

The Consistency of Functional Analysis Results Across Different Stimulus Conditions

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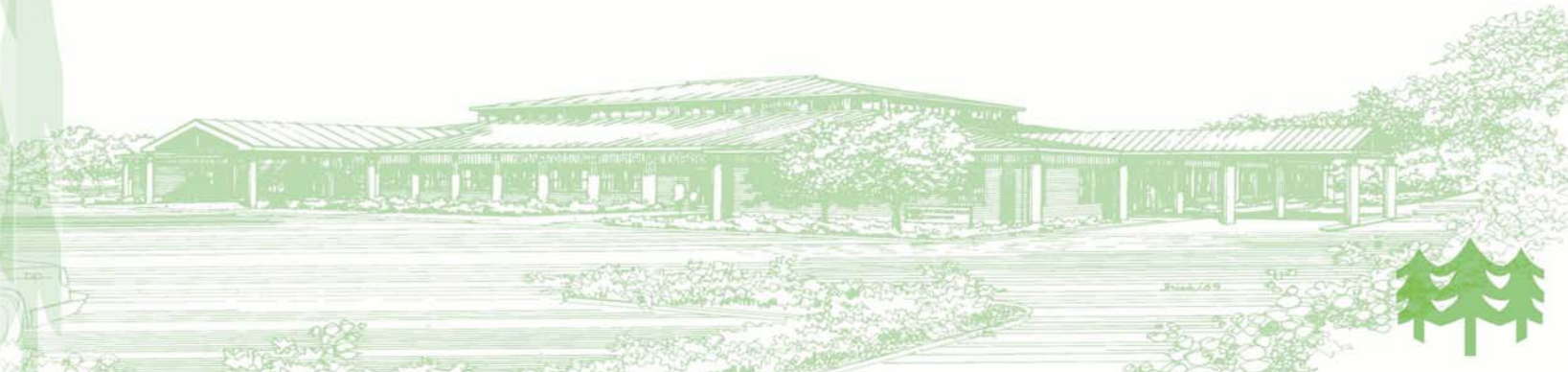
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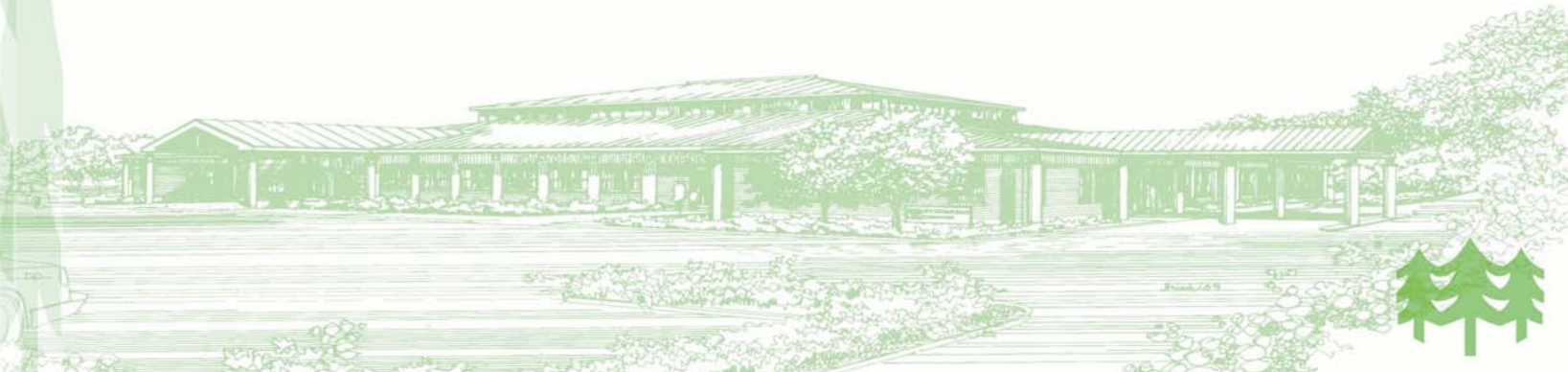
Variables that Influence Functional Analysis Results

- Type and content of instruction (Northup, Kodak, Lee, & Coyne, 2004)
- Presence or absence of leisure items during the attention condition (McCord & Neef, 2005)



Variables that Influence Functional Analysis Results

- Question of analog setting capturing variable maintained in the natural environment (Conroy, Fox, Crain, Jenkins, & Belcher, 1996; Evans & Meyer, 1985)
- Discrepant results between functional analysis settings



Purpose

- Need for comparison of analog and naturalistic conditions in functional analysis of tic disorders
- Compare the function of tics across analog and naturalistic settings



Subjects

Cory

- 17-year old male
- Attention Deficit Hyperactivity Disorder
- Tourette's Syndrome
- Mild mental retardation

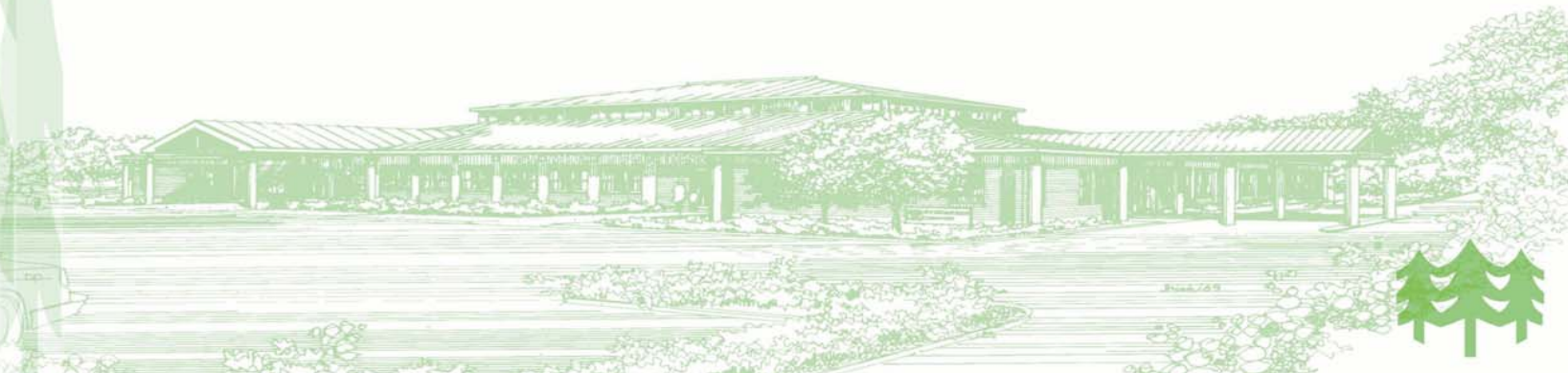
Chris

- 21-year old male
- Autism
- Tic Disorder NOS, as a result of Pediatric Autoimmune Nueropsychiatric Disorders Associated with Streptococcal Infections (PANDAS, 2001)



