



Mands for Information

Teaching:

‘WHAT?’ and
‘WHERE?’

Relationship between Mand and MO

- 💧 Mand is a verbal operant for which the response is under the functional control of motivating operations (MO). The specific reinforcement that strengthens a mand is directly related to the relevant MO.

(Cooper et al., 2007)

- 💧 Therefore when teaching mands, manipulating MO is essential in establishing a true mand

Motivating Operations (MO)

- A motivating operation is an antecedent environmental variable that:

1) Increases or decreases the reinforcing **value** of a stimulus or event X

and

2) Evokes or suppresses behaviors that have produced X in the past

Types of MO

- 💧 There are two types of MO
 1. **Establishing Operations (EO):** An antecedent event that increases the value of a reinforcer X and evokes behaviors that have produced X in the past.
 2. **Abolishing Operations (AO):** An antecedent event that decreases the value of a reinforcer X and suppresses behaviors that have produced X in the past

EO



Increase in value of reinforcer

Antecedent
: had salty
crackers for
snack



Behavior:
mand for
water

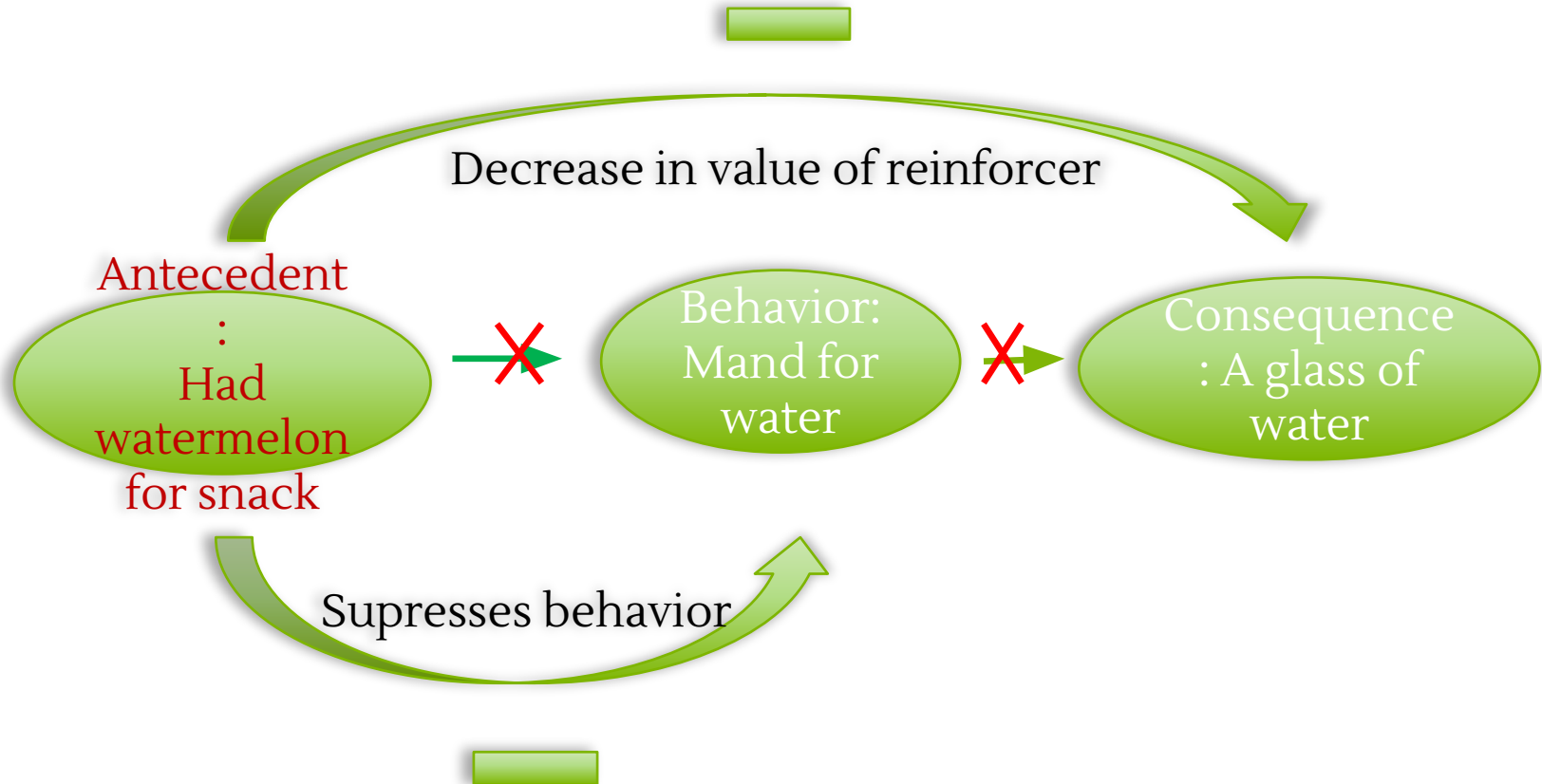


Consequence
: A glass of
water

Evokes behavior



AO



Examples of EO

Antecedent : EO	Behavior	Consequence
	Mands for M&M ↑	Eats M&M ↑

Examples of EO

Antecedent : EO	Behavior	Consequence
1. Haven't had M&M for a long time 2. Is hungry	Mands for M&M ↑	Eats M&M ↑

Examples of EO

Antecedent : EO	Behavior	Consequence
1. Haven't had M&M for a long time 2. Is hungry	Mands for M&M ↑	Eats M&M ↑
	Mands for 'play' or 'all done' ↑	Gets a break from work ↑

Examples of EO

Antecedent : EO	Behavior	Consequence
<ol style="list-style-type: none">1. Haven't had M&M for a long time2. Is hungry	Mands for M&M ↑	Eats M&M ↑
<ol style="list-style-type: none">1. Has been working for long2. Work is too hard	Mands for 'play' or 'all done' ↑	Gets a break from work ↑



Examples of EO

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	Mands for tickles ↑	Gets tickled ↑



Examples of EO

Antecedent : EO	Behavior	Consequence
<ol style="list-style-type: none">1. Haven't had M&M for a long time2. Is hungry	Mands for M&M ↑	Eats M&M ↑
<ol style="list-style-type: none">1. Has been working for long2. Work is too hard	Mands for 'play' or 'all done' ↑	Gets a break from work ↑
<ol style="list-style-type: none">1. Is in a playful 'silly' mood2. Feels a sensory need for tactile stimulation	Mands for tickles ↑	Gets tickled ↑

Examples of AO

Antecedent : AO	Behavior	Consequence
	Mands for M&M 	Eats M&M 

Examples of AO

Antecedent : AO	Behavior	Consequence
1. Had a pack of M&M before session 2. Just had a big snack	Mands for M&M 	Eats M&M 

Examples of AO

Antecedent : AO	Behavior	Consequence
1. Had a pack of M&M before session 2. Just had a big snack	Mands for M&M ↓	Eats M&M ↓
