

Supplementary information

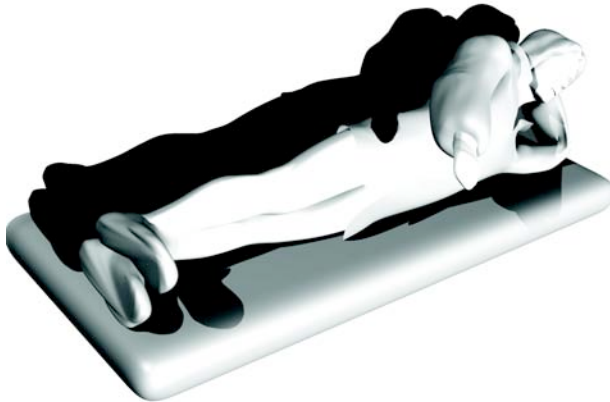
The patient was a 22-year-old, right handed woman, with normal psychiatric history, who suffered from complex partial seizures since the age of seven years. Seizures were characterized initially by auditory sensations followed by loss of consciousness and postictal aphasia. During a seizure recorded in presurgical epilepsy evaluation, the patient also reported an out-of-body experience⁵. Pharmacoresistant epilepsy due to a focal transmantle dysplasia in the posterior aspect of the left superior and middle temporal gyri was diagnosed. 102 subdural grid electrodes were implanted to record seizures. Focal electrical stimulation (0.5–11.0 mA, 2s train duration) was applied at 50Hz in a bipolar manner through adjacent contacts^{5,10} at 88 electrodes to identify cortex involved in somatosensory, motor, and language functions. Overt responses were evoked at 42 sites, of which 21 were motor responses, 8 somatosensory and 8 language responses (Fig. 1a). Other responses were obtained at additional strip electrodes that were implanted in parieto-occipital cortex (visual responses; not shown) and anterior medial temporal cortex (laughter; not shown). Informed consent was obtained from the patient and electrical stimulation procedures conformed to the Declaration of Helsinki.

Supplementary figure S1

a



b



Body (white) and body of the illusory person (black) during cortical stimulation in different body positions and postures. To further confirm the influence of the patient's body position and body posture on those of the illusory person's body, stimulation was again applied in the supine position, but either lying on the right or left side. **a**, When lying on her right side (11.0mA; n=1) the patient reported again that the "person" was

also lying down (to her right) “taking the same position as my position, the same place as my place”. **b**, When lying on her left side (11.0mA; n=1), the stimulation-induced experience was modified and she noted that “somebody touches my right thigh”. Asked if she knows who touched her she stated that it was “probably the same person, but this was more vaguely”. For clinical reasons, the same site was retested in one more short session the following day. This was done in order to exclude that this site was involved in language function given its location in temporo-parietal cortex and language responses at adjacent sites. Tested currents ranged from 1.0-11.0 mA. Again, at 11.0 mA (n=1) the patient experienced the feeling-of-a-presence, but stimulations below this amplitude did not induce this experience. For clinical reasons we did not carry out further testing about the feeling-of-a-presence at this later session. (illustrations: M. Boyer)