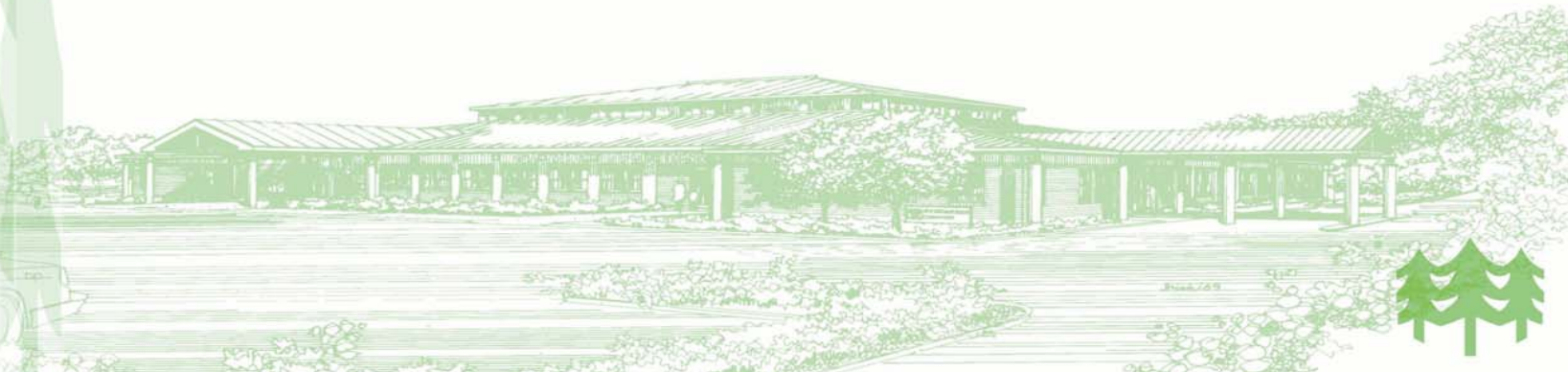
Setting

- Residential treatment program
- Ninety students
- Severe mental, physical, and/or psychiatric disorders
- Different classroom for each subject
- Seven other students in classroom



