular types of dysfunction

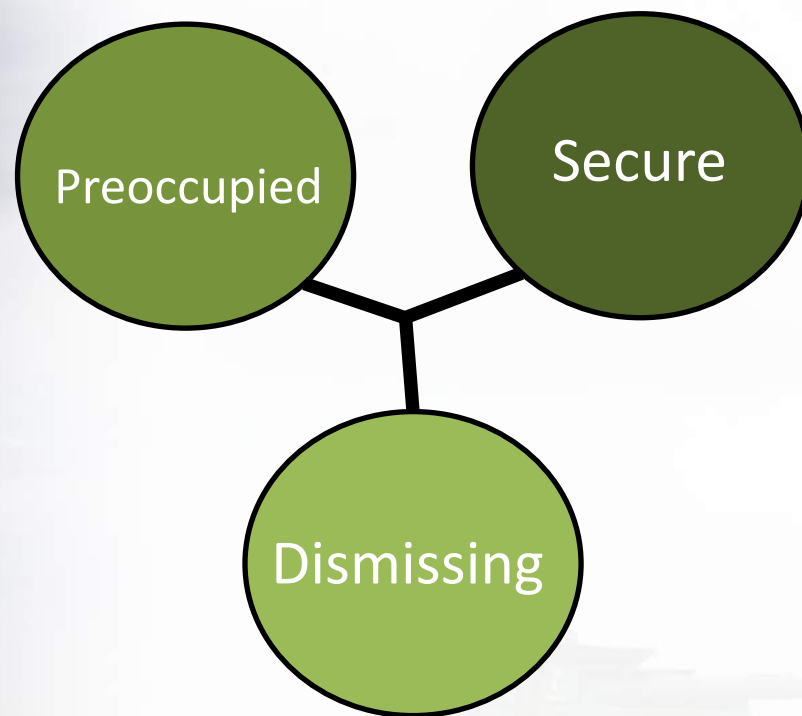


What's the point?



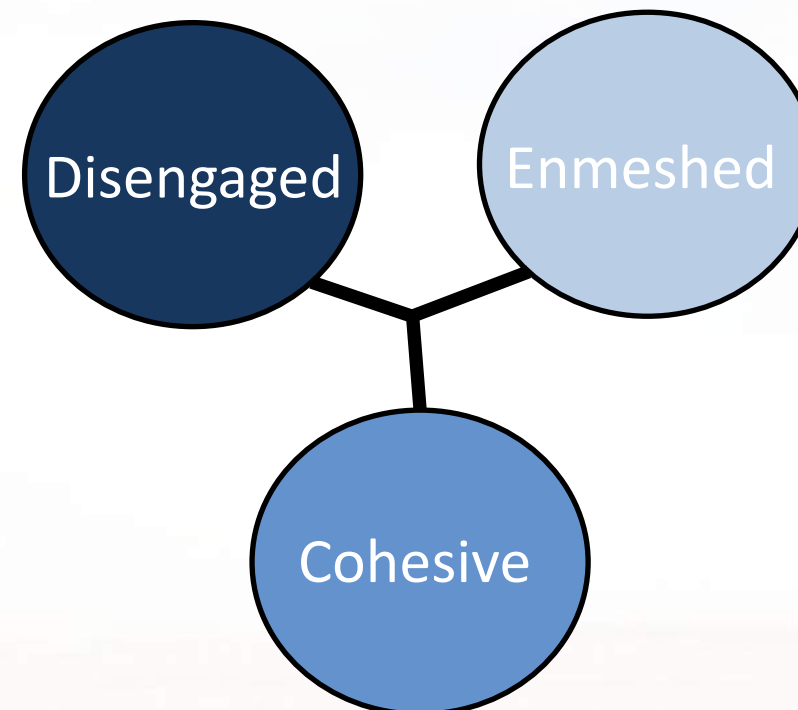
Profile-based coding

ATTACHMENT



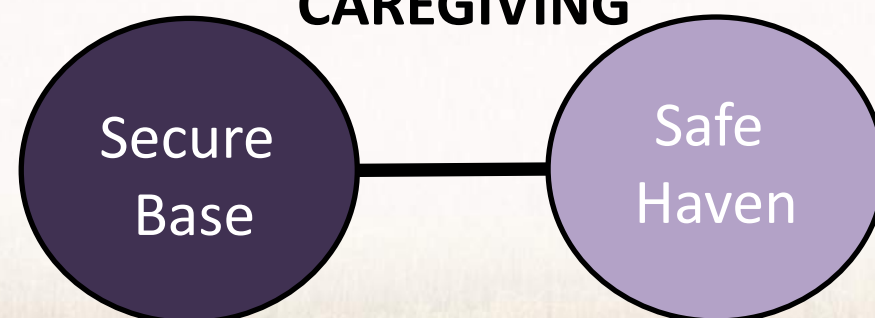
(Bakermans-Kranenburg & van IJzendoorn, 2009;
Furman et al., 2002)

(Kerig, 1995; Sturge-Apple, Davies, & Cummings, 2010)



