

Supplementary Information

Table S1. Quiz questions

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Table S3. GLM results for the pitch, intensity and word rate regressors for fMRI data

Table S1. Quiz questions. The correct choice is marked in bold.

Sec.	ID	Question	Choices
1	1	叙述者知道了巨蟒的故事后，画了他的第一幅作品。他的第一幅作品是： After the narrator learned about the story of the python, what did he draw as his first piece of artwork?	A. 一只正在消化大象的开着肚皮的蟒蛇 A python digesting an elephant
			B. 一只戴着帽子的巨蟒 A python with a hat
			C. 一只正在消化大象的闭着肚皮的蟒蛇 A python digesting an unseen elephant
			D. 一只在帽子里的巨蟒 A python inside a hat
	2	总的来说，叙述者对大人的态度是： In general, what is the narrator's attitude towards adults?	A. 大人们太关注“重要”的事，对他们的评价不高 Adults care too much about “important” things and are not highly regarded
			B. 他对大人的态度很模糊 His attitude toward adults is unclear
			C. 大人们能给出最好的建议，很尊敬他们 Adults give the best advice, and he respects them
			D. 大人们彼此很凶恶，对他们的评价不高 Adults are cruel to each other and are not highly regarded
	3	叙述者认为他不能马上画出小王子想要的羊，主要应该责怪谁？ Who does the narrator mainly blame for not being able to immediately draw the sheep that the Little Prince wanted?	A. 他的同龄人 His peers
			B. 大人们 Adults
			C. 他自己 Himself
			D. 小王子 The Little Prince
	4		A. 他不说话 He doesn't talk a lot

2		为什么跟小王子讲话很困难?	B. 他不问问题 He doesn't ask questions
		Why is it difficult to talk to the Little Prince?	C. 他说外星语 He speaks aliens' languages
			D. 他不直接回答问题 He doesn't answer questions directly
	1	第一颗行星上的国王声称他统治什么? What does the king on the first planet claim he rules?	A. 他自己的太阳系 His own solar system
			B. 不统治任何东西 He rules nothing
			C. 他自己的星球 His own planet
			D. 一切 Everything
	2	小王子向第一颗行星上的国王请求了什么? What does the king on the first planet claim he rules?	A. 让太阳为他落下 Make the sun set for him
			B. 让星星为他显现 Make the star blink for him
			C. 让他消失 Make himself disappear
			D. 让草为他生长 Make the grass grow for me
	3	第二颗行星上那个戴着一顶古怪帽子的人非常: The man on the second planet, who wears a strange hat, is very ____.	A. 善于观察 Observant
			B. 骄傲自大 Arrogant
			C. 正直 Honest
			D. 快乐 Happy

4		当小王子表示他想离开第一颗行星时，国王的反应是什么 How did the king react when the Little Prince said he wanted to leave the first planet?	A. 给他一张地图，让他离开 Give him a map and ask him to leave
			B. 把他推开 Push him away
			C. 告诉他不要离开这个星球 Tell him not to leave the planet
			D. 给他糖吃 Give him candy
3	1	小王子最后接受了叙述者画的什么？ What kind of drawing did the Little Prince finally accept from the narrator?	A. 帽子 Hat
			B. 大象 Elephant
			C. 碗 Bowl
			D. 箱子 Box
	2	小王子看到叙述者的飞机后有什么反应？ What was the Little Prince's reaction when he saw the narrator's airplane?	A. 他立即要求驾驶它 He immediately asked to drive it
			B. 他害怕地从飞机上跑开 He ran away in fear from the plane
			C. 他不知道那是什么，要求对方解释 He didn't know what it was and asked for an explanation
			D. 他向叙述者讲述了他的驾驶经历 He told the narrator about his driving experience
	3	当小王子得知叙述者来自天空时，他有什么反应？ When the Little Prince learned that the narrator came from the sky, how did he react?	A. 大笑 Laugh
			B. 哭了 Cry
			C. 尖叫 Scream

			D. 跑开 Run away
	4	为什么小王子不怕小羊跑丢? Why is the Little Prince not afraid of the sheep getting lost?	A. 有绳子拴着小羊 The sheep is tied with a rope
			B. 小羊很小 The sheep is very small
			C. 小羊在房子里 The sheep is in a house
			D. 小王子待的地方很小 The place where the Little Prince stays is very small
4	1	第一颗行星上，除了老国王还有什么? Besides the old king, what else is on the first planet?	A. 耗子 A mouse
			B. 大臣 A minister
			C. 公主 A princess
			D. 小羊 A sheep
	2	第二颗行星上的人要求小王子参加一个游戏，小王子需要做什么? What game does the man on the second planet ask the Little Prince to play, and what does the Little Prince need to do?	A. 拍手 Clap hands
			B. 跺脚 Stomp feet
			C. 打响指 Snap fingers
			D. 喊叫 Shout
	3	第二颗行星上的人为什么脱下帽子?	A. 天气太热 The weather is too hot
			B. 让小王子给他画像 To ask the Little Prince to draw him

