Table S1. Behavioural performance and differences between LTLE and HC during recognition task

		Old items				New items				All items			
		%CR	**%ER**	**%NR**	**RT**	**%CR**	**%ER**	**%NR**	**RT**	**%CR**	**%ER**	**%NR**	**RT**
	LTLE	72.4	21	6.67	1.08	75.6	13.8	10.7	1.18	74	17.4	8.68	1.13
Mean	HC	71.2	24.9	3.82	0.97	87.5	4.61	8.03	1.12	79.3	14.7	5.91	1.05
	LTLE	73.8	20	6.25	1.08	81.3	7.5	7.5	1.2	75	16.3	8.13	1.12
Median	HC	72.5	25	5	0.96	87.5	2.5	7.5	1.13	81.3	13.8	6.25	1.05
	LTLE	8.81	8.45	4.93	0.1	17.4	14.5	10.8	0.11	8.24	7.31	6.87	0.08
SD	HC	9.55	9.98	2.41	0.08	7.36	5.42	6.1	0.07	6.54	5.83	3.72	0.05
	U	152	126	110.5	74.5	96.5	88	158.5	85.5	105	118	134.5	39
Difference	*p*	0.572	0.173	0.062	0.003	0.024	0.011	0.713	0.01	0.046	0.112	0.272	< 0.001

Abbreviations: %CR – percentage of correct responses; %ER – percentage of incorrect responses; %NR – Percentage of items without response; RT – reaction time in seconds; LTLE – left temporal lobe epilepsy; HC – healthy controls; The difference in performance between HC and LTLE patients is represented by values of Mann-Whitney *U* tests with the corresponding *p* value.

