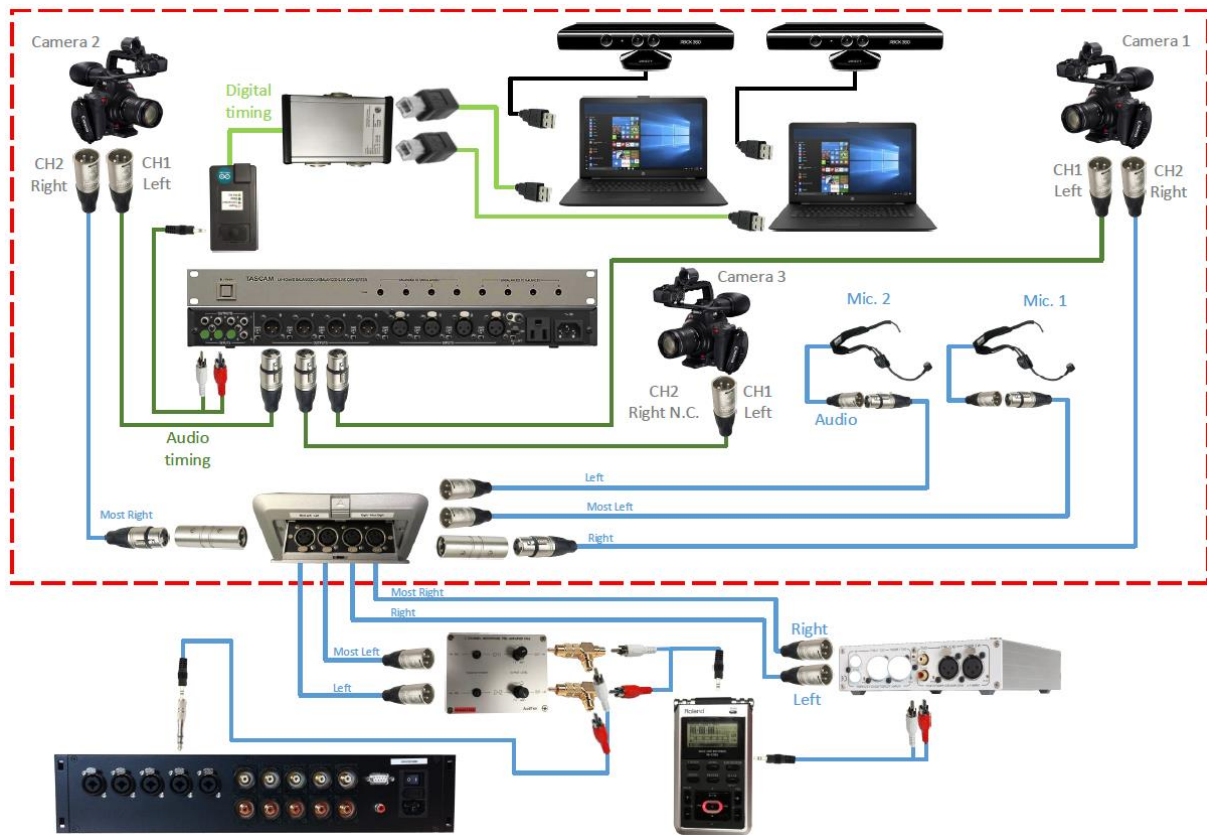**Supplementary Materials**

Figure S1. Overview of the equipment used for recording the interaction. Equipment in the area marked in red was situated inside the sound-attenuated booth, the rest of the equipment was situated in the control room. Note that this figure is for illustrative purposes only (it visualises the set-up and the connections between the devices; for accurate brand and product names, see Section 2.4.2 in the manuscript).
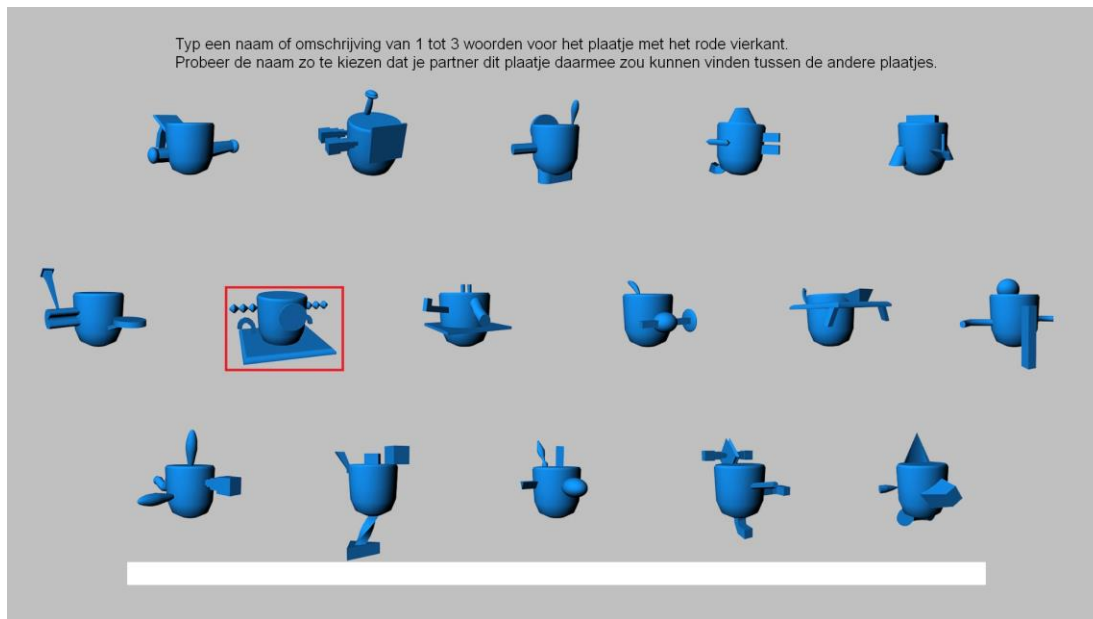
Figure S2. Screenshot of one trial in the Naming task. Instructions are given at the top (in Dutch; English gloss: "Please type in a name or description of 1 to 3 words for the picture with the red square. Try to choose the name in such a way that your partner could use it to find the picture between the other pictures.") and the red square indicates the Fribble that should be named. Participants type in their name/description on the keyboard and it becomes visible in the white bar at the bottom of the screen.

Table S1. *The 29 features that participants saw on the screen in the Features task in original Dutch with English translation. On top of the screen a lead-in sentence was displayed (*In hoeverre zie je dit plaatje als*; "To what extent do you view this picture as…").*

Nr	Feature (original Dutch)	Feature (English translation)
1	afgerond	Rounded
2	puntig	Pointy
3	symmetrisch	Symmetrical
4	langwerpig	Elongated
5	plat	Flat
6	compact	Compact
7	visueel complex	visually complex
8	aandacht vragend	demanding attention
9	iets met een kenmerkende kleur	something with a characteristic colour
10	licht of helder om te zien	light or bright on the eyes
11	groot	Large
12	klein	Small
13	iets met een kenmerkende smaak	something with a characteristic taste
14	iets met een kenmerkende geur	something with a characteristic smell
15	makkelijk hoorbaar	easily audible
16	gerelateerd aan beweging	related to movement
17	menselijk	Human
18	iets met een hoofd/gezicht	something with a head/face
19	iets met een lichaam	something with a body
