Pairing & Manding

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IESCUM
Parma, Italy

December 1, 2 & 3, 2016

Pairing

• Pairing is the process by which we condition ourselves, the teaching materials, and other stimuli as reinforcers.

• Before we can begin teaching skills, we need to begin the pairing process with the learner.

• The most useful way to increase cooperation is by using the learner’s motivation.

• Through pairing the learner should gain access to a wide variety of reinforcers with little effort.

• To begin pairing, the instructor should surround themselves with many reinforcers and deliver the reinforcers non-contingently (without requiring any demands).

• Pairing typically starts in the natural environment.
Pairing

- During this process the instructor should take note of what items and activities serve as reinforcers for the learner, and what things the learner seems to have the strongest motivation for.

- The instructor should be associated with the delivery of reinforcement, and not the removal of reinforcement.

- If the child is already engaging in an activity that he or she seems to like, and you are ready to begin your session, do not remove the item or activity. Instead, the instructor should try to make that activity more fun by engaging with the learner.

**Video:** Marc with Emily in NET  
**Video:** Christy with Anthony in NET  
**Video:** Vince and Emily

- Pairing can look different depending on the child. Not every child has the same reinforcers, and some children require more pairing than others.

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Pairing

- Requiring the First Response: Transitioning to the Table  
  Make sure that you have strong reinforcers available.

  **Video:** Emily P. pairing at the table with Marc

- It is important to realize that pairing is an on-going process that may take hours, days, or weeks.

- The goal of pairing is that the sight of the instructor signals that good things are about to happen, not that the sight of the instructor means the removal of fun things.

  **Kelly, et al. Pre-session Pairing Research**
The Mand

What is the Mand?

- A mand is essentially a request.
- Mands are emitted when we are motivated for something.
- Manding is verbal behavior that produces immediate benefit for the learner and therefore strengthens it.
- This is the first repertoire learned by all children.
Why is the Mand Important?

- Development of a strong manding repertoire may be essential for the development of all other types of verbal behavior.

- Marding teaches a child that verbal behavior is valuable; other repertoires teach what to say once the learner “wants to talk.”

- By teaching a mand repertoire you may replace some problem behavior.

- It is unlikely that you will be able to develop a verbal behavior repertoire in an early learner by just requiring the child to label items (tact) or talk about things (intraverbal).

When to Teach the Mand

- Teach mands at times when the motivation is the greatest for the item or activity.

- It is imperative that you begin teaching the child to ask for his or her strongest reinforcers.
Rules For Teaching Manding

• Teaching must occur in the natural, everyday environment where motivation is strong (NET).

• Make sure the child has a motivating operation (MO) for an item before prompting a mand.

• Capture and contrive as many opportunities per day to teach mands.

Rules For Teaching Manding

• Count the number of mands, prompted and unprompted, the controlling variables, and variety per day or per session and graph your results.

• Prompt mands initially to teach the child that its easy to get things with verbal behavior so as to not turn the child off to communicating.
Rules for Teaching Manding

• Run multiple trials a day, across all mands.

• Within each trial attempt to use less of a prompt than was needed on the previous trial.

• Get the best quality response with the least amount of prompting.

Rules For Teaching Manding

• Use Differential Reinforcement:
  Differential Reinforcement is defined as - "Within a response class, reinforcing only those responses that meet a specific criterion and placing all other responses on extinction."

• Practice teaching mands so that you are skilled in how and when to reinforce, what approximations to accept, what level of prompt to provide and how to fade prompts quickly.
Rules For Teaching Manding

• Consistency in methods across trainers is essential as is contriving lots of opportunities for generalization.

• Be a “giver” and not a “taker” – do not remove reinforcers just to require the child to mand again.

• Avoid “killing” MOs - to prevent this with early learners, give some items for “free” or require less response effort at times.

• An orderly and progressive curriculum must be in place.