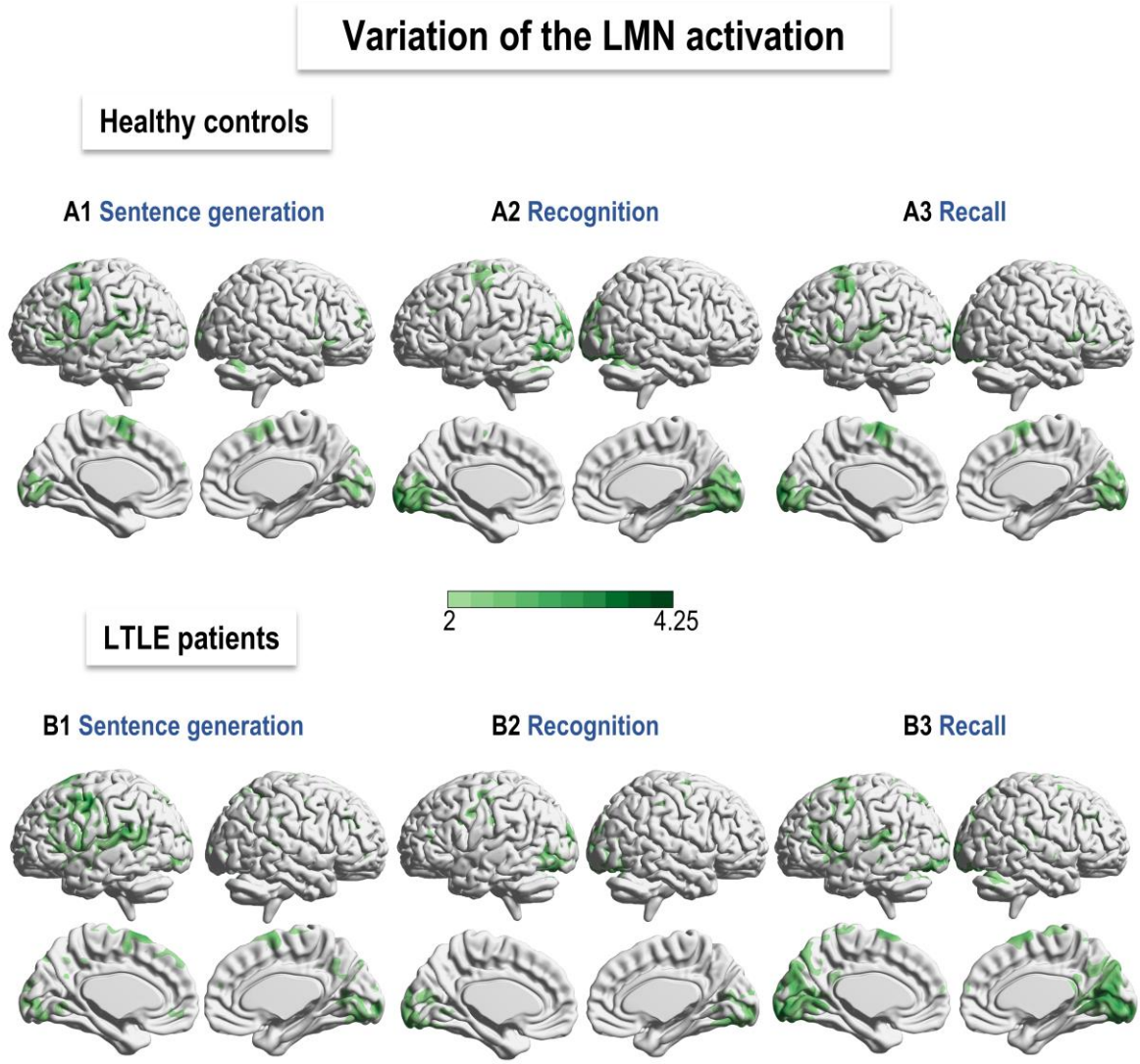

Figure S1. Illustration of activation variation in HC (**A**) and LTLE (**B**) for each GE2REC task. The standard deviation (SD) of task activation across participants within a group is projected onto a 3D anatomical template for sentence generation (**A1, B1**), recognition (**A2, B2**), and recall (**A3, B3**). The color scale indicates the SD value.

Table S2. Standard deviation (SD) for each AAL region for GE2REC tasks in LTLE and HC groups. Regions with SD higher than 2SD are marked in red. The highest variation was found in occipital regions for LTLE during recall and in occipital regions in HC during recognition. **Abbreviations**: GE = sentence generation with implicit encoding; RECO = recognition; RA = recall; LTLE = Left temporal lobe epilepsy; HC = Healthy controls.

Lobe	AAL region	LTLE GE	LTLE RECO	LTLE RA	HC GE	HC RECO	HC RA
Frontal	Frontal_Inf_Oper_L	1.83	1.58	1.80	1.99	1.53	1.62
	Frontal_Inf_Oper_R	1.46	1.49	1.39	1.62	1.40	1.55
	Frontal_Inf_Orb_2_L	1.57	1.35	1.55	1.70	1.34	1.42
	Frontal_Inf_Orb_2_R	1.28	1.13	1.18	1.58	1.32	1.53
	Frontal_Inf_Tri_L	1.75	1.56	1.91	1.78	1.54	1.79
	Frontal_Inf_Tri_R	1.45	1.51	1.48	1.48	1.42	1.67
	Frontal_Med_Orb_L	1.51	0.95	1.13	1.13	1.12	1.03
	Frontal_Med_Orb_R	1.43	1.03	1.23	1.16	1.05	1.07
	Frontal_Mid_2_L	1.72	1.32	1.61	1.58	1.37	1.64
	Frontal_Mid_2_R	1.57	1.44	1.47	1.45	1.39	1.44
	Frontal_Sup_2_L	1.49	1.29	1.49	1.43	1.30	1.40
	Frontal_Sup_2_R	1.39	1.34	1.36	1.41	1.27	1.31
	Frontal_Sup_Medial_L	1.59	1.22	1.46	1.41	1.08	1.29
	Frontal_Sup_Medial_R	1.45	1.25	1.36	1.42	1.09	1.26
	OFCant_L	1.05	0.82	0.82	0.82	0.84	0.76
	OFCant_R	0.84	0.73	0.77	0.68	0.92	0.74
	OFClat_L	1.04	1.01	0.89	0.95	0.76	0.76
	OFClat_R	0.84	0.89	0.78	0.96	0.90	0.72
	OFCmed_L	0.72	0.55	0.87	0.61	0.68	0.56
	OFCmed_R	0.57	0.54	0.52	0.58	0.69	0.55
	OFCpost_L	1.34	1.09	1.12	1.07	1.01	1.04
	OFCpost_R	1.18	1.02	1.08	1.22	1.13	1.04
	Olfactory_L	1.10	1.20	1.29	0.99	1.05	1.09
	Olfactory_R	0.98	1.07	1.28	1.00	1.05	1.05
	Paracentral_Lobule_L	1.48	0.96	1.52	1.29	1.26	1.22
	Paracentral_Lobule_R	1.54	0.99	1.60	1.27	1.14	1.34
	Precentral_L	1.49	1.31	1.50	1.34	1.36	1.34
	Precentral_R	1.45	1.46	1.47	1.21	1.23	1.19
	Rectus_L	0.72	0.60	0.86	0.75	0.67	0.70
	Rectus_R	0.68	0.58	0.68	0.76	0.69	0.74
	Rolandic_Oper_L	1.75	1.24	1.46	1.36	1.24	1.43
	Rolandic_Oper_R	1.52	1.31	1.24	1.17	1.12	1.35
	Supp_Motor_Area_L	1.90	1.42	1.72	1.95	1.48	1.91
	Supp_Motor_Area_R	1.59	1.25	1.66	1.54	1.41	1.64
Insula and Cingulate	Cingulate_Ant_L	1.53	1.24	1.29	1.20	1.10	1.24
	Cingulate_Ant_R	1.40	1.28	1.21	1.20	1.13	1.11
	Cingulate_Mid_L	1.51	1.12	1.33	1.35	1.23	1.30
	Cingulate_Mid_R	1.47	1.19	1.30	1.38	1.25	1.30
	Cingulate_Post_L	1.52	1.24	1.72	1.37	1.05	1.26
	Cingulate_Post_R	1.59	1.27	1.69	1.33	1.01	1.23
	Insula_L	1.50	1.15	1.36	1.24	1.16	1.39