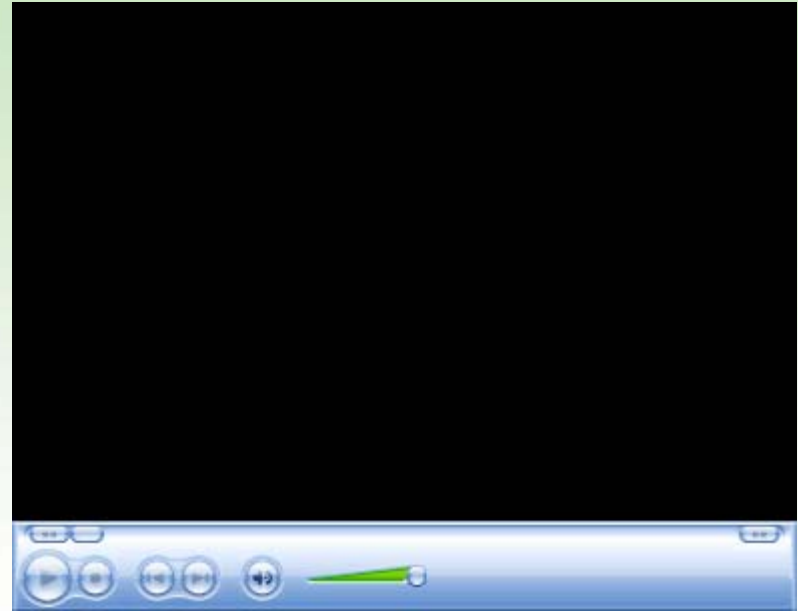
Dependent Variables

Cory



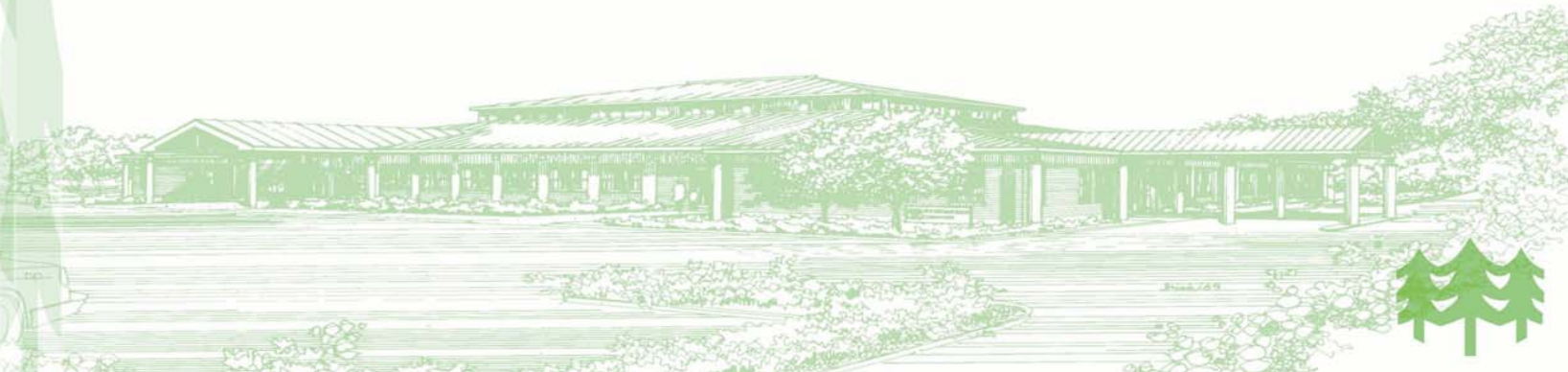
Dependent Variables

Cory



Dependent Variables

Chris



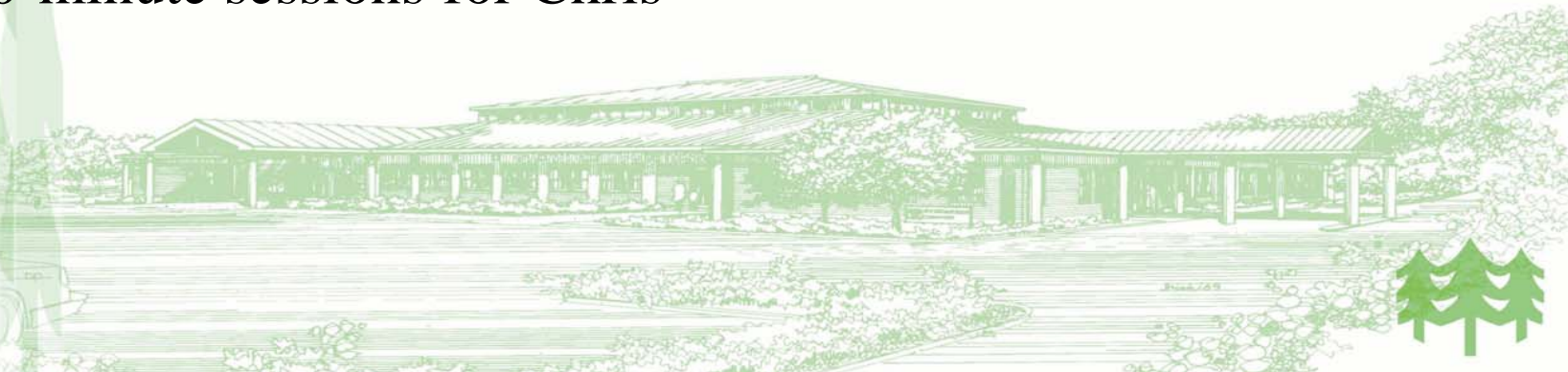
Dependent Variables

Chris



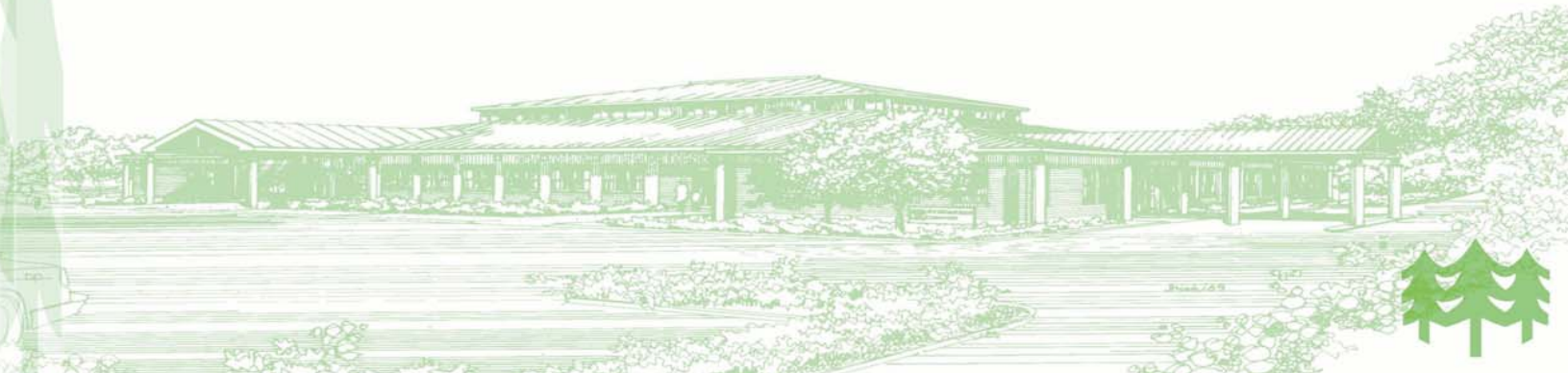
Experimental Design

- Multi-element design
- All sessions videotaped
- Daily minimum of three sessions
- Measurement - 5s partial-interval recording
- 5-minute sessions for Cory
- 10-minute sessions for Chris



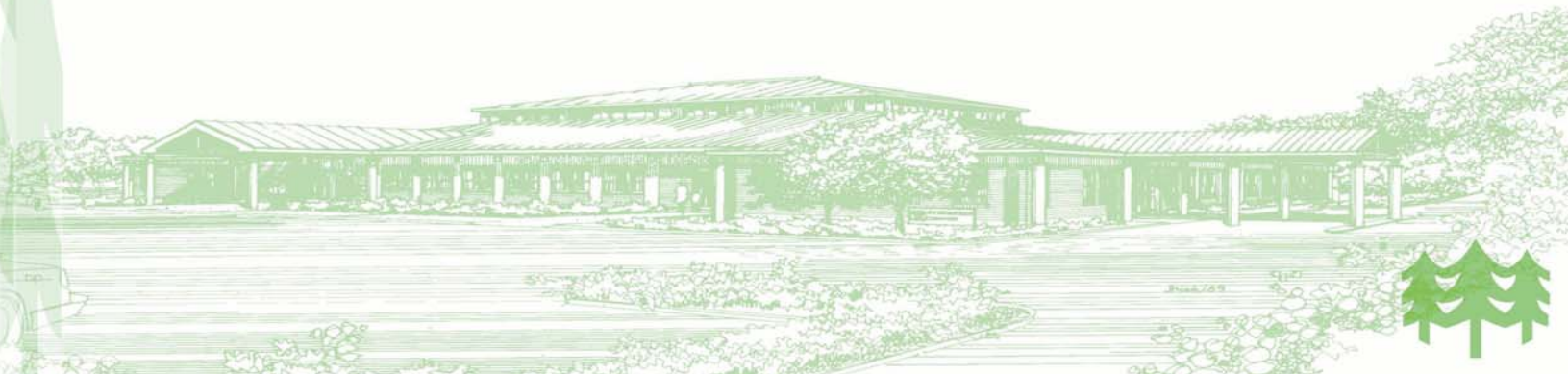
Functional Analysis Conditions and Procedures

- Play - used as a control condition
- Access to tangibles
- Ignore – used as alone condition
- Escape/demand
- Access to social attention
- **Cory** - attention, ignore, play, and demand
- **Chris** - all five