20	gerelateerd aan acties met het gezicht/de mond	related to actions with the face/the mouth
21	gerelateerd aan acties met de hand/arm	related to actions with the hand/arm

22	gerelateerd aan acties met de voet	related to actions with the foot
23	iets met een vaste plaats/locatie	something with a fixed place/location
24	iets waarvoor tijd (tijdstip of duur) relevant is	something for which time (point in time or duration) is relevant
25	iets waar jij directe ervaring mee hebt	something you have direct experience with
26	iets wat jou of anderen helpt	something that helps you or others
27	iets waardoor je verrast wordt	something that you are surprised by
28	positief/plezierig	positive/pleasant
29	negatief/onplezierig	negative/unpleasant

Figure S3. Screenshot of one trial in the Features task. See Table S1 for translations of all features. Participants should rate the Fribble displayed on the left by changing the sliders for all 29 different features.

Table S2. *Details on the eight animated movies participants viewed in the movies session.*

Movie order	Movie name	Source	Short description	Length shown (s)	Remarks
1	Caminandes Llamigos	Pablo Vazquez, Blender Foundation, http://www.caminandes.com/	A llama chases a penguin in the snow for some berries.	134	
2	Lifted	Pixar Short Films Collection 1 (DVD)	Aliens take away a sleeping man at night.	261	
3	One man band	Pixar Short Films Collection 1 (DVD)	Two men play several instruments at a square for a child.	217	black bar at top/bottom of screen
4	Knick Knack	Pixar Short Films Collection 1 (DVD)	Toys are enjoying music and trying to escape from their shelf.	173	
5	Geri's game	Pixar Short Films Collection 1 (DVD)	An old man plays a game of chess against himself.	245	black bar left/right of screen
6	La Luna	Pixar Short Films Collection 2 (DVD)	A man and child sail to the moon to change its appearance.	365	black bar at top/bottom of screen
7	Presto	Pixar Short Films Collection 2 (DVD)	A magician's show is disturbed by his rabbit.	265	
8	Partly Cloudy	Pixar Short Films Collection 2 (DVD)	A stork brings babies, but appears to always get the difficult ones.	300	