The Analysis of Verbal Behavior 2013, 29, 000–000

The Establishing Operation and Teaching Verbal Behavior

Vincent J. Carbone, Carbone Clinic

Twenty years ago Michael (1993) refined and extended the concept of the conditioned establishing operation (CEO). With this paper he updated his previous treatment of the topic (Michael, 1982) by providing terminological refinements and conceptually clear descriptions of the reflexive and transitive CEOs. In the 20 years since the publication of that paper there has been an increase in the application of CEOs as independent variables in the teaching of verbal behavior in applied setting. The purpose of this paper is to provide a brief overview of clinical applications of the EO to the teaching of verbal behavior during the last 20 years.

Key words: applied, establishing operation, motivation, verbal behavior
# Early Marding

## Milestones Assessment: Level 1 (0-18 Months)

(T) = Direct testing; (O) = Observation; (E) = Either testing or observation; (TO) = Timed observation

### Mand

**Does the child use words, signs, or pictures to ask for desired items or activities?**

1. Emits 2 words, signs, or PECS, but may require echoic, imitative, or other prompts but no physical prompts (e.g., cracker, book) (E)

2. Emits 4 different mands without prompts (except What do you want?) — the desired item can be present (e.g., music, slinky, ball) (T)

3. Generalizes 6 mands across 2 people, 2 settings, and 2 different examples of a reinforcer (e.g., mands bubbles from mom and dad, inside and outside, a red bottle and a blue bottle) (E)

4. Spontaneously emits (no verbal prompts) 5 mands — the desired item can be present (TO: 60 min.)

5. Emits 10 different mands without prompts (except What do you want?) — the desired item can be present (e.g., apple, swing, car, juice) (E)

Comments/Notes:
Teaching Procedures for Mand Training

VOCAL MANDING

Echoic to Mand Transfer

Establish MO------------------------ Vocal Prompt------------------------ Mand-------------------Reinforce

Item Prompt

Fade Vocal Prompt

Fade Item

MO------------------------MAND------------------------Reinforce

MANUAL SIGN MANDING

Mimetic to Mand Transfer

Establish MO------------------------ Vocal Prompt------------------------ Mand-------------------Reinforce

Item Prompt

Physical Prompt

Model Prompt

MANDING VIDEOS

Fade All Prompts

MO------------------------MAND------------------------Reinforce

Fade the item

(transferring stimulus control to the MO)

Once the child is consistently manding when there is an MO and the item is present without any additional prompt, begin to run procedures to transfer stimulus control of the mand from the presence of the item solely to the MO.

→ Item is present and the child mands, but DO NOT deliver the reinforcer immediately.

→ Instead place the item out of sight (behind back) and wait 2-3 seconds.

→ If the child mands within the 2-3 seconds, deliver the reinforcer.

→ If the child does not mand within the 2-3 seconds bring the item into view and when the child mands deliver the reinforcer immediately.
Fade the item diagram
(transfering Stimulus Control to the MO)

• MO + ITEM → Vocal mand = Reinforce

• MO + ITEM → Vocal mand
  → 3 second time delay → Vocal mand = Reinforce
  (with item out of sight)

• MO + ITEM → Vocal mand
  → 3 second time delay → NR
  with item out of sight
  → bring item in sight → Vocal mand = Reinforce

Joey: transferring stimulus control to MO
Video: Jamie – Tranferring control of the mand to the MO

The Analysis of Verbal Behavior 2007, 23, 89–102

Transferring Control of the Mand to the Motivating Operation in Children with Autism

Emily J. Sweeney-Kerwin, Vincent J. Carbone, Leigh O’Brien, Gina Zecchin, and Marietta N. Janecky, Carbone Clinic

Few studies have made use of B. F. Skinner’s (1957) behavioral analysis of language and precise taxonomy of verbal behavior when describing the controlling variables for the mand relation. Consequently, the motivating operation (MO) has not typically been identified as an independent variable and the nature of a spontaneous mand has been imprecisely described. The purpose of this study was to develop procedures to bring the mand response under the control of the relevant MO and therefore free it from the multiple controls that are more easily identified by practitioners who rely on Skinner’s analyses and taxonomy. Using a rolling time delay and prompt fade procedure both participants’ mand repertoires were successfully transferred to the relevant MO and a listener and described within the context of a behavioral analysis of language.

