

Complete experimental stimuli and results for “Numerals denote degree quantifiers: Evidence from child language”

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1 Description

Below we provide the full set of experimental stimuli and results used in [Kennedy and Syrett 2021](#), as well as additional stimuli and results that had to be removed from the final version of the paper due to space considerations. The paper focuses only on the materials reported here as “Experiment 1a,” which involve upper-bounding inferences, and are the results that are crucial for the argument made in the paper. In fact, the materials described here under the headings “Experiment 1a” and “Experiment 1b” were originally used in a single study that looked at both upper-bounding inferences (“Experiment 1a”) and lower-bounding inferences (“Experiment 1b”), but the discussion of the latter had to be removed to meet space limitations. The materials described here under the label “Experiment 2” were from a separate study on lower-bounding inferences, also removed from the final version of the paper.

2 Complete List of Lead-Ins and Target Sentences

2.1 Experiment 1a: Upper Bounds

Control Items

The choice of lexical item in brackets was designed to favor a “yes” or “no” response.

- (1)
 - a. Remember, Ruby asked Max to draw a [cat/dog]. Is what Max did ok?
 - b. Remember, Dora wanted some fruit and asked Boots to give her [an apple/a banana]. Is what Boots did okay?
 - c. Remember, Mickey told Goofy to use the [red/blue] Play-Doh to make a car. Is what Goofy did ok?
 - d. Remember, Joe told Blue to draw a [star/flower]. Is what Blue did okay?

Test items

Numeral-Count Noun scenarios

- (2) *Making Lemonade*
Gonzo was making lemonade and needed to use Kermit’s lemons. Remember, Kermit said to Gonzo, “I need to leave some lemons for myself so ... you *are allowed to* use two lemons.” Is what Gonzo did okay?
- (3) *Books before Bedtime*
The Man in the Yellow Hat wanted George to go to bed soon, but George wanted to read first. Remember, The Man in the Yellow Hat told George, “You have to go to bed soon so ... you *are allowed to* read two books.” Is what George did okay?
- (4) *Bunnies and Carrots*
Benjamin Bunny wanted to eat some of Peter Rabbit’s carrots. Remember, Peter Rabbit said to him “I need to keep enough carrots to make dinner so ... you *are allowed to* have two carrots.” Is what Benjamin Bunny did okay?

Measure Phrase-Mass Noun scenarios

- (5) *Filling the Pitcher*
Elmo wanted to help get the picnic lunch ready by filling a pitcher of water. Remember, Big Bird said to Elmo, “We don’t want the pitcher to be too heavy to carry so ... you *are allowed to* fill the pitcher with two inches of water.” Is what Elmo did ok?
- (6) *Filling the Pool*
Sister Bear was learning how to fill the pool up on her own. Remember, Brother Bear said, “You don’t want the water to spill out when you splash so ... you *are allowed to* fill the pool with two feet of water.” Is what Sister Bear did ok?
- (7) *Stuffing for Bears* (Faulty item in original Experiment 1)
Bob was showing Wendy how to make a toy bear. Remember, Bob said, “You want your bear to be cuddly, but not too stiff so ... you *are allowed to* use two inches of stuffing.” Is what Wendy did ok?
- (8) *Packing building materials* (replacement item in follow-up to Experiment 1)
Bob was showing Wendy how to pack stuffing in a container to ship building materials. Remember, Bob said, “You want the building materials to be really protected, but you still want enough room for the building materials to go in and not be cushioned too much, so you’re *allowed to* use 2 inches of stuffing.” Is what Wendy did ok?

2.2 Experiment 1b: Lower Bounds

Control Items

Same as Experiment 1a.

Test items

Numeral-Count Noun scenarios

- (9) *Making Lemonade*
 Gonzo was making lemonade and needed to use Kermit’s lemons. Remember, Kermit said to Gonzo, “You want it to taste lemony so ... you *have to* use two lemons.” Is what Gonzo did okay?
- (10) *Books before Bedtime*
 George wanted to go to bed, but The Man in the Yellow Hat wanted him to read first. Remember, The Man in the Yellow Hat said to George, “It’s important to practice reading so ... you *have to* read two books.” Is what George did okay?
- (11) *Bunnies and Carrots*
 Benjamin Bunny needed energy for his trip. Remember, Peter Rabbit said to him “You want to have enough energy for the whole trip so ... you *have to* have two carrots.” Is what Benjamin Bunny did okay?