	Insula_R	1.55	1.28	1.32	1.29	1.14	1.37
Temporal	Amygdala_L	1.01	1.28	1.34	1.16	0.99	1.15
	Amygdala_R	1.16	1.12	0.99	1.12	0.97	0.91
	Fusiform_L	1.28	1.54	1.41	1.15	1.71	1.27
	Fusiform_R	1.30	1.41	1.34	1.10	1.73	1.16
	Heschl_L	1.38	1.02	1.39	1.14	1.12	1.42
	Heschl_R	1.35	1.17	1.30	1.11	1.00	1.43
	Hippocampus_L	1.11	1.17	1.13	1.03	0.97	1.13
	Hippocampus_R	1.29	1.09	1.11	1.02	0.97	1.01
	ParaHippocampal_L	0.98	1.23	1.15	1.04	1.01	0.97
	ParaHippocampal_R	1.17	1.12	1.12	1.08	1.09	0.96
	Temporal_Inf_L	1.05	1.04	0.99	0.98	1.09	1.06
	Temporal_Inf_R	1.05	1.01	0.98	0.91	1.11	0.94
	Temporal_Mid_L	1.53	1.15	1.51	1.65	1.19	1.52
	Temporal_Mid_R	1.36	1.14	1.48	1.30	1.30	1.30
	Temporal_Pole_Mid_L	0.85	0.64	0.83	1.07	0.66	0.83
	Temporal_Pole_Mid_R	0.99	0.75	0.95	0.96	0.74	0.84
	Temporal_Pole_Sup_L	1.29	0.91	1.47	1.57	0.93	1.20
	Temporal_Pole_Sup_R	1.29	0.92	1.38	1.36	1.03	1.35
	Temporal_Sup_L	1.85	1.23	1.64	1.71	1.16	1.80
	Temporal_Sup_R	1.49	1.08	1.65	1.44	1.14	1.60
Parietal	Angular_L	1.78	1.20	1.80	1.54	1.25	1.38
	Angular_R	1.57	1.30	1.40	1.39	1.42	1.17
	Parietal_Inf_L	1.81	1.55	1.67	1.58	1.47	1.48
	Parietal_Inf_R	1.87	1.37	1.47	1.31	1.45	1.29
	Parietal_Sup_L	1.54	1.32	1.51	1.19	1.53	1.20
	Parietal_Sup_R	1.57	1.19	1.48	1.15	1.36	1.04
	Postcentral_L	1.74	1.49	1.54	1.33	1.57	1.26
	Postcentral_R	1.43	1.27	1.46	1.11	1.05	1.11
	Precuneus_L	1.54	1.11	1.74	1.27	1.23	1.27
	Precuneus_R	1.62	1.14	1.68	1.30	1.25	1.30
	SupraMarginal_L	2.01	1.54	1.64	1.98	1.63	1.75
	SupraMarginal_R	1.77	1.39	1.67	1.31	1.31	1.38
Occipital	Calcarine_L	1.68	1.90	2.26	1.77	2.09	1.92
	Calcarine_R	1.92	1.89	2.39	1.74	2.10	1.86
	Cuneus_L	1.51	1.44	2.00	1.52	1.56	1.53
	Cuneus_R	1.79	1.61	2.29	1.70	1.82	1.66
	Lingual_L	1.69	1.81	2.10	1.57	2.05	1.68
	Lingual_R	1.82	1.83	2.23	1.52	2.08	1.79
	Occipital_Inf_L	1.83	2.14	2.07	1.51	2.25	1.90
	Occipital_Inf_R	1.91	2.01	2.15	1.37	2.14	1.57
	Occipital_Mid_L	1.79	1.78	1.78	1.45	2.13	1.66
	Occipital_Mid_R	1.86	1.80	1.83	1.51	2.04	1.49
	Occipital_Sup_L	1.69	1.61	1.74	1.41	1.81	1.59
	Occipital_Sup_R	1.83	1.88	2.00	1.65	2.13	1.49
Grey matter nuclei	Caudate_L	1.28	1.10	1.23	1.00	1.14	1.13
	Caudate_R	1.28	1.15	1.33	1.09	1.04	1.05
	Pallidum_L	1.32	1.10	1.29	1.03	1.04	1.05
	Pallidum_R	1.34	1.21	1.09	0.90	1.03	1.03