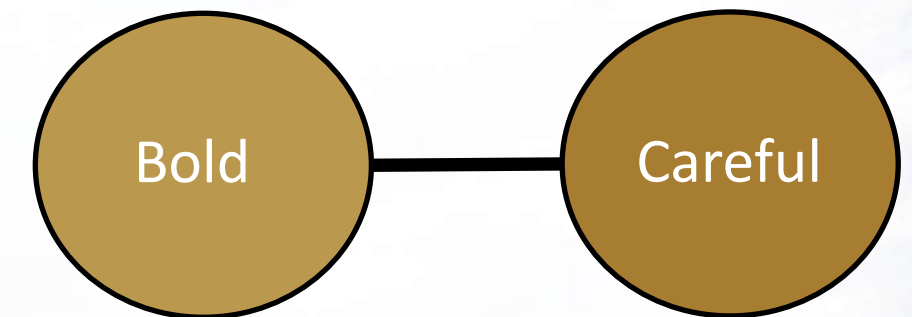
FAMILY SYSTEMS

PARENTAL CAREGIVING



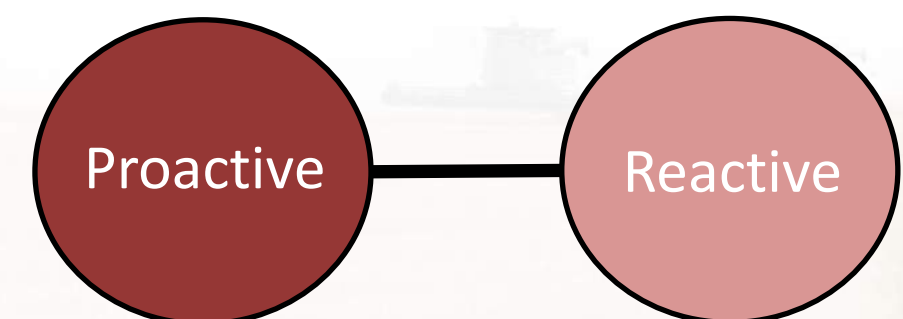
(Martin, Sturge-Apple, Davies, & Romero, in press;
Kerns et al., 2015)

TEMPERAMENT



(Korte, Koolhaas, Wingfield, & McEwen, 2005;
Sturge-Apple et al., 2012)

AGGRESSION

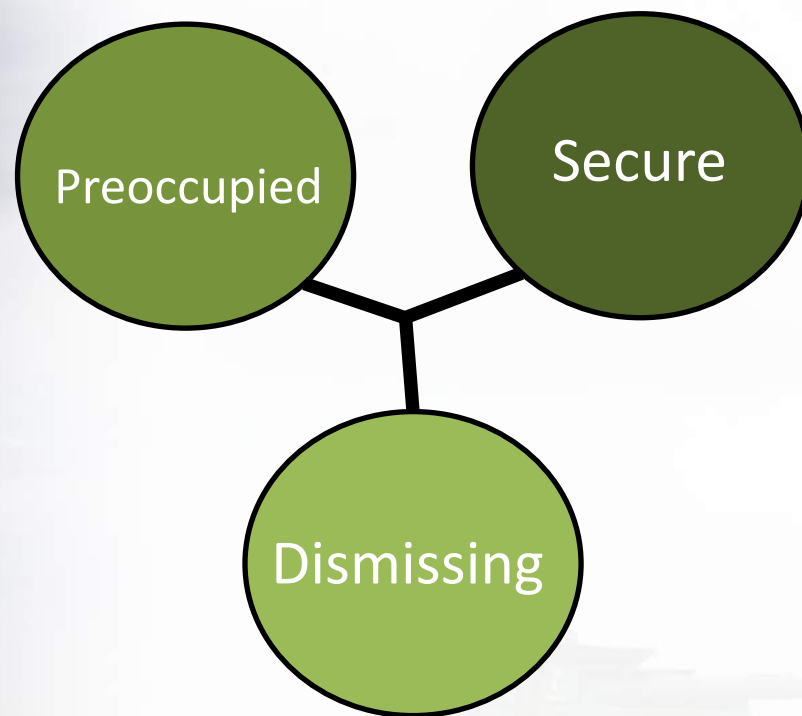


(Card & Little, 2006; Ostrov & Crick, 2007)