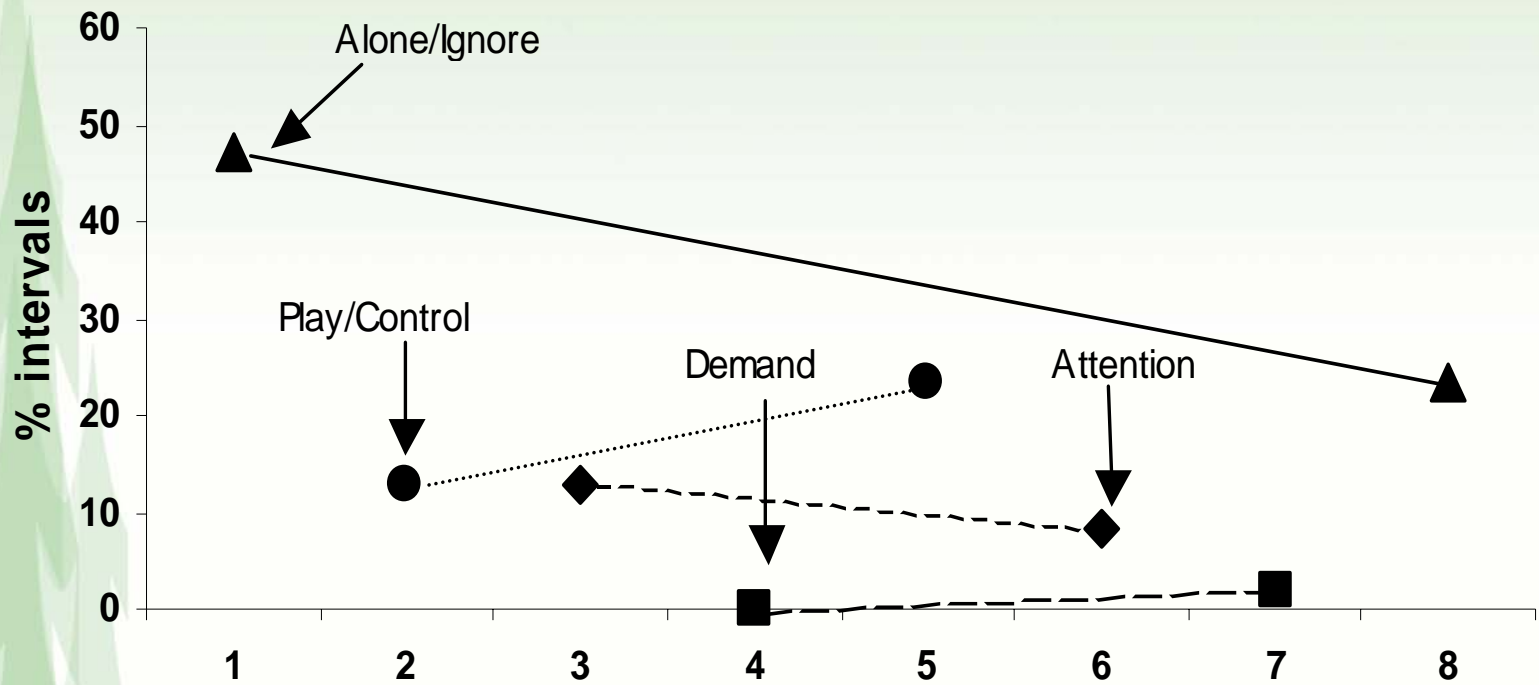


Functional Analysis Conditions and Procedures

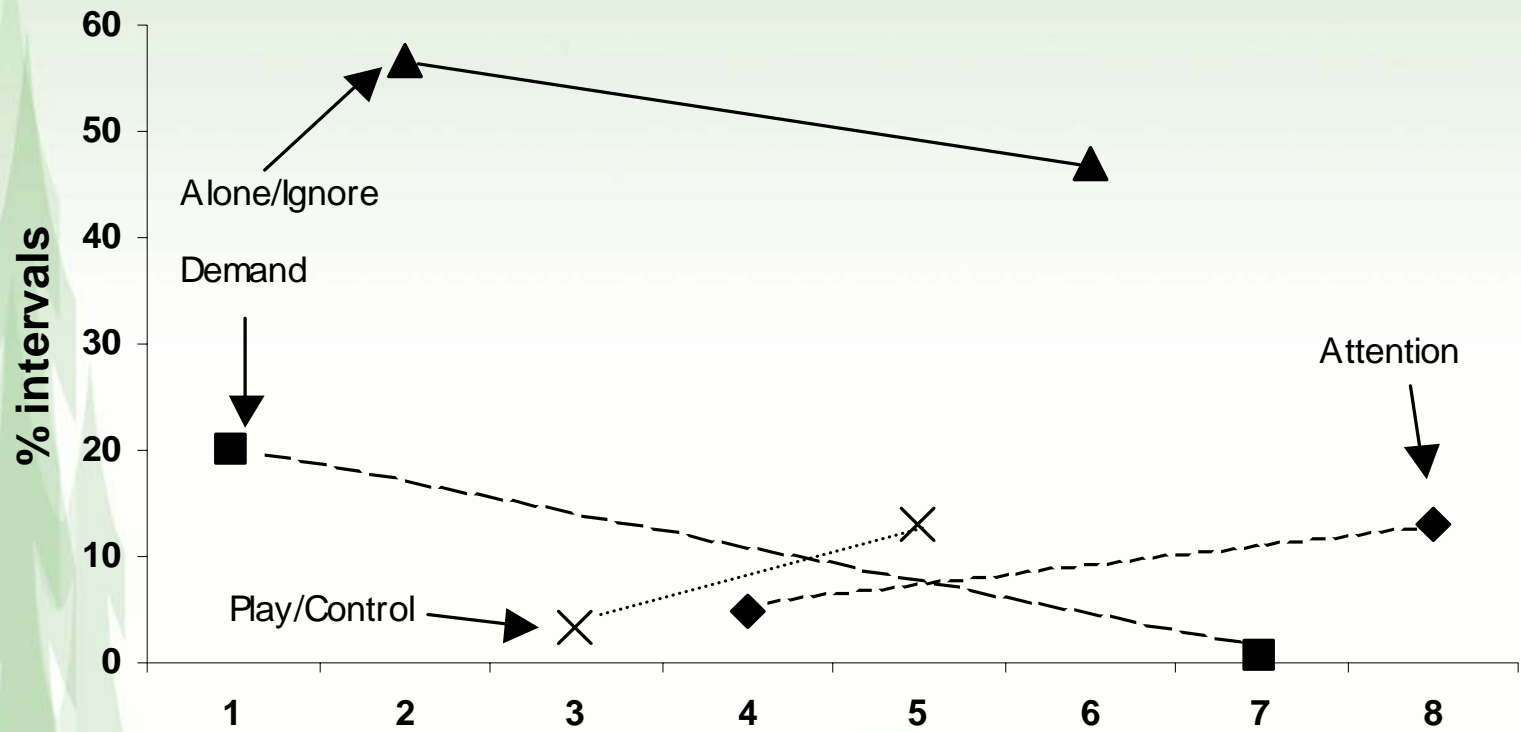
- Analog conducted first
- Procedures identical in each classroom
- Student sat at his assigned desk
- Clinicians sat within arm's reach
- No control for the type of activity going on in the room
- IOA