Key words: verbal behavior, motivating operation, mand, autism.
Figure 1. Frequency of MO controlled mands per session during baseline (BL), treatment, and generalization and maintenance conditions for all targeted items for Martin.

Figure 2. Frequency of MO controlled mands per session during baseline (BL) and treatment conditions for Jeff.
When Manding Goes Wrong: Scrolling and Error Correction

Scrolling: Scrolling is when the learner has an MO for an item or activity but emits the incorrect mand (sign or vocal) or chains more than one mand together

- Never reinforce a scrolled response.

If a vocal learner makes an error...

1. Wait for 3-5 seconds where the learner is not manding.
2. Next, give a vocal prompt for the correct mand.
3. When the child echoes the vocal prompt, immediately deliver the reinforcer.
4. If child has a strong echoic repertoire, do an echoic to mand transfer before giving the child the desired item.
5. If, following your vocal prompt, the child emits the incorrect mand again, wait for 3-5 seconds where the learner is not manding. Once the learner has been quiet for 3-5 seconds provide a vocal prompt, when the learner echoes the mand, immediately deliver the reinforcer.
**If a signer makes an error...**

1. If you know what the child wants, prompt their hands to a neutral position for 3-5 seconds.

2. Next, prompt the correct sign (i.e., gestural or physical).

3. The child signs with the prompt, immediately deliver the reinforcer.

4. If child has a strong motor imitation repertoire, do a mimetic to mand transfer before giving the child the desired item.

5. If, after you model the sign, the child emits the wrong sign again, prompt the hands to a neutral position. This time go straight to a physical prompt and reinforce immediately so that the child does not have the opportunity to emit the incorrect sign again.
Scrolling Procedure:
Video: Peter
Video: Anthony

Intermediate Learners
## Intermediate Manding Goals

- Requests others to perform an action
- Requests missing items needed for a task
TEACHING INTERMEDIATE MANDING
MANDING FOR ACTIONS AND MISSING ITEMS

The CMO-T plays an important role in teaching children with autism by increasing the number and variety of items that act as reinforcers and therefore increases the variety of mands that can be taught.

Several researchers have demonstrated the benefit of contriving transitive MOs to teach mands to persons with developmental disabilities and autism (Carroll & Hesse, 1987; Hall & Sundberg, 1987; Sigafoos, Doss and Reichle, 1989; Sundberg, Loeb, Hale and Eigenheer, 2002; Sundberg & Partington, 1998)

Teaching these skills to children with autism usually requires a sophisticated teacher repertoire related to the manipulation of the relevant motivating operations.

CMO-T Definition

- **Motivating Operation (MO)** - Any set of events, stimulus or condition that alters (establishes/abolishes) the value of some stimulus as a reinforcer and alters (evokes/abates) the frequency of some response that has produced that consequence (Michael, 1993)

- **Transitive MO (CMO-T)** - a set of stimulus conditions, where there is a motivating operation for a stimulus but access to that stimulus is blocked, interrupted, or denied, that momentarily establishes the value of some other stimulus as a reinforcer and evokes all behaviors that have in the past produced that reinforcer.
CMO-T Diagram

When An Item or Activity or Action Would Act as a Reinforcer (Motivating Operation)

AND
Some Other Item or Activity or Action is Required To Obtain the Reinforcer

BUT
Access to the Activity or Action is blocked or Has Been interrupted

Then
The Activity or the Actions is Conditioned as a Reinforcer

AND
All Behaviors That Have Previously Been Strengthened with Newly Established Reinforcer Will be Evoked

