

## Supplementary Materials

### Experiment 1 Materials (with average naturalness rating for initial event on 1-5 scale)

1a/c) After flavoring the roasts with some syrup/gravy, Susan served them to the guests.	3 / 1.6
1b/d) After the roasts were flavored with some syrup/gravy, Susan served them to the guests.	
2a/c) After covering the wounds with a scarf/some gauze, Kevin found band-aids for them.	2.6 / 1
2b/d) After the wounds were covered with a scarf/ some gauze, Kevin found band-aids for them.	
3a/c) After teaching ventriloquism techniques using a fable/dummy, Fiona went home.	3.4 / 1.8
3b/d) After ventriloquism techniques were taught using a fable/dummy, Fiona went home.	
4a/c) After eliminating the bacteria with a spear/toxin, Harold felt better.	4.8 / 3
4b/d) After the bacteria were eliminated with a spear/toxin, Harold felt better.	
5a/c) After catching the baseball in her lasso/glove, Tracy threw it to first base.	4.2 / 1.2
5b/d) After the baseball was caught in her lasso/glove, Tracy threw it to first base.	
6a/c) After scraping the plates with a spade/spoon, Peter put them in the sink.	3.4 / 1.6
6b/d) After the plates were scraped with a spade/spoon, Peter put them in the sink.	
7a/c) After moving the hay on a stretcher/with a pitchfork, Holly stored it in the barn.	3.6 / 1.6
7b/d) After the hay was moved on a stretcher/with a pitchfork, Holly stored it in the barn.	
8a/c) After constructing the boxes out of chocolate/cardboard, Caitlin added some details.	3.6 / 1
8b/d) After the boxes were constructed out of chocolate/cardboard, Caitlin added some details.	
9a/c) After adorning the napkins with a chandelier/some embroidery, Debbie went to buy flowers.	5 / 2
9b/d) After the napkins were adorned with a chandelier/some embroidery, Debbie went to buy flowers.	
10a/c) After identifying the shorebirds using a microscope/ from a photograph, Alex wrote a note.	3.8 / 1.6
10b/d) After the shorebirds were identified using a microscope/ from a photograph, Alex wrote a note.	
11a/c) After protecting the castle with a canopy/bunker, the troops secured the drawbridge.	4.4 / 2.8
11b/d) After the castle was protected with a canopy/bunker, the troops secured the drawbridge.	
12a/c) After filling the oil tank using a kettle/funnel, Evan checked the antifreeze levels.	4.4 / 2.6
12b/d) After the oil tank was filled using a kettle/funnel, Evan checked the antifreeze levels.	
13a/c) After cleaning the blackboards with a napkin/an eraser, Patricia got out new chalk.	2.8 / 2.2
13b/d) After the blackboards were cleaned with a napkin/an eraser, Patricia got out new chalk.	
14a/c) After illustrating the research results in a mosaic/poster, David asked for help.	3.4 / 1.4
14b/d) After the research results were illustrated in a mosaic/poster, David asked for help.	
15a/c) After attacking the ships using a hammer/cannon, Blackbeard's crew boarded them.	3.8 / 1.8
15b/d) After the ships had been attacked using a hammer/cannon, Blackbeard's crew boarded them.	