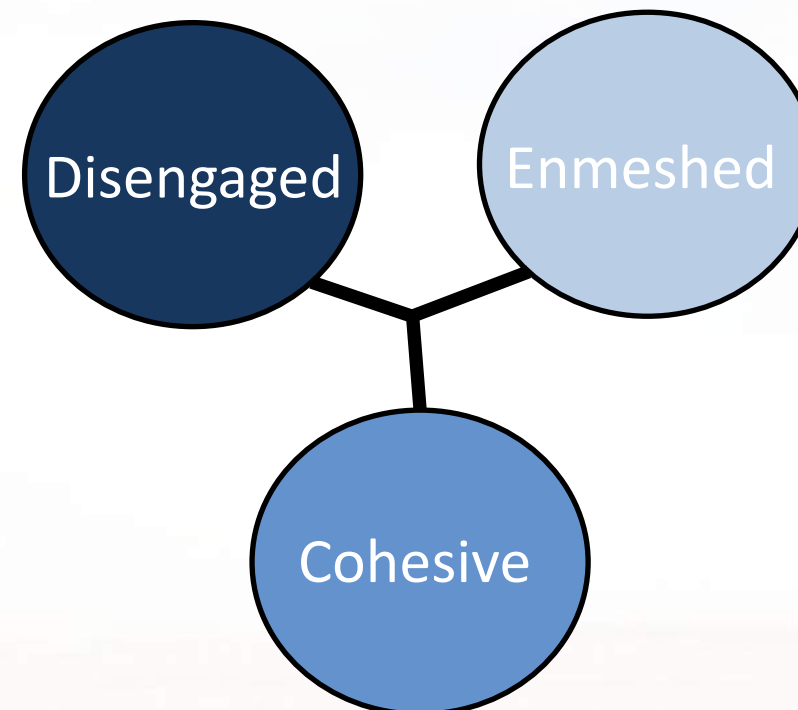
Profile-based coding

ATTACHMENT



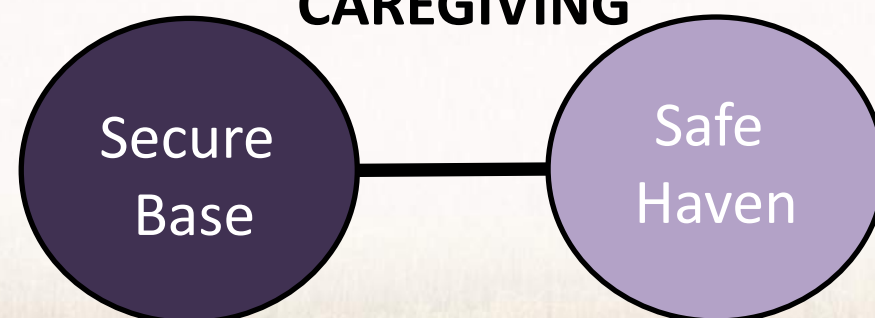
(Bakermans-Kranenburg & van IJzendoorn, 2009;
Furman et al., 2002)

(Kerig, 1995; Sturge-Apple, Davies, & Cummings, 2010)



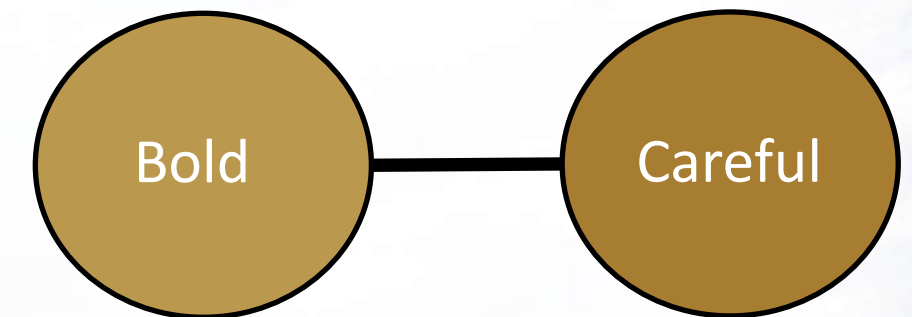
FAMILY SYSTEMS

PARENTAL CAREGIVING



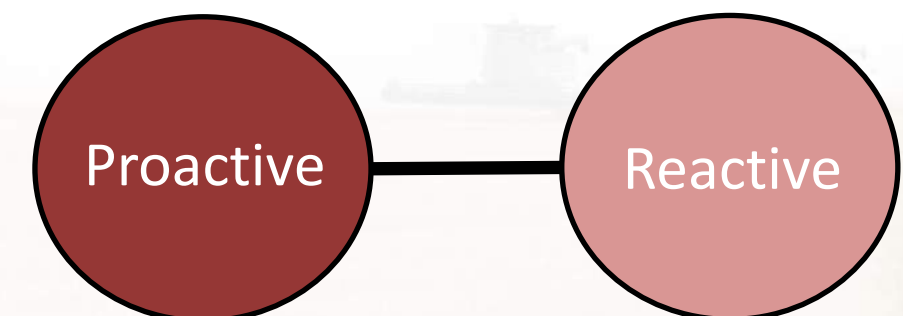
(Martin, Sturge-Apple, Davies, & Romero, in press;
Kerns et al., 2015)

TEMPERAMENT



(Korte, Koolhaas, Wingfield, & McEwen, 2005;
Sturge-Apple et al., 2012)

AGGRESSION



(Card & Little, 2006; Ostrov & Crick, 2007)



Thank you!

- **Patrick Davies**
- Melissa Sturge-Apple
- Dante Cicchetti
- Fred Rogosch
- My graduate and undergraduate research assistants
- NICHD (R21 HD068326)
- ISHE (Owen F. Aldis Award)
- The Mt. Hope Family Center
- The many children, teachers, and parents who participated in this research