4	Why does the man on the second planet take off his hat?	C. 整理头发 To fix his hair
		D. 向小王子致意 To greet the Little Prince
	小王子对这两个行星上大人的感觉是什么? What does the Little Prince feel about the adults on these two planets?	A. 英俊 Handsome
		B. 古怪 Strange
		C. 幽默 Humorous
		D. 蛮横 Rude

Table S2. Participants run order

Participants ID	Run1	Run2	Run3	Run4
sub-01	single_m	mixed_f	mixed_m	single_f
sub-02	single_m	single_f	mixed_f	mixed_m
sub-03	single_f	single_m	mixed_f	mixed_m
sub-04	mixed_f	single_f	mixed_m	single_m
sub-05	mixed_m	single_m	single_f	mixed_f
sub-06	mixed_m	single_f	mixed_f	single_m
sub-07	single_m	mixed_f	mixed_m	single_f
sub-08	single_f	mixed_f	single_m	mixed_m
sub-09	single_m	single_f	mixed_f	mixed_m
sub-10	single_m	single_f	mixed_m	mixed_f
sub-11	mixed_m	single_m	mixed_f	single_f
sub-12	mixed_m	single_m	mixed_f	single_f
sub-13	mixed_m	mixed_f	single_m	single_f
sub-14	mixed_f	mixed_m	single_f	single_m
sub-15	single_m	single_f	mixed_m	mixed_f
sub-16	single_f	single_m	mixed_f	mixed_m
sub-17	mixed_f	single_f	mixed_m	single_m
sub-18	single_f	single_m	mixed_m	mixed_f
sub-19	mixed_f	single_m	mixed_m	single_f
sub-20	single_m	mixed_f	single_f	mixed_m
sub-21	single_f	mixed_m	mixed_f	single_m
sub-22	mixed_f	mixed_m	single_f	single_m

sub-23	mixed_f	single_f	single_m	mixed_m
sub-24	mixed_m	single_m	single_f	mixed_f
sub-25	mixed_m	mixed_f	single_f	single_m
sub-26	mixed_f	mixed_m	single_f	single_m

Table S3. GLM results for the pitch, intensity and word rate regressors for fMRI data: MNI coordinates, cluster size and their peak level statistics, threshold at $p < 0.001$ and $k > 50$.

Condition	Regressors	MNI coordinates	Cluster k-size (mm3)	<i>t</i> value	<i>p</i> value
Single-talker	Pitch	54, -30, 4	100232	9.44	<0.001
		-50, -56, -12	114280	8.66	<0.001
		10, 34, -28	6572	8.25	<0.001
		-46, 32, 30	552	6.76	<0.001
	Intensity	48, -50, -18	131944	10.40	<0.001
		-60, -18, -34	167616	10.18	<0.001
		4, 42, -30	11200	9.58	<0.001
		22, 18, 2	2944	7.85	<0.001
		46, 54, -8	480	6.91	<0.001
		-18, -38, -4	504	6.74	<0.001
	Word rate	-60, -46, -24	121576	10.01	<0.001
		42, -48, -20	51320	9.44	<0.001
		-6, 46, -26	10168	7.96	<0.001
		52, -36, 50	1136	7.01	<0.001
Mix-attend	Pitch	52, 8, 10	79944	8.42	<0.001
		-50, -54, -18	114512	8.16	<0.001
		6, 38, -30	3168	7.81	<0.001
		46, 54, -8	480	7.54	<0.001
		58, -22, 40	1616	6.56	<0.001
		-32, -38, 50	608	8.15	<0.001
	Intensity	50, -46, -26	127200	10.52	<0.001
		-60, -16, -34	169112	10.13	<0.001
		12, 44, -26	10992	8.73	<0.001
	Word rate	-56, -50, -30	115152	9.24	<0.001
		42, -54, -12	62416	9.10	<0.001
		8, 44, -30	6512	8.01	<0.001
		46, -32, 40	1488	6.97	<0.001
Mix-unattend	Pitch	46, -24, 14	45896	8.26	<0.001
		-52, -38, 4	108888	8.09	<0.001
		56, -20, 42	1152	7.49	<0.001
		-6, 42, -28	5600	7.36	<0.001
		-44, 18, 28	648	6.76	<0.001
	Intensity	-48, -24, 22	105224	8.43	<0.001
		50, 8, 8	74472	8.23	<0.001
		2, 38, -32	3824	7.38	<0.001
		28, 14, 6	680	7.15	<0.001
		-52, 26, 2	1024	6.92	<0.001
		44, -24, 48	1088	6.85	<0.001

	Word rate	48, -48, -24	39720	9.56	<0.001
		-62, -26, -28	39720	7.96	<0.001