16a/c) After transporting the popsicles in a bucket/cooler, the clown went to the freezer.	2.8 / 1.8
16b/d) After the popsicles were transported in a bucket/cooler, the clown went to the freezer.	
17a/c) After scaling the wall with a ticket/ladder, Julia jumped down into the interior.	4.8 / 1
17b/d) After the wall was scaled with a ticket/ladder, Julia jumped down into the interior.	
18a/c) After tying the beef roast with some ribbon/string, Mark put it in the oven.	3.4 / 2.6
18b/d) After the beef roast was tied with some ribbon/string, Mark put it in the oven.	
19a/c) After embellishing the dresses with some lacquer/taffeta, Elaine started on a purse.	4.4 / 3
19b/d) After the dresses were embellished with some lacquer/taffeta, Elaine started on a purse.	
20a/c) After studying the heartbeats in the observatory/ with a stethoscope, Ed watched the patient.	4.2 / 1
20b/d) After the heartbeats had been studied in the observatory/ with a stethoscope, Ed watched the patient.	
21a/c) After delivering the adrenaline by messenger/injection, Tom took John's pulse.	4.6 / 2
21b/d) After the adrenaline had been delivered by messenger/injection, Tom took John's pulse.	
22a/c) After protecting the ammunition under an umbrella/ in a fortress, Craig left.	3.6 / 2
22b/d) After the ammunition had been protected under an umbrella/ in a fortress, Craig left.	
23a/c) After cleaning the dirty glassware with some shampoo/solvent, Kari wiped the counter.	2.8 / 1.8
23b/d) After the dirty glassware was cleaned with some shampoo/solvent, Kari wiped the counter.	
24a/c) After transporting the cattle in a helicopter/locomotive, the farmer released them.	3.8 / 2.4
24b/d) After the cattle were transported in a helicopter/locomotive, the farmer released them.	
25a/c) After making the dessert from some cement/a recipe, Ben made himself an iced tea.	5 / 1
25b/d) After the dessert had been made from some cement/a recipe, Ben made himself an iced tea.	
26a/c) After controlling the water temperature with a leash/valve, Jill took a shower.	4.4 / 1.8
26b/d) After the water temperature had been controlled with a leash/valve, Jill took a shower.	
27a/c) After lifting the injured dog with a crane/sling, the veterinarian examined it.	4 / 2.6
27b/d) After the injured dog was lifted with a crane/sling, the veterinarian examined it.	
28a/c) After measuring the voltage with a ruler/meter, the electrician replaced the wiring.	5 / 1.2
28b/d) After the voltage was measured with a ruler/meter, the electrician replaced the wiring.	
29a/c) After threatening the suspects with a feather/bayonet, the soldier left the room.	4.6 / 2.6
29b/d) After the suspects were threatened with a feather/bayonet, the soldier left the room.	
30a/c) After sealing the wood with some asphalt/varnish, George left the bookshelf to dry.	3.6 / 1.6
30b/d) After the wood was sealed with some asphalt/varnish, George left the bookshelf to dry.	
31a/c) After safeguarding the valuables with a vaccine/padlock, Eddie left for vacation.	4.2 / 1
31b/d) After the valuables had been safeguarded with a vaccine/padlock, Eddie left for vacation.	
32a/c) After celebrating the anniversary with an explosion/some champagne, the couple kissed.	2.6 / 1
32b/d) After the anniversary had been celebrated with an explosion/some champagne, the couple kissed.	

Experiment 2 Stimuli (with average naturalness rating for verb-object on 1-7 scale, followed by average naturalness rating for sentence through critical word on 1-5 scale).

1 Paul used a spoon to eat the hot chili during lunch.	1.5	1
1 Paul used a spoon to gouge the hot chili during lunch.	4.3	3.4
1 Paul used chopsticks to eat the hot chili during lunch.		4.4
2 Steve used a backhoe to dig the deep reservoir in the woods.	2.8	2.7
2 Steve used a backhoe to remove the deep reservoir in the woods.	5.3	4.3
2 Steve used a snow shovel to dig the deep reservoir in the woods.		3.3
3 Susan used a cup to measure the white flour for the recipe.	1.5	1
3 Susan used a cup to sip the white flour for the recipe.	6.1	4
3 Susan used a ruler to measure the white flour for the recipe.		4
4 Nick used a tank to hold the active angelfish in his room.	5.8	1.1
4 Nick used a tank to destroy the active angelfish in his room.	6.1	3.9
4 Nick used a playpen to hold the active angelfish in his room.		4.7
5 Kate used a sheet to cover the cold child on Friday night.	1.5	1.7
5 Kate used a sheet to escape from the cold child on Friday night.	5.7	4.1
5 Kate used a tarp to cover the cold child on Friday night.		2.9
6 Sean used a keyboard to play the difficult melody in the concert.	1.9	1.3
6 Sean used a keyboard to type the difficult melody in the concert.	4.9	2.4
6 Sean used a rubber band to play the difficult melody in the concert.		3.7
7 Calvin used a hook to catch the large salmon in northern Oregon.	1.6	1.6
7 Calvin used a hook to hang the large salmon in northern Oregon.	3.9	2.1
7 Calvin used a snare to catch the large salmon in northern Oregon.		3.1
8 Molly used a skillet to cook the fluffy pancakes for Sunday breakfast.	1.6	1.1
8 Molly used a skillet to smash the fluffy pancakes for Sunday breakfast.	5.8	3.7
8 Molly used a wok to cook the fluffy pancakes for Sunday breakfast.		3.6
9 Jake used a towel to dry the small poodle on the porch.	2.4	1.1
9 Jake used a towel to catch the small poodle on the porch.	3.5	2.7
9 Jake used a fire to dry the small poodle on the porch.		3.9
10 Mike used a shovel to bury the orange goldfish on the hill.	2.6	1.3
10 Mike used a shovel to scatter the orange goldfish on the hill.	5.5	4.3
10 Mike used an excavator to bury the orange goldfish on the hill.		4.6
11 Jenny used her hand to press the orange button on the panel.	2.4	1.4
11 Jenny used her hand to pet the orange button on the panel.	6.4	4
11 Jenny used her iron to press the orange button on the panel.		3.9
12 Ben used a shield to deflect the large arrows during battle.	4.3	1.1
12 Ben used a shield to protect the large arrows during battle.	6.2	3.3
12 Ben used a tray to deflect the large arrows during battle.		3.3
13 Dan used a razor to trim the unruly beard on Tuesday morning.	1.6	1.6
13 Dan used a razor to threaten the unruly beard on Tuesday morning.	6.1	3.6
13 Dan used hedge clippers to trim the unruly beard on Tuesday morning.		3.9
14 Amy used an alarm to protect the new house over winter vacation.	2.1	1.1