CMO-T Example

When Painting a Picture Becomes Valuable to Me (Motivating Operation)

AND
I Need a Paintbrush

BUT
No paintbrush is available

Then
The Paintbrush is Momentarily Conditioned as a Reinforcer

AND
All Behavior That Has Produced the Paintbrush is Evoked-
I ask, “Can I have a paintbrush?”
Clinical Example of the Application of CMO-T

MO for painting picture BUT no paintbrush available
(Conditioned Transitive Motivating Operation)

Conditions a paintbrush as a reinforcer + evokes the mand for the paintbrush

SR+
Paintbrush is delivered

Mand response is evoked

Teaching mands for missing items under the control of the CMO-T

• Establish a routine by teaching to mastery (80% - 100% independent over 3 or more consecutive days) using a stimulus-response chain.
• Conduct baseline probes for all possible mand targets within the chain by removing items needed to complete the chain.
• Begin to teach the mand for one missing item needed to complete the chain.
• After you have taught one mand, run baseline probes for all the remaining mand targets.
• If teaching needs to continue, select the next target and begin teaching the mand for that missing item.
• Continue to teach and run baseline probes until all the targets have met mastery criteria (i.e., mand emitted under the control of the CMO-T for three out of three baseline probes or across 3 consecutive days of teaching).
• Continue with maintenance once all the targets have met criteria.
• Contrive opportunities for and track novel responses.
Andrew

MO FOR WATER

EXPOSURE TO THE VALUE OF CUP, OPENING THE BOTTLE AND POURING WHEN CONSUMING WATER

MO FOR WATER

BLOCKED ACCESS TO CUP, OPEN BOTTLE & POURING

EVOKES MANDS FOR "CUP, OPEN WATER & POUR"

APPLICATION OF THE CMO-T

James-Just Water
The diagram below illustrates the controlling relations that you will see in the video example of Declan manding for cup, open and pour.

The diagram below illustrates the controlling relations that you will see in the video example of Declan playing Cariboo.
The diagram below illustrates the controlling relations that you will see in the first video example of Declan playing Cariboo.

Wants to play a game but cards are unavailable

ESTABLISHES

Cards
AS A FORM OF REINFORCEMENT

EVOKES

ALL RESPONSES IN THE PAST WHICH HAVE RECEIVED THIS FORM OF REINFORCEMENT
DECLAN MANDS FOR CARDS

The diagram below illustrates the controlling relations that you will see in the first video example of Declan playing Cariboo.

Wants to play a game but key is unavailable

ESTABLISHES

Key
AS A FORM OF REINFORCEMENT

EVOKES

ALL RESPONSES IN THE PAST WHICH HAVE RECEIVED THIS FORM OF REINFORCEMENT
DECLAN MANDS FOR KEY
How to Increase the Number of Mands Per Day

Develop lesson plans similar to the one on the next slide to capture and contrive many opportunities per day to increase the number of mand opportunities.

CMO-T Lesson Plan for Increasing Mands:

**Teaching**

<table>
<thead>
<tr>
<th>Set up to Contrast MO</th>
<th>What is conditionally conditioned as a reinforcer?</th>
<th>What should you teach the learner to say?</th>
<th>Probe Data Recording</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andre has an I/O to watch/listen to music/video on YouTube.com. After using the mouse to click in the search box to type in the song/artist name, the instructor will tell Andre to give the following title in the keyboard in TIRS.</td>
<td>Mouse</td>
<td>&quot;Music&quot;</td>
<td>Y N</td>
</tr>
<tr>
<td>Andre has an I/O to watch/listen to music/video on YouTube.com. After using the mouse to click in the search box to type in the artist's name, the instructor will tell Andre to give the following title in the keyboard in TIRS.</td>
<td>Keyboard</td>
<td>&quot;Keyboard&quot;</td>
<td>Y N</td>
</tr>
<tr>
<td>Andre has an I/O to watch/listen to music/video on YouTube.com. After using the speaker to type in the artist's name, the instructor will tell Andre to give the following title in TIRS.</td>
<td>Speakers</td>
<td>&quot;Speakers&quot;</td>
<td>Y N</td>
</tr>
</tbody>
</table>

**Objective:** Increase opportunities to teach a wider variety of mands by removing items needed to satisfy/listen to music/video on YouTube.com (e.g., turning a volume).