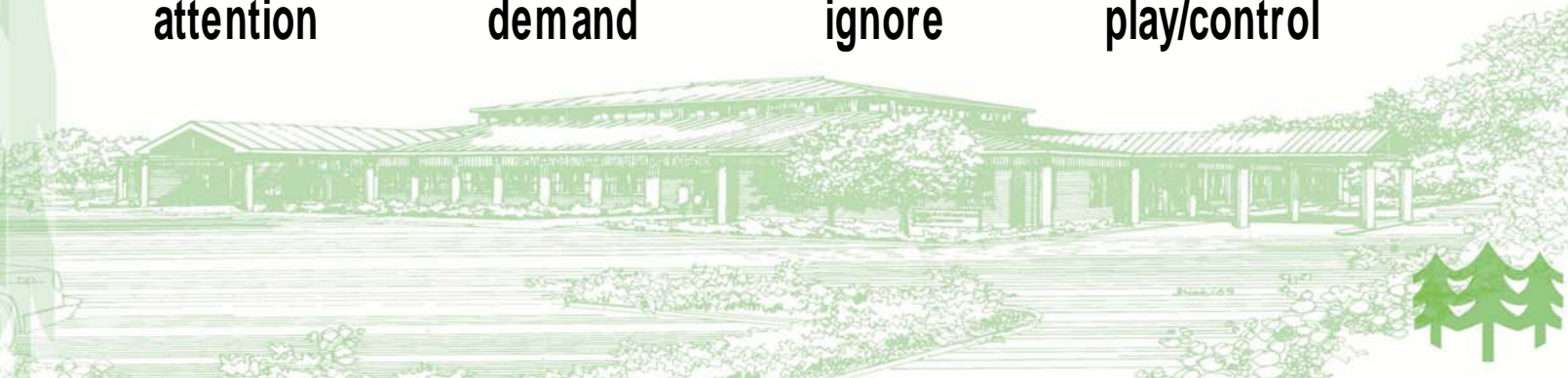
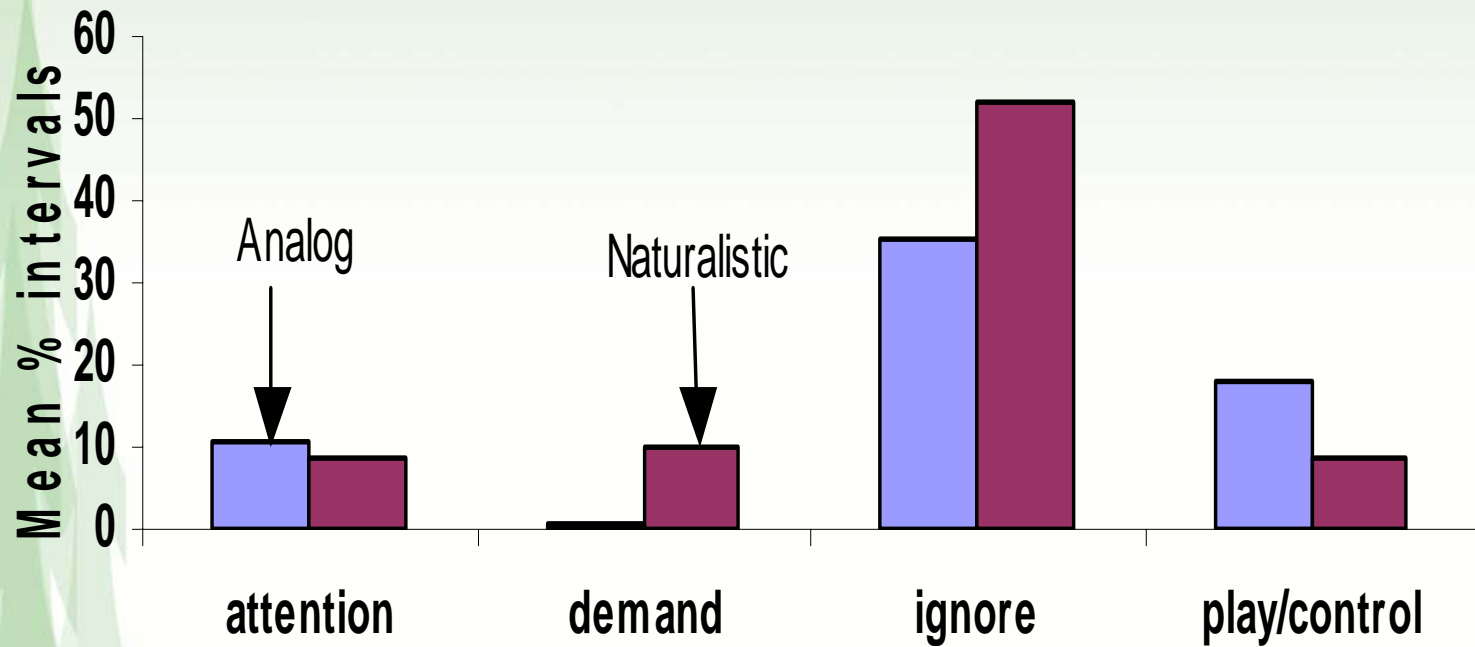
Occurrence of Tics - Analog Condition - Cory