	Mands for 'play' or 'all done' ↓	Gets a break from work ↓

Examples of AO

Antecedent : AO	Behavior	Consequence
1. Had a pack of M&M before session 2. Just had a big snack	Mands for M&M ↓	Eats M&M ↓
1. Just started working 2. Work is easy	Mands for 'play' or 'all done' ↓	Gets a break from work ↓

Examples of AO

Antecedent : AO	Behavior	Consequence
1. Had a pack of M&M before session 2. Just had a big snack	Mands for M&M ↓	Eats M&M ↓
1. Just started working 2. Work is easy	Mands for 'play' or 'all done' ↓	Gets a break from work ↓
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Examples of AO

Antecedent : AO	Behavior	Consequence
<ol style="list-style-type: none">1. Had a pack of M&M before session2. Just had a big snack	Mands for M&M ↓	Eats M&M ↓
<ol style="list-style-type: none">1. Just started working2. Work is easy	Mands for 'play' or 'all done' ↓	Gets a break from work ↓
<ol style="list-style-type: none">1. Is tired and wants to rest2. Has a body ache	Mands for tickles ↓	Gets tickled ↓



Question?

If this child says “block”, is it likely to be a mand?



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NO! There is no EO for the mand. She already has blocks.



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NO! There is no EO for the mand. She already has blocks.

If a response is equally likely to occur in presence and absence of the EO, then it is probably not a mand.

(Petursdottir, 2015)

Mands for Information

- 💧 A mand for information is under the functional control of conditions (EO) that renders information valuable. The information is valuable because it is needed to obtain an eventual desired goal.
- 💧 *To verify that you have truly taught a mand for information, you need to demonstrate that it occurs more under EO present conditions than EO absent (AO) conditions*

(Petursdottir, 2015)

Therefore.....

- 💧 To teach mands for information, you need to run trials with EO present conditions interspersed with trials with EO absent (AO) conditions for every target situation

Teaching “where?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial

Teaching “where?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
A favourite candy is in a locked drawer and key is missing	“Where is key?”		

Teaching “where?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
A favourite candy is in a locked drawer and key is missing	“Where is key?”	Child doesn't know the location of the key	

Teaching “where?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
A favourite candy is in a locked drawer and key is missing	“Where is key?”	Child doesn't know the location of the key	<ul style="list-style-type: none">- Child knows where the key is and can get it himself- Knows the location of the key but can't reach it

Teaching “where?”