Andre Manding

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Increasing the MAND Repertoire of Children With Autism Through the Use of an Interrupted Chain Procedure
Kristin M. Albert, Vincent J. Carbone, Danielle D. Murray, Margaret Hagerty, and Emily J. Sweeney-Kerwin
Carbone Clinic

ABSTRACT
MAND training is an essential component of verbal behavior training for any individual who lacks this skill. The current study replicates and extends, with some procedural differences, the work of Hall and Sundberg (1987) by using an interrupted chain procedure to teach MANDs for missing items to children with autism. The participants were 3 children with autism, ranging between 5 and 8 years of age, who had previously been taught MANDs using the same method. MANDs were used to increase the repertoire of children with autism.

BAP Article
The MAND is defined as a class of verbal responses controlled by the motivating operation and strengthened by a consequence specific to it. This repertoire is frequently weak and frequently not targeted for intervention with children with autism (Sundberg & Partington, 1998) despite the fact that it has been associated with a decrease in problem behavior, increase in communication skills and social initiations (Charlop-Christy, 2002; Shafer, 1993). The contriving and capturing of motivating operations has been demonstrated to increase the MAND repertoire in persons with developmental disabilities (Sundberg, 1993; Sundberg & Michael, 2001; Sundberg & Partington, 1998).

Motivating operations may be contrived by controlling conditions of deprivation/satiation and aversion or through the presentation of one stimulus that engenders reinforcing value to a second stimulus (i.e. transitive motivating operation [CEO-T]). Only a few studies have used this type of independent variable to increase the MAND repertoire (Carroll & Hesse, 1987; Hall & Sundberg, 1987; Sigafoos, Doss, & Reichle, 1989; Sundberg, Loeb, Hale, & Eigenheer, 2002; Sundberg & Partington, 1998). This study extends the research on the use of the transitive motivating operation with young children with autism by establishing chains of behavior that result in access to reinforcement for the participants. Subsequently, when completing the chain would again result in reinforcement an item was removed and the MAND for it was taught. Within the context of a multiple baseline across participants MANDs were increased for all participants. Moreover, probes for generalization found reliable responding under novel conditions. Implications for teaching language skills to children with autism are discussed.