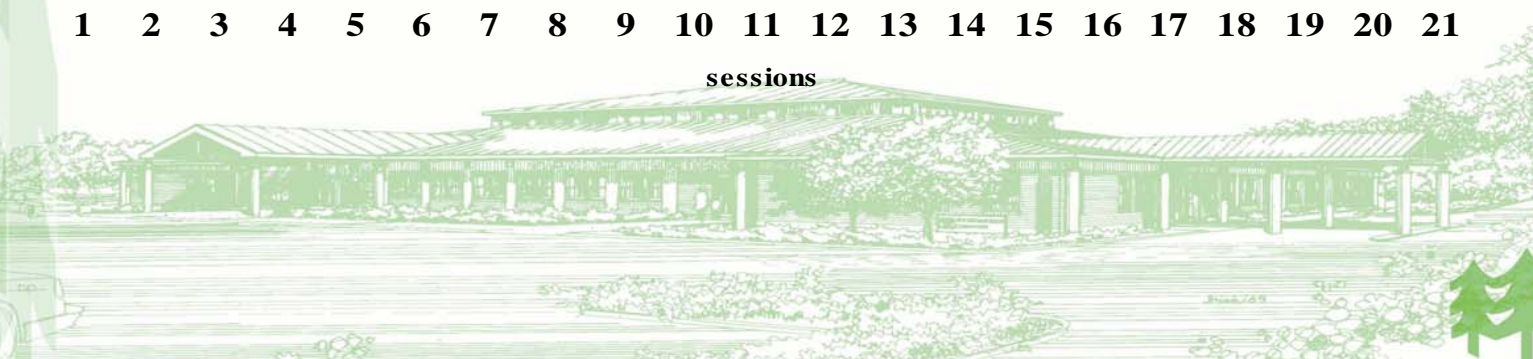
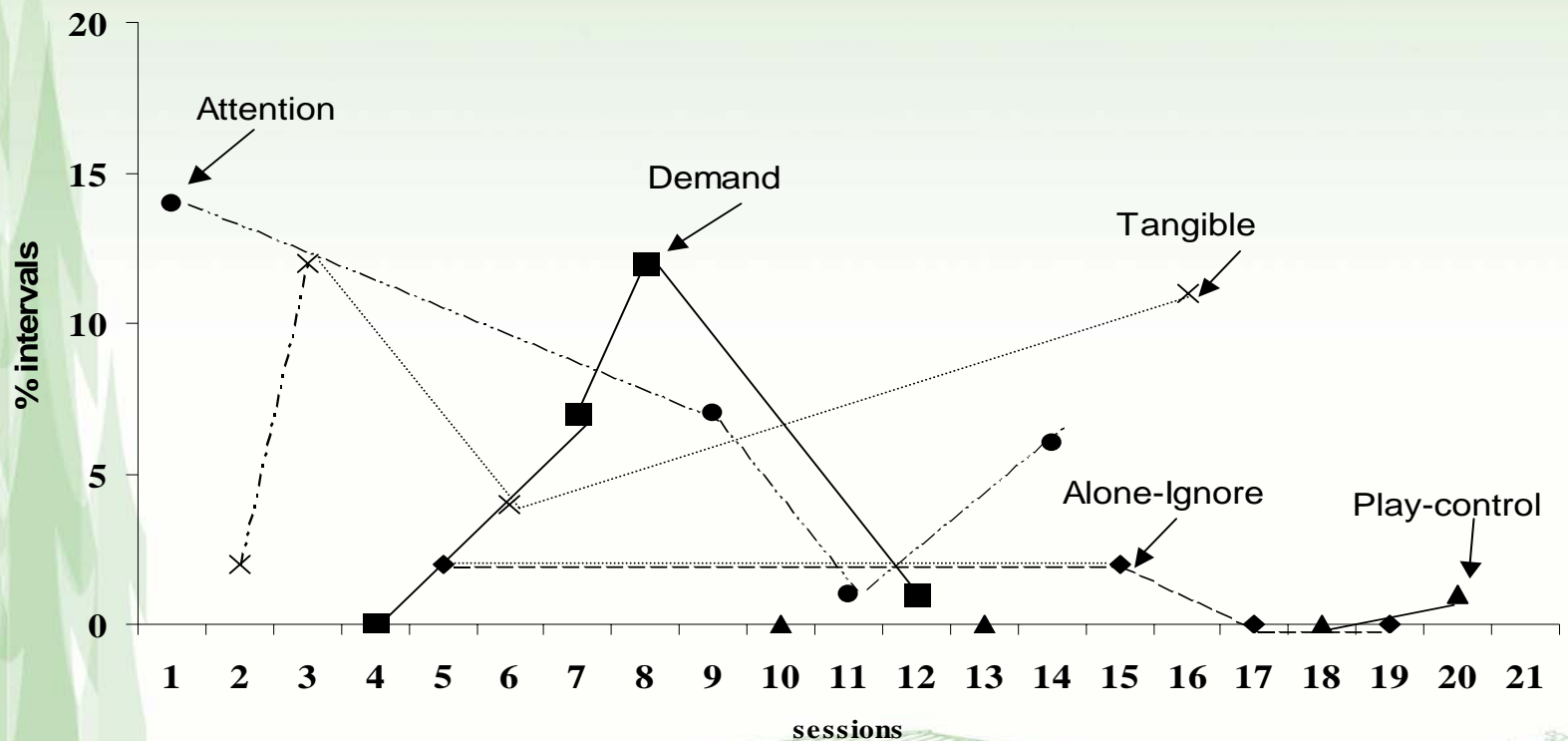
Occurrence of Tics - Naturalistic Condition-Cory



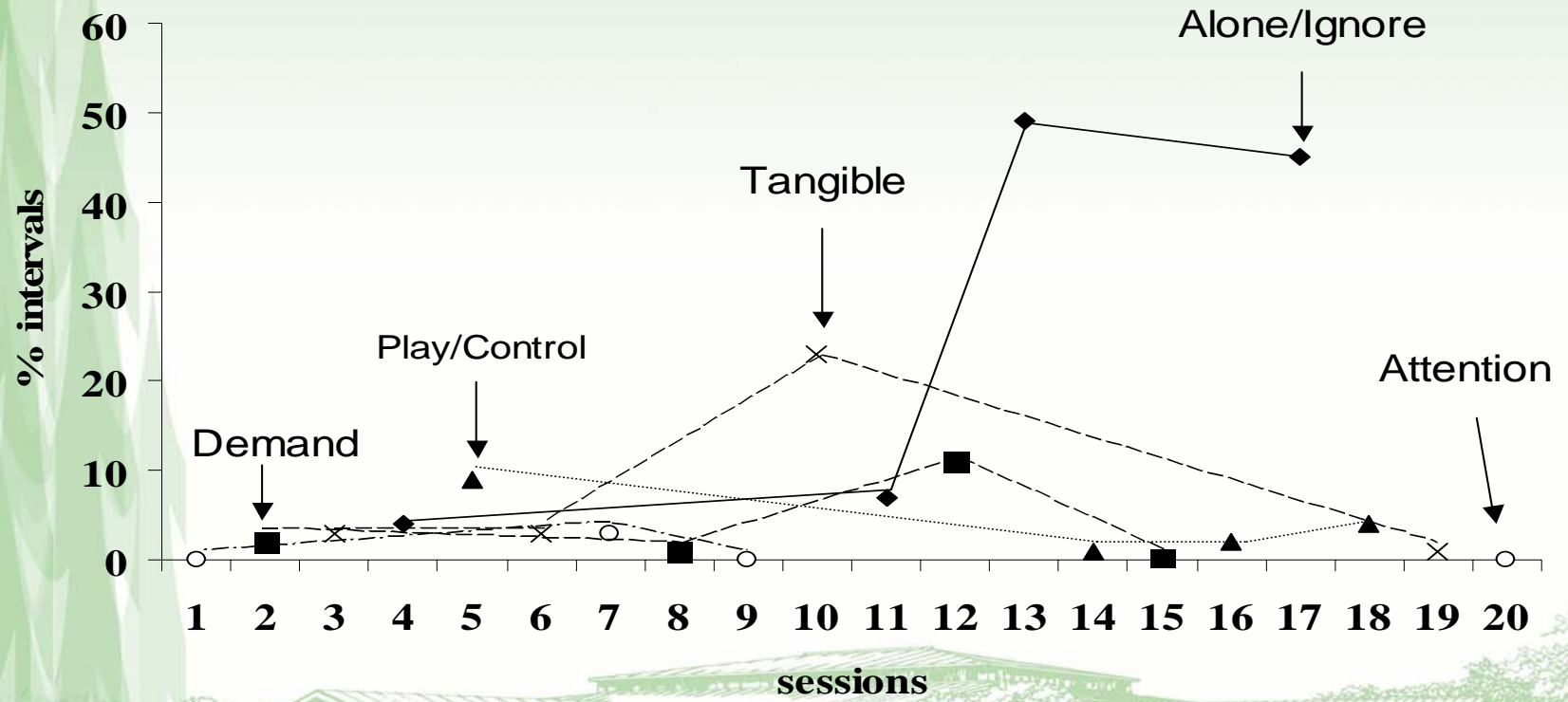
Comparison of Analog and Naturalistic Conditions-Cory



