



## Differential Reinforcement of Eye Contact During Mand Training By Jason Pepin & Vaughn Maxson

### Introduction

- Lack of eye contact is a hallmark symptom of an Autistic Spectrum Disorder (ASD) diagnosis. Most parents, educators, and service providers struggle to find effective methods for teaching this social behavior (Carbone et al., 2013).
- A large body of research exists suggesting that eye contact is important for social development, but there is disagreement as to the mechanism that causes eye contact to develop (e.g. Baron-Cohen, 1988; Senju & Johnson, 2009).
- The current study is a replication of Teaching Eye Contact to Children with Autism: A Conceptual Analysis and Single Case Study (2013, Carbone et al.) with a non-vocal participant (compared to the vocal participant of the original study).
- This study aims to demonstrate a functional methodology for conditioning eye contact in ASD individuals. This study will present the methodology and the effect of the methodology over time.

### Methods

#### Participants

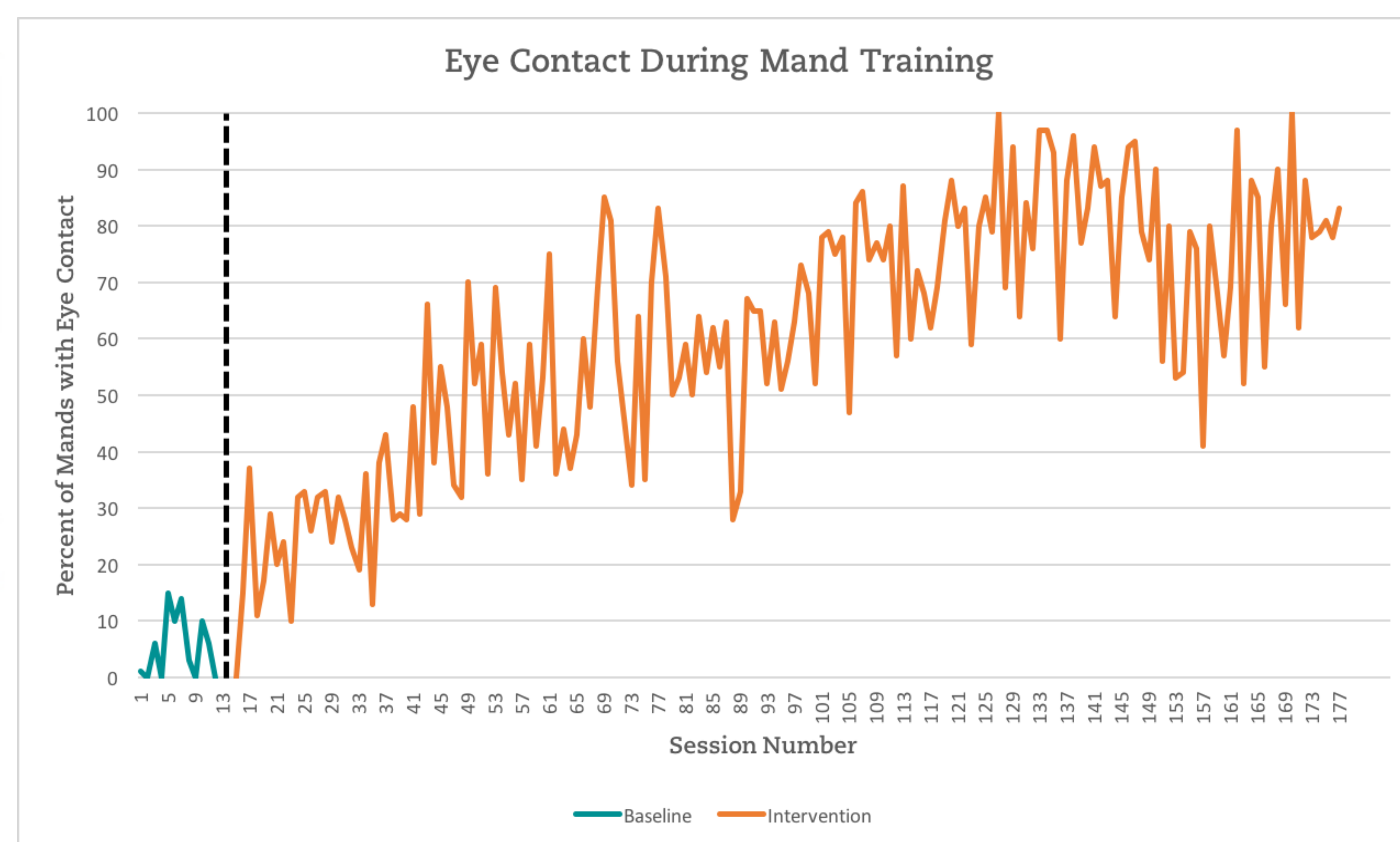
- 7 year old girl diagnosed with ASD & a Genetic Deletion; she has been receiving clinic based ABA service at Behavioral Connections since 2013. The participant *only uses sign language when exhibiting appropriate Verbal Behavior.*

#### Materials & Procedure

- The participant has developed a consistent mand repertoire for stimuli she is strongly motivated to seek out; only these mands were used. Informal preference assessments were used per trial to ensure motivation for the stimulus.
- Baseline:
  - All mands were immediately followed by the delivery of the requested item, regardless of eye contact.
- Intervention:
  - If the participant simultaneously sign manded for an item or activity with eye contact, the instructor immediately delivered the preferred stimulus.
  - If the participant signed for a stimulus with no eye contact the instructor would use extinction by withholding the reinforcer specific to the mand.
  - If the participant manded with no eye contact, the extinction procedure would continue.
  - If the participant exhibited eye contact while manding during the extinction period the instructor would reinforce differentially.
  - If the participant changed the topography of the request during the extinction period it was considered a scroll and the participant was brought back to a neutral position and an entirely different item was contrived for motivation.

### Results

- During Baseline the participant demonstrated low levels of eye contact while requesting for items and activities
- During Treatment the participant demonstrated an increasing frequency (from baseline) of eye contact while manding as the session number increased.



### Discussion

- During the baseline phase, the participant demonstrated minimal, negligible frequencies of eye contact. However, during the intervention phase, the frequency of eye contact increased steadily as sessions continued.
- A potentially larger implication of these results are the suggestion that, like eye contact, social behavior that is thought to be "innate" is actually learned, and therefore can be taught.
- These results may suggest that eye contact is mediated by more subtle social consequences (e.g. reinforcement). Eye contact behavior in individuals with an ASD diagnosis would therefore be far less likely to be mediated by the same stimuli. Known reinforcers must be used for any intervention to be efficacious.
- Confounds & Limitations:
  - One participant
  - One experimental condition; future research may include a phase that puts supposedly conditioned eye contact on extinction, further suggesting that the eye contact response is learned.
- Future research may seek to determine the best methods to generalize eye contact. Other research may endeavor to determine which social stimuli act as reinforcers and punishers of eye contact behavior in neuro-typical development.