Task user case

Task 1:
Instruction
screen shows

For the first task, in each trial, please read the prompt
sentence presented in the box, and rate the level of its
acceptibility based on your intuition of grammaticality by
clicking the scale, from 0 (not acceptbale at all), to 5
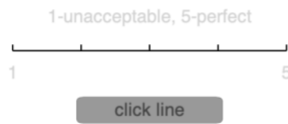(perfectly acceptable).

Please press any key to start.

X: Mouse clicking—
no response

Press any key, trial begins

X: No
action—no
response

The road wasn't very wide or easy to find.

1-unacceptable, 5-perfect

1   5

click line

X: Press
keyboard—
no response

Click mouse on the scale – progress to
the next trial

X: Click mouse
anywhere else –
no response

25 trials in total: 4 experimental conditions, 1 control condition

Task 2:

Instruction shows

For the second task, you will first read a story describing the scenario. Based on the scenario, you'll be asked to make a factual judgement in each trial. The detailed instruction will be given after the story.

Please press any key to start.

X: Mouse clicking—no response

Press keyboard: move to the next screen

X: No action—no response

Five types of animals will take part in an eating contest. All these animals love cake, so they will all eat the cake. But no all these animals like vegetables, so they will get a special reward for eating vegetables.

Those anmials who can eat BOTH the carrot and the pepper will receive a trophy. Those animals who eat ONLY ONE vegetables--the carrot OR the pepper--will receive a star. But those animals who eat NO vegetables at all will get nothing.

Unfortunately, we can't see the eating contest, but we can see which award the animals received. Based on the information presented in the picture, you'll need to judge whether the following statement is right or wrong, by typing in 'true' or 'false' after the promt.
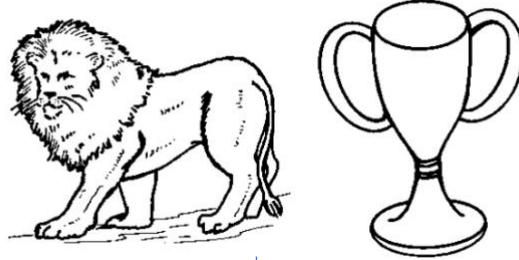
Please press any key to start.

X: Mouse clicking—no response

Press keyboard: move to the next screen, trial begins

X: No action—no response

Cross: none. Star: at least one. Trophy: both

Prompt on top of the screen in each trial

2 seconds, no action from participants needed, progress to the next screen

The animal ate the cake, but he didn't eat the carrot and the pepper.

True or False?

Press 'y' if true, 'n' if false, press SPACE if not sure about the answer.

X: Mouse clicking— no response

Press 'y', 'n', or space to give the judgement, move on to the next trial. 60 trials in total.

X: Press keys other than 'y', 'n', or space, no response

Experiment ends, window closes.

- Detailed information about experimental conditions in each task

Task 1:

Sentences of four experimental conditions and one control condition will be presented in random order for participants to judgement their grammaticality on a Likert scale of 1 to 5, 1 being unacceptable at all, 5 being perfectly acceptable. Experiment will only progress until the participant click on the scale without time restriction. Each condition has five sentences, and the control condition has five sentences. Detailed information of experimental conditions is provided in Table 1.

Scope assignment / Logical operator	Ambiguous	Unambiguous
Conjunction	*Pat didn't enter the room and see her. (n=5)*	*It is not true that Pat entered the room and saw her.(n=5)*
Disjunction	*Pat didn't enter the room or see her. (n=5)*	*It is not true that Pat entered the room or saw her.(n=5)*

Table 1: sentence types in Task 1

Task 2:

After reading a story scenario, participants will be presented a picture for 2 seconds and asked to judge the truth value of statement based on the information provided in the story and picture. There is no time limit in making the judgement. Only "y", "n", and "space" (to skip the question) are accepted to progress forward to the next question. In total there will be 5(animals)*3(award)*4(judgement)=60 trials

"both" condition

"either" condition

"none" condition
(2 second)

He didn't eat the carrot and the pepper.

He didn't eat the carrot or the pepper.

He ate both the carrot and the pepper.