45
2012

Table 1: Descriptions of Chains Taught to Participants

<table>
<thead>
<tr>
<th>Participant and Chain</th>
<th>Materials</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making an art project</td>
<td>Shapes cut from paper, Glue, Glitter</td>
<td>Pick up paper shapes, Put glue on each shape, Arrange shapes into a picture, Put glue on top of arranged shapes, Sprinkle glitter on top of glue</td>
</tr>
<tr>
<td>Painting a picture</td>
<td>Smock, Paper, Clip, Paintbrush, Water, Paint, Rasin</td>
<td>Put on smock, Hand clip to instructor (to slip paper onto easel), Pick up paintbrushes, Dip paintbrushes into water, Dip paintbrushes in paint, Apply paintbrushes to paper, Repeat painting steps several times</td>
</tr>
<tr>
<td>Making a sandwich</td>
<td>Bread, Toaster, Plate, Peanut butter, Knife</td>
<td>Open bag of bread, Put bread in toaster, Push down toaster button, Take bread out of toaster (after bread has popped back up), Put bread on plate, Open peanut butter, Put peanut butter on knife, Spread peanut butter on bread, Eat sandwich</td>
</tr>
<tr>
<td><strong>Nathaniel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening to music</td>
<td>Portable CD player, CD, Headphones</td>
<td>Open CD player, Put CD in CD player, Put headphones on, Press play button, Listen to music</td>
</tr>
<tr>
<td>Science project</td>
<td>Plastic container, Bottle of water, Two bottles of food coloring, Spoon</td>
<td>Pour water into container, Drop food coloring into container, Pick up spoon, Mix liquid with spoon</td>
</tr>
<tr>
<td>Painting a picture</td>
<td>Smock, Paper, Paintbrush, Water, Paint, Rasin</td>
<td>Put on smock, Put paper on easel, Pick up paintbrushes, Dip paintbrushes into water, Dip paintbrushes in paint, Apply paintbrushes to paper, Repeat painting steps several times</td>
</tr>
<tr>
<td><strong>Carina</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Painting a picture</td>
<td>Smock, Paper, Clip, Paintbrush, Water, Paint, Rasin</td>
<td>Put on smock, Hand clip to instructor (to slip paper onto easel), Pick up paintbrushes, Dip paintbrushes into water, Dip paintbrushes in paint, Apply paintbrushes to paper, Repeat painting steps several times</td>
</tr>
<tr>
<td>Making an art project</td>
<td>Paper, Three crayons, Glue stick, Glitter</td>
<td>Color picture, Rub glue on paper, Sprinkle glitter on top of glue</td>
</tr>
<tr>
<td>Making Juice</td>
<td>Gag, Powder to make juice, Spoon, two ice cubes, Measuring cups containing water</td>
<td>Scoop powder into cup, Pour water into measuring cups into cup, Mix solution in cup using spoon, Put ice cubes into cup, Drink juice</td>
</tr>
</tbody>
</table>

Note: Materials removed to teach MANDs for missing items are shown in boldface.
Figure 3. The occurrence of mands for missing items recorded by controlling variable (MO, prompted, no response) across baseline and treatment conditions.

Data Recording
## Data Collection and Graphing

**Vocal Learners**

### Skills Tracking Sheet

**Learner:** Joseph Y.  
**Skill Area:** Vocal Mnd Skills  
**Mastery Criteria:** 3 consecutive y’s

<table>
<thead>
<tr>
<th>Item Name</th>
<th>Date Introduced</th>
<th>Date Acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td>train</td>
<td>3/22/11</td>
<td>4/30/11</td>
</tr>
<tr>
<td>track</td>
<td>3/22/11</td>
<td>5/10/11</td>
</tr>
<tr>
<td>jump</td>
<td>3/22/11</td>
<td>5/10/11</td>
</tr>
<tr>
<td>squeeze</td>
<td>3/22/11</td>
<td>4/28/11</td>
</tr>
<tr>
<td>block</td>
<td>3/22/11</td>
<td>4/28/11</td>
</tr>
<tr>
<td>bubbles</td>
<td>3/22/11</td>
<td>5/10/11</td>
</tr>
<tr>
<td>playdoh</td>
<td>3/22/11</td>
<td>6/17/11</td>
</tr>
<tr>
<td>movie</td>
<td>3/22/11</td>
<td>5/10/11</td>
</tr>
<tr>
<td>dinosaur</td>
<td>3/22/11</td>
<td>5/10/11</td>
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<tr>
<td>rice</td>
<td>3/22/11</td>
<td>6/17/11</td>
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<td>beads</td>
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<td>helix</td>
<td>5/13/11</td>
<td>5/17/11</td>
</tr>
<tr>
<td>rock</td>
<td>5/13/11</td>
<td>5/17/11</td>
</tr>
</tbody>
</table>

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Controlling Variable/Prompt Level Response Definitions

• **V** – vocal prompt; when the instructor vocally models the spoken name of the reinforcer to evoke the vocal mand relevant to the specific MO