Measure Phrase-Mass Noun scenarios

- (12) *Filling the Pitcher*
 Elmo wanted to help get the picnic lunch ready by filling a pitcher of water. Remember, Big Bird said to Elmo, “We want there to be enough for everyone so ... you *have to* fill the pitcher with two inches of water.” Is what Elmo did ok?
- (13) *Filling the Pool*
 Sister Bear learning how to fill the pool up on her own. Remember, Brother Bear said, “You want enough water to be able to splash so ... you *have to* fill the pool with two feet of water.” Is what Sister Bear did ok?
- (14) *Stuffing for Bears*
 Bob was showing Wendy how to make a toy bear. Remember, Bob said, “Stuffing is very important in order to make your bear cuddly so ... you *have to* use two inches of stuffing.” Is what Wendy did ok?

Experiment 2: Lower Bounds

Control Items

The choice of lexical item in brackets was designed to favor a “yes” or “no” response.

- (15) a. Remember, Ruby told Max that if he drew a [cat/dog] for her, then he could have a turn in the sandbox. Can Max have a turn in the sandbox?
- b. Remember, Dora asked Boots to find [an apple/a banana] in his basket. Can Boots be in charge of making the fruit salad?
- c. Remember, Mickey told Goofy to use the [red/blue] Play-Doh to make his racecar. Can Goofy race his car?
- d. Remember, Joe told Blue to draw a [star/flower]. Can Blue use the special chalk on the sidewalk?

Test Items

Numeral-Count Noun scenarios

- (16) *Vines*
Marvin wanted to play with Tarzan in the jungle, but Tarzan can only take fast monkeys into the jungle with him. Remember, Tarzan said you *hafta* swing on three vines in a row to show you are a fast monkey. Can Marvin play with Tarzan in the jungle?
- (17) *Lily Pads*
Freddy’s brother Frankie invited him to play in the deep pond with the big kid frogs, but only strong jumpers can play there. Remember, Frankie said you *hafta* jump over three lily pads to show you are a strong jumper. Can Freddy go play in the deep pond?
- (18) *Vegetables*
Remember, Diego said that kids in his class *hafta* eat three vegetables in order to get a “healthy kid” sticker. Can Diego get a sticker?

Measure Phrase scenarios

- (19) *Board Game*
Kevin and Amanda weren’t sure if they could play the board game. Remember, the box said you *hafta* be three years old to play. Can Kevin and Amanda play the game?
- (20) *Monkey Bars*
Emily Elizabeth wanted to play on the monkey bars for the first time, but she wasn’t sure if she could reach them. Remember, Charley said you *hafta* reach three feet up to be able to play on the monkey bars. Can Emily Elizabeth play on the monkey bars?
- (21) *Roller Coaster*
Elmo wasn’t sure if he could go on the roller coaster, so Big Bird was helping him measure himself. Remember, the sign said you *hafta* be three feet tall to ride. Can Elmo go on the rollercoaster?

3 Results

	QUANTITY		
	<2	=2	>2
ADULTS	78.1%	100.0%	3.1%
CHILDREN	43.8%	100.0%	21.9%

Table 1: Mean percentage acceptance of second character’s actions in Experiment 1a (upper bounds)

	QUANTITY		
	<2	=2	>2
ADULTS	87.5%	100.0%	0.0%
CHILDREN	41.7%	100.0%	4.2%

Table 2: Mean percentage acceptance of second character’s actions in Experiment 1a (upper bounds), “Stuffing the Bear” items removed

	QUANTITY		
	<2	=2	>2
CHILDREN	60.0%	100.0%	10.0%

Table 3: Results of a follow-up experiment correcting for the item effect in Experiment 1a (upper bounds)

	QUANTITY		
	<2	=2	>2
ADULTS	12.5%	96.9%	33.3%
CHILDREN	16.7%	100.0%	20.8%

Table 4: Mean percentage acceptance of second character’s actions in Experiment 1b (lower bounds), excluding the “Stuffing the Bear” items

References

Kennedy, Christopher, and Kristen Syrett. 2021. Numerals denote degree quantifiers: Evidence from child language. In *Tbd*, ed. Nicole Gotzner and Uli Sauerland. Palgrave MacMillan.

	QUANTITY		
	<2	=2	>2
ADULTS	0.0%	100.0%	98.4%
CHILDREN	3.6%	89.3%	78.6%

Table 5: Mean percentage acceptance of second character’s actions in Experiment 2 (lower bounds)