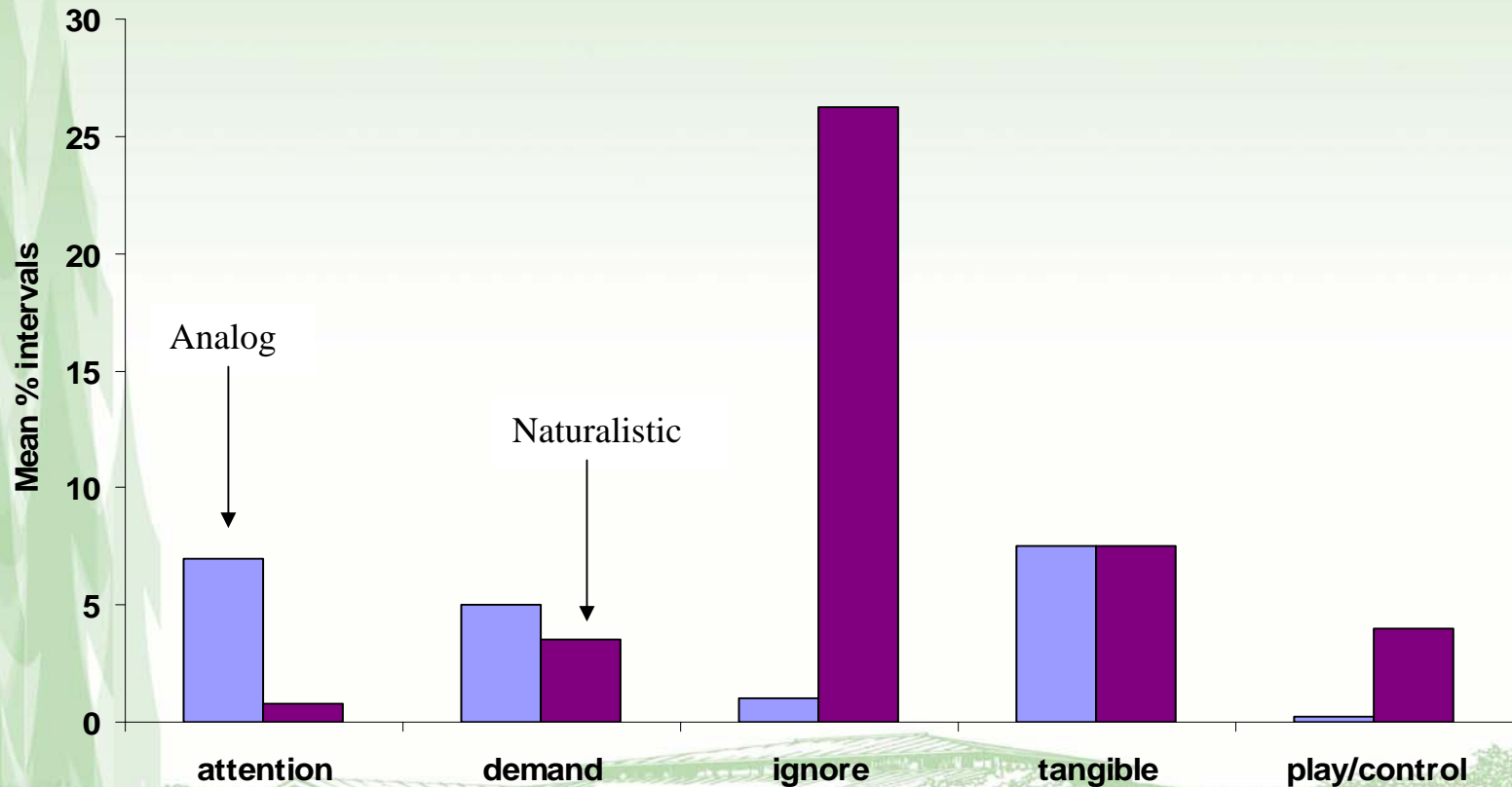
Occurrence of Tics -Analog Condition-Chris



Occurrence of Tics-Naturalistic Condition Chris



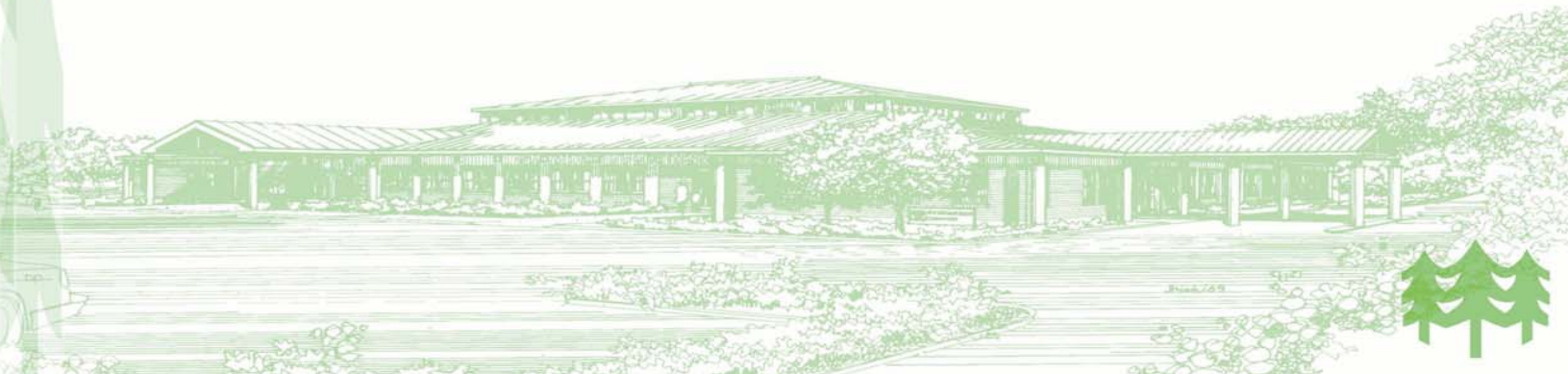
Comparison of Analog and Naturalistic Conditions-Chris