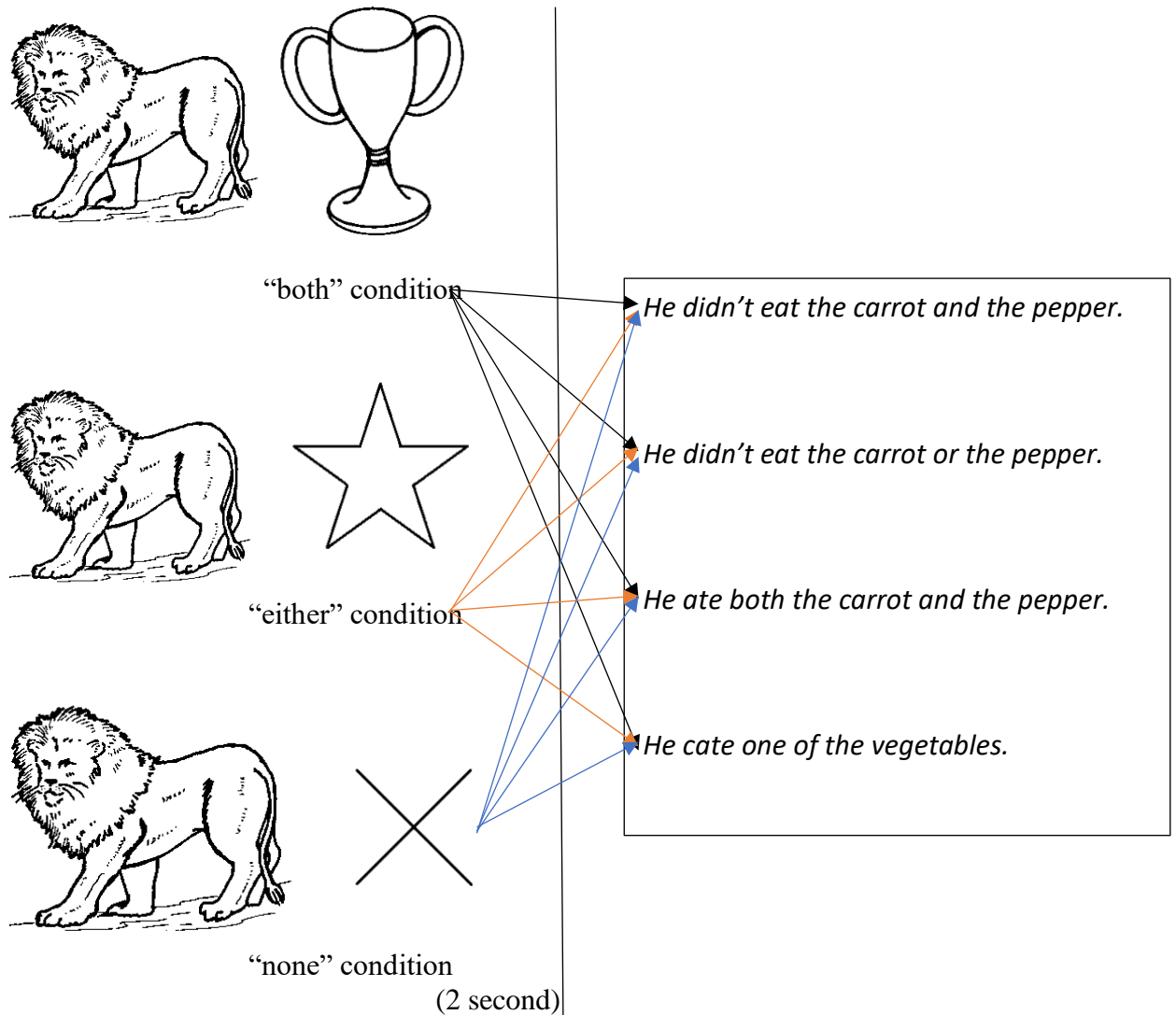He cate one of the vegetables.

Figure 1: Flow of Task 2

Function user case:

Def ShowInstruction1():
    Purpose of the function is to create the instruction window for Task 1.
    The function takes no argument as input.
    After the function being called, the variables window, kb, task1_prompt, which are created and initialized in an earlier function, will be declared global. Then, the function will assign task1_prompt a text stimulus presented in a window, with font height of 1, text width of 25, color in black, and a text being presented in the middle of the window.

The next while sentence will change the flow—when the participant doesn't press the keyboard, the text stimulus window will be drawn and shown.

When the participant clicks the keyboard, the function ends and the program moves to the next step; if the participant makes no further move after the stimulus window shown, no progress will be made; if the participant clicks the mouse, no progress will be made either.