

## Appendix A: Instructions for the study

In this task, you will see two dolls: Ken (left) and John (right). You will be asked questions about them. Each of the dolls has pictures behind them. Your task is to make judgments about those pictures. For each question, indicate your answer by clicking on the appropriate oval. Below are two examples of what you will see, and how you might answer the questions:



Refer to the picture. Who has a taller friend?

- a. Ken (doll on the left) ✓
- b. John (doll on the right)



Refer to the picture. Who has a darker mug?

- a. Ken (doll on the left)
- b. John (doll on the right) ✓

If you have any questions about the two examples above, please raise your hand and ask the teacher now.

During the task, you will not be able to go back to the previous question or page once you have clicked the red button >> at the bottom of the page.

Please do not click the "BACK" button in your browser at any point during the task.

If you are ready, you may start the task by clicking >> at the bottom of this page.

## Appendix B: Results of subsidiary analysis<sup>1</sup>

### ANOVA

**Table A:** Summary of ANOVA results for count, substance mass and object mass conditions.

	df	F	p
Noun type	1.21, 271.79	495.63	0.000**
Noun type x Age	1.21, 271.79	30.94	0.000**
Noun type x Language dominance	1.21, 271.79	5.55	0.014*

Note. \*p < .05; \*\*p < .001

**Table B:** Summary of ANOVA results for flexible noun conditions.

	df	F	p
Noun type	1, 224	108.81	0.000**
Age	1, 224	3.11	0.079
Noun type x Age	1, 224	22.9	0.000**
Noun type x Language dominance	1, 224	22.58	0.000**

Note. \*\*p < .001

<sup>1</sup> Please refer to footnote 3 of the main text for the subsidiary analysis. Statistics that are different from the analysis reported in the main text are highlighted in yellow.

## Independent t-tests

**Table C:** Independent t-tests comparing performance of language groups.

		Mean	SE	t	df	p
Count	Chinese dominant/Balanced	0.94	0.02	-1.13	169.2	0.26
	English dominant	0.96	0.01			
Substance mass	Chinese dominant/Balanced	0.37	0.04	0.98	198.11	0.33
	English dominant	0.32	0.03			
Object mass	Chinese dominant/Balanced	0.93	0.02	-0.43	161.55	0.67
	English dominant	0.94	0.01			
Flexible count	Chinese dominant/Balanced	0.61	0.03	-2.64	185.02	0.009*
	English dominant	0.71	0.02			
Flexible mass	Chinese dominant/Balanced	0.45	0.03	2.14	211.72	0.034*
	English dominant	0.36	0.03			

Note. \*p < .05

**Table D:** Independent t-tests comparing performance of age groups.

		Mean	SE	t	df	p
Count	11 year olds	0.93	0.02	-2.48	127.03	0.015*
	14 year olds	0.98	0.01			
Substance mass	11 year olds	0.45	0.04	4.14	199.63	0.000**
	14 year olds	0.24	0.03			
Object mass	11 year olds	0.91	0.02	-1.63	163.06	0.1
	14 year olds	0.95	0.01			
Flexible count	11 year olds	0.64	0.03	-1.21	214.54	0.23
	14 year olds	0.69	0.02			
Flexible mass	11 year olds	0.48	0.04	3.57	196.37	0.000**
	14 year olds	0.32	0.03			

Note. \*p < .05; \*\*p < .001

## Dependent t-tests

**Table E:** Dependent-tests comparing flexible nouns in count and mass contexts.

		Mean	SE	t	df	p
Chinese dominant/balanced (n = 93)	Flexible count	0.61	0.03	4.25	92	0.000**
	Flexible mass	0.45	0.03			
English dominant (n = 135)	Flexible count	0.71	0.02	11.14	134	0.000**
	Flexible mass	0.36	0.03			
11 year olds (n = 107)	Flexible count	0.65	0.03	5.3	106	0.000**
	Flexible mass	0.48	0.04			
14 year olds (n = 121)	Flexible count	0.69	0.02	10.28	120	0.000**
	Flexible mass	0.32	0.03			

Note. \*\*P < .001

## One-sample t-tests

**Table F:** One-sample t-test comparing performance of against chance level.

		Mean	SE	t	df	p
Chinese dominant/Balanced (n = 93)	Count	0.94	0.02	24.93	92	0.000**
	Substance mass	0.37	0.04	-3.24	92	0.002*
	Object mass	0.93	0.02	19.79	92	0.000**
	Flexible count	0.61	0.03	3.59	92	0.001*
	Flexible mass	0.45	0.03	-1.53	92	0.129
English dominant (n = 135)	Count	0.96	0.01	39.38	134	0.000**
	Substance mass	0.32	0.03	-5.43	134	0.000**
	Object mass	0.94	0.01	32.33	134	0.000**
	Flexible count	0.71	0.02	9.17	134	0.000**
	Flexible mass	0.36	0.03	-4.78	134	0.000**
11 year olds (n = 107)	Count	0.93	0.02	21.46	106	0.000**
	Substance mass	0.45	0.04	-1.22	106	.226
	Object mass	0.91	0.02	19.08	106	0.000**
	Flexible count	0.65	0.03	5.05	106	0.000**
	Flexible mass	0.48	0.04	-0.60	106	.553
14 year olds (n = 121)	Count	0.98	0.01	76.28	120	0.000**
	Substance mass	0.24	0.03	-8.67	120	0.000**
	Object mass	0.95	0.01	39.29	120	0.000**
	Flexible count	0.69	0.02	7.85	120	0.000**
	Flexible mass	0.32	0.03	-6.98	120	0.000**

Note. \*p < .05; \*\*p < .001; test value = 0.5