14 Amy used an alarm to wake the new house over winter vacation.	6.9	4.6
14 Amy used packing peanuts to protect the new house over winter vacation.		4.3
15 Bill used a fan to cool the large bedroom in the summer.	1.6	1.1
15 Bill used a fan to clear the large bedroom in the summer.	2.3	3.7
15 Bill used dry ice to cool the large bedroom in the summer.		3.9
16 Colette used a car to drive the young children to elementary school.	1.7	1
16 Colette used a car to lead the young children to elementary school.	1.2	3.4
16 Colette used an eighteen-wheeler to drive the young children to elementary school.		3.1
17 Jason used a cloth to clean the white dishes in the sink.	2.1	1.6
17 Jason used a cloth to wax the white dishes in the sink.	5.7	4
17 Jason used a toothbrush to clean the white dishes in the sink.		3
18 Diana used scissors to cut the long thread on her shirt.	2	1
18 Diana used scissors to stab the long thread on her shirt.	6.4	4.1
18 Diana used a saw to cut the long thread on her shirt.		3.9
19 Kevin used some thread to stitch up the open incision in the emergency room.	1.4	2
19 Kevin used some thread to embroider the open incision in the emergency room.	6.5	4.1
19 Kevin used some yarn to stitch up the open incision in the emergency room.		4.4
20 Bryan used a bottle to feed the hungry infant yesterday morning.	1.1	1.1
20 Bryan used a bottle to fight off the hungry infant yesterday morning.	6.5	3.6
20 Bryan used a trough to feed the hungry infant yesterday morning.		3.9
21 Nancy used a spotlight to illuminate the twirling acrobat in the circus.	3.4	1.6
21 Nancy used a spotlight to blind the twirling acrobat in the circus.	6.4	2.1
21 Nancy used a candle to illuminate the twirling acrobat in the circus.		3.1
22 Rob used glasses to see the green chalkboard in calculus class.	1.4	1
22 Rob used glasses to serve the green chalkboard in calculus class.	6.6	4.4
22 Rob used a microscope to see the green chalkboard in calculus class.		4.3
23 Liz used a pipe to drain the green field behind the school.	4.7	2.9
23 Liz used a pipe to smoke the green field behind the school.	6.6	4.4
23 Liz used a strainer to drain the green field behind the school.		4.6
24 Tim used a brush to paint the white ceiling in the garage.	1.7	1
24 Tim used a brush to flatten the white ceiling in the garage.	5.7	4.1
24 Tim used nail polish to paint the white ceiling in the garage.		3.9
25 Laura used traffic cones to mark the partially obscured ditch near the road.	2.4	1.3
25 Laura used traffic cones to protect the partially obscured ditch near the road.	5.3	1.6
25 Laura used a highlighter to mark the partially obscured ditch near the road.		4
26 Brandon used a broom to scare away the pesky mouse in the kitchen.	1.7	1.1
26 Brandon used a broom to sweep away the pesky mouse in the kitchen.	2.5	2.4
26 Brandon used a scarecrow to scare away the pesky mouse in the kitchen.		3.6
27 Ann used a crate to ship the yellow lemons to the new house.	2.7	1
27 Ann used a crate to restrict the yellow lemons to the new house.	6.6	2.9
27 Ann used an envelope to ship the yellow lemons to the new house.		4.1