• **ITEM** – presence of the item; when a vocal mand relevant to the specific MO is evoked when the reinforcing item itself is present or has already been presented within the current setting/physical environment (e.g., ITT, NET) or when the instructor engages in or demonstrates a reinforcing action

• **MO** – motivating operation; when a vocal mand relevant to the specific MO is evoked when the reinforcing item is not present/visible and has not yet been presented since the last change in environment (i.e., physical location); this includes manding for actions when they are not being demonstrated if the action itself is the reinforcer

• **TMO** – transitive conditioned motivating operation; when an item that would not typically serve as a reinforcer is conditionally conditioned as a reinforcer because it is missing but needed to complete a behavioral chain (so as to contact a terminal reinforcer) and the vocal mand specific to the missing item is emitted

• **IV** – intraverbal; when a vocal mand relevant to a specific MO is evoked by a verbal antecedent stimulus that does not have point to point correspondence with the response
### MAND DATA SHEET

<table>
<thead>
<tr>
<th>Date</th>
<th>Teacher</th>
<th>Time spent teaching</th>
<th>Total # of Mand's</th>
<th>Total # of prompted Mand's</th>
<th># of prompted Mand's that result in 10% or less</th>
<th>Total # of NOA's</th>
<th>Total # of D/RF errors</th>
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</thead>
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<td>51</td>
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### Frequency of Prompted Mand's per Minute per Hour Session

**Graph showing frequency of prompted mand's per minute.**

- **Date:** 2/8/11 to 2/14/11
- **Mand's per Minute:**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6

**Legend:**
- Mand's per Minute
- Data from 2/8/11 to 2/14/11

**Graph Details:**
- The graph plots the frequency of prompted mand's per minute over a 7-day period.
- The x-axis represents the date range from 2/8/11 to 2/14/11.
- The y-axis represents the frequency of prompted mand's per minute.

**Note:**
- The frequency of prompted mand's per minute ranges from 0 to 6 per minute.
- There is a notable increase in frequency on 2/11/11 and 2/14/11.
Data Collection and Graphing

Non-Vocal Learners
Controlling Variable/Prompt Level Response Definitions

- **FPP** - full physical prompt; when the instructor provides hand over hand guidance to evoke the entire sign mand topography relevant to the specific MO
- **PPP** – partial physical prompt; when the instructor provides a faded physical prompt to evoke a portion of the entire sign mand topography relevant to the specific MO or when the instructor provides a full physical prompt to evoke only a portion of the sign mand topography relevant to the specific MO
- **GP** – gestural prompt; when the instructor physically models the entire sign mand or a portion of the sign mand to evoke the sign mand topography relevant to the specific MO
- **V** – vocal prompt; when the instructor vocally models the spoken name of the reinforcer to evoke the sign mand topography relevant to the specific MO
- **ITEM** – presence of the item; when a sign mand topography relevant to the specific MO is evoked when the reinforcing item itself is present or has already been presented within the current setting/physical environment (e.g., ITT, NET) or when the instructor engages in or demonstrates a reinforcing action
- **MO** – motivating operation; when a sign mand topography relevant to the specific MO is evoked when the reinforcing item is not present/visible and has not yet been presented since the last change in environment (i.e., physical location); this includes manding for actions when they are not being demonstrated if the action itself is the reinforcer
- **TMO** – transitive conditioned motivating operation; when an item that would not typically serve as a reinforcer is conditionally conditioned as a reinforcer because it is missing but needed to complete a behavioral chain (so as to contact a terminal reinforcer) and the sign mand topography specific to the missing item is emitted
- **IV** – intraverbal; when a sign mand topography relevant to a specific MO is evoked by a verbal antecedent stimulus that does not have point to point correspondence with the response
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<tr>
<th>Reinforcer</th>
<th>Prompt Level</th>
<th>Vocal Response during Initial Trials</th>
<th>Vocal Response after Time Delay</th>
<th>Vocal Response after Tonic Trials</th>
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**Tran Alphabet**