Table S3. *Translated questions from the questionnaire (the original questions were in Dutch).*

Nr	Translated question
1	Did you notice anything about the experiment or would you like to say something about it? If so, what?
2	What do you think the goal of the experiment is?
3	When you had to name/describe the images for the first time, what strategy did you use? Was it difficult?
4	Did the features influence your naming? If so, how?
5	How did you go about the first features task? Was it difficult?
6	Did the naming influence the features? If so, how?
7	Did you use a different strategy the second time you did the naming task? How? Was it easier/harder?
8	Did you use a different strategy the second time you did the features task? Was it easier/harder?
9	What strategy did you use in the first interactive task with your partner (where you had to describe the images)?
10	What strategy did you use in the second interactive task with your partner (where you had to describe where the image was on the screen)?
11	Did you think you could use gestures during the interactive tasks? If so, did you do so?
12	Did you think the task inside the fMRI scanner with the images was hard? Was it harder/easier/the same the second time?
13	Did you use a certain strategy to do the task in the fMRI scanner? If so, which one?
14	Could you easily keep your attention while watching the videos in the scanner (the last part) or were you distracted sometimes?
15	Have you already seen some of the videos in the fMRI scanner? If so, which ones?
16	You will now get a few questions about the other participant in the experiment. Could you be friends with him/her? Give a score from 1-7 (1 = very unlikely, 7 = very likely)
17	Does the other participant look like you? Give a score from 1-7 (1 = not at all, 7 = very much).
18	How intelligent do you think the other participant is? Give a score from 1-7 (1 = not at all, 7 = very much).

19	How selfish do you think the other participant is? Give a score from 1-7 (1 = not at all, 7 = very much).
20	How shy do you think the other participant is? Give a score from 1-7 (1 = not at all, 7 = very much).
21	How enthusiastic did you think the other participant was during the interaction? Give a score from 1-7 (1 = not at all, 7 = very much).
22	How nice did you think the other participant was? Give a score from 1-7 (1 = not at all, 7 = very much).
23	How pleasant did you think the other participant's voice was to listen to? Give a score from 1-7 (1 = not at all, 7 = very much).
24	Do you think the other participant was a real participant or a collaborator of the researcher?
25	You will now get a few questions about yourself. How old are you?
26	What is your sex?
27	What do you do in your daily life? (studying, working, unemployed, ?)
28	What study programme have you followed/are you following?
29	How introverted/extravert do you think you are? Give a score from 1-7 (1 = very introverted, 7 = very extravert).
30	How proud are you of your own accent? Give a score from 1-7 (1 = not at all, 7 = very much).

Table S4. *Overview of all data types in the Data folder of the Dataset with associated tasks and formats (extensions).*

Data type	Task	Format(s)
task log files	Naming and Features, one-back, phonological pre-test, interaction, movies, questionnaire	txt
aggregated data from log files	Naming, Features, questionnaire	csv
MRI	one-back, movies	NIfTI
eye-tracking	one-back, movies	idf
physiological	one-back, movies	eeg; vhdr; vmrk
Audio	phonological pre-test, interaction	wav
Video	Interaction	mp4
Kinect	Interaction	c3d; csv; txt; log
Transcription	Interaction	eaf; pfsx; txt; TextGrid

Section S1. Details on the automatic movement coder

The gesture autocoder was applied to the dominant hand we determined whether there was a gesture event based on the following rules:

1. A gesture event is considered when the movement speed of the hand tip exceeds 15cm/s.
2. If a candidate gesture event is adjacent to another event within 250 ms, the events are merged, and treated as a single event.
3. If a candidate gesture event is shorter than 200 ms then the event is too short to be considered a gesture event, and such events are excluded. However, by rule 2, if candidate gesture events shorter than 200 ms are adjacent to each other, they will be merged and are therefore not excluded.
4. If the gesture event contains a movement that does not exceed the vertical threshold of 1SD under the average vertical position, the gesture event is excluded. This is because we want to avoid the detection of button presses as communicative gestures.

This autocoder is comparable in nature to other benchmarked approaches (Ripperda, Drijvers, Holler, 2020), with the exception that we did not apply a manual removal for possibly incorrectly detected communicative gestures.

Reference

Ripperda, J., Drijvers, L., & Holler, J. (2020). Speeding up the detection of non-iconic and iconic gestures (SPUDNIG): A toolkit for the automatic detection of hand movements and gestures in video data. *Behavior research methods, 52(4)*, 1783-1794. https://doi.org/10.3758/s13428-020-01350-2

Data Use Agreement

The Data Use Agreement is provided as a separate pdf file.