Discussion

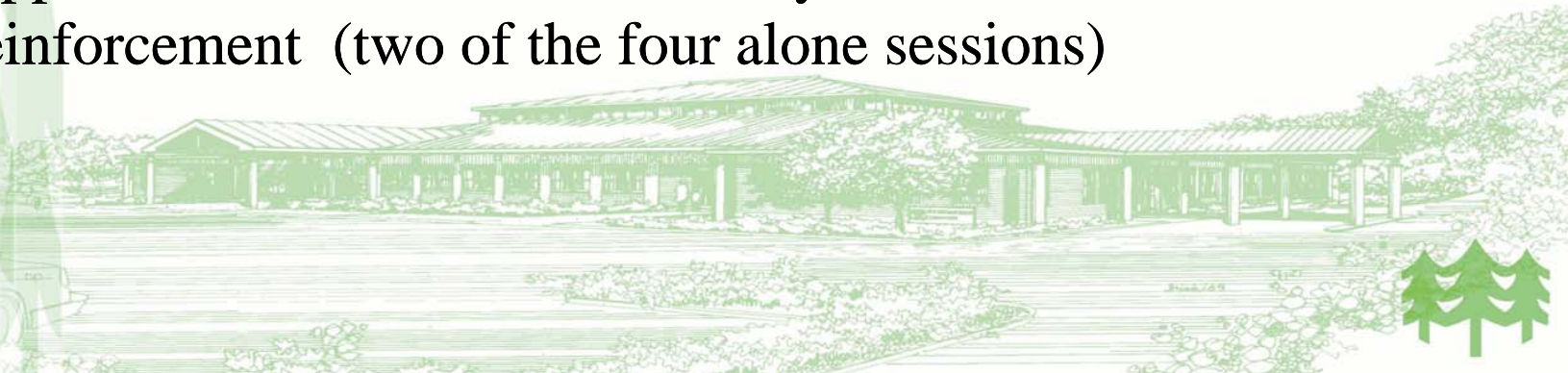
Cory

- Tics appeared to serve as an automatic function.
- Alone condition higher rates in both analog and naturalistic
- Classroom environment noisier than analog
- More activity going on in the classroom
- Ignore condition awkward



Discussion

- **Chris**
- Analog setting
- Undifferentiated results
- Attention, demand, and tangible conditions higher
- Play/control and ignore/alone almost nonexistent
- Naturalistic setting,
- Appeared to be more influenced by automatic reinforcement (two of the four alone sessions)

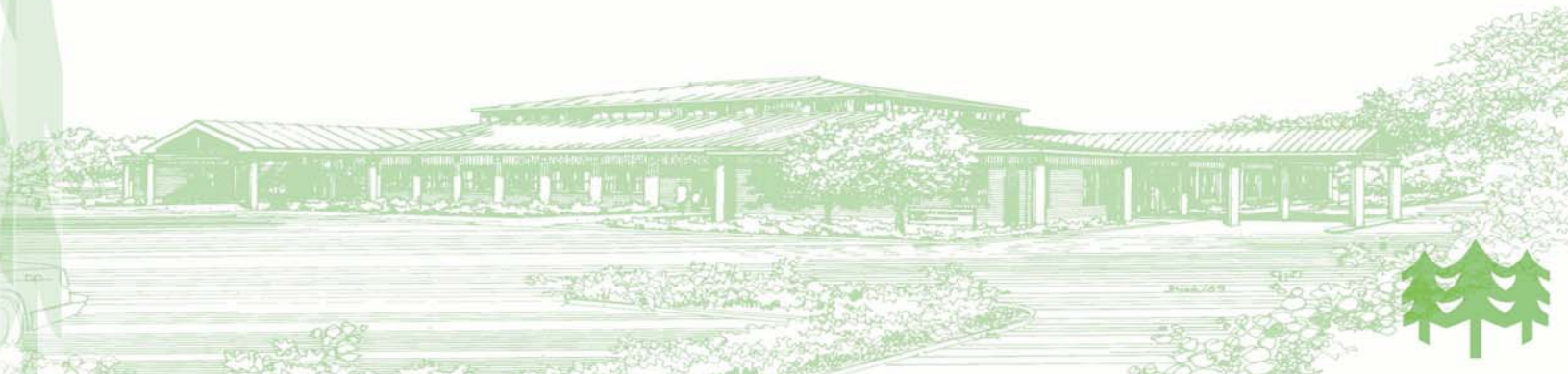


Discussion



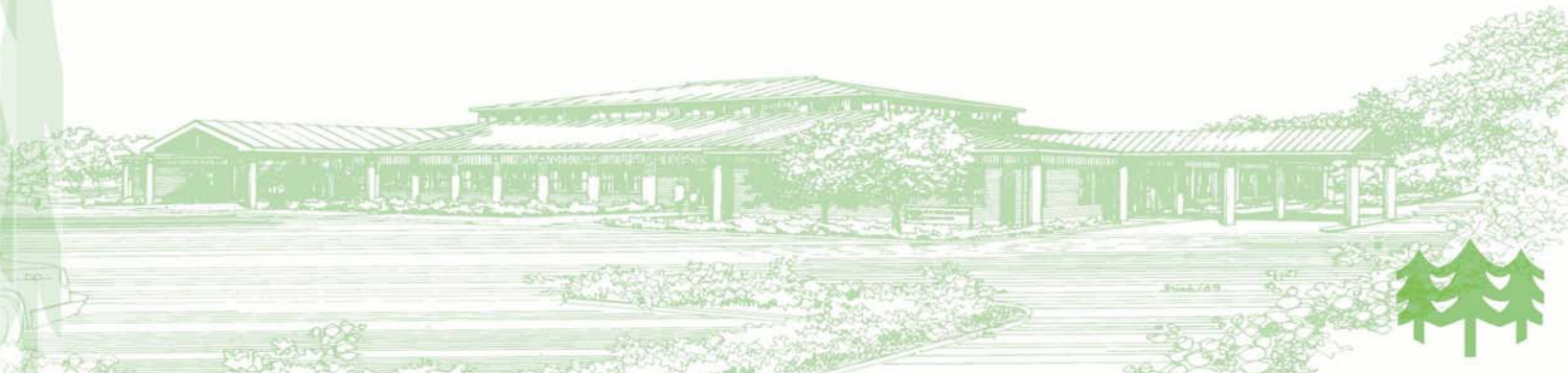
Discussion

- Tics show an undifferentiated result, because tics are thought to be “uncontrollable”
- Little to no target behavior in some settings seems inconsistent with what is known about “classic” tics
- Cory – function same in each setting
- Chris – function variable between settings



Limitations

- Two different time periods
- Cory – 1 less condition
- Cory – 2 less opportunities
- Chris – Extremes in natural setting
- Ignore condition possibly confusing



Conclusion

- Replication to understand differences across settings
- Should future functional analysis procedures should likely be done in the natural contexts
- If inconsistent differences across analog and naturalistic settings, Future FA procedures should likely be done in the natural contexts



Future Research

- Tic rates differences in the two settings may indicate environment having some effect on tic production.
- Are there differences between environmental settings
- Are there discernible variables within environmental settings
- Are tics more influenced by social variables than environmental
- Are there social factors yet to be evaluated that influence tic rate such as stress levels or tic acceptability