EO present vs. EO Absent Trials

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A desired toy is not in its usual location	“Where is toy?”		

Teaching “where?”

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A favourite candy is in a locked drawer and key is missing	“Where is key?”	Child doesn’t know the location of the key	<ul style="list-style-type: none">- Child knows where the key is and can get it himself- Knows the location of the key but can’t reach it
A desired toy is not in its usual location	“Where is toy?”	Child doesn’t know the location of the toy	<ul style="list-style-type: none">- Child saw you putting the toy away- Toy is visible in its new location

Some important tips about teaching 'where?'

- 💧 Run 'where?' and 'give me/I want' trials together (Somers et al., 2014)
- 💧 Only provide the location of the desired item not the item itself when possible (make the information valuable).
- 💧 Teach with least to most prompting using echoic prompt.
- 💧 Vary situations, hiding places and stimuli for generalization and to maintain EO for info (use Carbone workshop examples)
- 💧 Use variations of 'where' questions depending on child's communication skills and do not focus on grammar at first, as this could decrease the EO.

Videos: Teaching 'where?'

Where: Examples from Carbone Workshop

- 1. Have the learner come to sit to engage in a fun activity with you at a table but have no chair for him. Prompt, “where is my chair?”
- 2. Have the learner sitting and suddenly get up and say, “I’ll be right back” Prompt “where are you going?”. Teacher should say “to get a gummy (or other reinforcing item) for you.”

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”		

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”	Child doesn’t know the presented item	

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”	Child doesn’t know the presented item	Child can label the presented item

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”	Child doesn’t know the presented item	Child can label the presented item
Tell the child you have something for them	“What is it?”		

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”	Child doesn’t know the presented item	Child can label the presented item
Tell the child you have something for them	“What is it?”	The item is hidden (in your hand, behind a cover, in a box)	

Teaching “what?”

EO present vs. EO Absent Trials

Target Situation	Mand for Info	EO Present Trial	EO Absent Trial
Tacting items or pictures	“What is it?”	Child doesn’t know the presented item	Child can label the presented item
Tell the child you have something for them	“What is it?”	The item is hidden (in your hand, behind a cover, in a box)	<ul style="list-style-type: none">- The item is not hidden- You show the item to the child before hiding it

Some important tips about teaching 'what?'

- 💧 Run 'what?' and 'give me/I want' trials together (when you can)
- 💧 Teach with least to most prompting using echoic prompt.
- 💧 Vary situations and stimuli for generalization and to maintain EO for info (use Carbone workshop examples)
- 💧 Use variations of 'where' questions depending on child's communication skills and do not focus on grammar at first, as this could decrease the EO.
- 💧 Teach 'what?' and 'where?' together.

Videos: Teaching 'what?'

What: Examples from Carbone Workshop

- 💧 Say something to the learner in a very low or muffled voice. When the learner looks at you as if they didn't understand what you said, prompt them to mand, "what did you say?" once they mand, tell them "I said, I have an M&M for you" and then give them the M&M (or other favorite treat, toy or item).
- 💧 The teacher will bring a paper bag with things the learner likes inside the bag (i.e. little toys, gummies, books). The teacher will look in the bag and say, "wow, look at this" while keeping the bag closed. Prompt the learner to say, "what is in there?". The teacher removes the item while labeling it and delivers it to the learner.

#	Target	Date Introduced	EO Present Date Mastered	EO Absent Date Mastered	Date Target Maintained	Date/Reason Program on Hold/Revise
	Various situations and (Carbone examples)					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Data Collection

- 💧 Use Per-Opportunity Data Sheets to record data for 10 trials per session. 5 trials will be with EO present and 5 will be with EO absent (randomly interspersed)
- 💧 Indicate EO present trials with **P** and EO absent trials with **A**.
- 💧 Mark independent correct responding for each trial with **+** and prompted/incorrect responses with **-**
- 💧 On a separate probe sheet also mark the first cold probe for both EO present and EO absent trials for each session.
- 💧 Graph daily % of independent correct responding.

Target Mastery

- 💧 Three consecutive independent correct cold probes for both EO present and EO absent situations

and
- 💧 80% correct responding on per-op trials for three consecutive sessions across 2 ITs

Generalization and Maintenance

- 💧 Continue to teach in as many situations (such as Carbone workshop examples) as possible until mands for information are generalized to novel and spontaneous situations
- 💧 Continue to provide a minimum of 5 opportunities per session for mands for information for program maintenance.



Questions? Comments.

Thank You!