	Putamen_L	1.16	1.12	1.26	1.07	1.06	1.17
	Putamen_R	1.25	1.20	1.13	1.02	1.00	1.17
	Thalamus_L	1.14	1.11	1.29	0.87	1.01	0.88
	Thalamus_R	1.16	1.14	1.18	0.96	1.08	0.95
Cerebellum	Cerebelum_10_L	1.14	0.81	1.02	0.74	1.06	0.64
	Cerebelum_10_R	1.02	0.82	0.94	0.80	1.16	0.74
	Cerebelum_3_L	1.00	1.18	1.36	0.96	1.12	1.00
	Cerebelum_3_R	1.22	1.16	1.34	0.94	1.20	1.07
	Cerebelum_4_5_L	1.30	1.21	1.43	1.13	1.25	1.07
	Cerebelum_4_5_R	1.35	1.45	1.41	1.06	1.50	1.18
	Cerebelum_6_L	1.52	1.59	1.75	1.45	1.89	1.54
	Cerebelum_6_R	1.76	1.59	1.88	1.52	1.99	1.51
	Cerebelum_7b_L	1.11	1.08	0.99	0.83	1.07	0.77
	Cerebelum_7b_R	1.27	1.00	1.14	1.18	0.93	0.91
	Cerebelum_8_L	1.16	1.04	1.01	0.86	0.95	0.89
	Cerebelum_8_R	1.28	1.17	1.11	1.04	1.04	0.89
	Cerebelum_9_L	1.08	0.92	1.08	0.89	0.89	0.80
	Cerebelum_9_R	1.10	0.98	1.03	0.84	0.91	0.74
	Cerebelum_Crus1_L	1.27	1.34	1.52	1.23	1.85	1.43
	Cerebelum_Crus1_R	1.51	1.27	1.72	1.38	1.60	1.36
	Cerebelum_Crus2_L	1.11	1.11	1.22	0.99	1.20	1.05
	Cerebelum_Crus2_R	1.31	0.94	1.33	1.12	0.96	0.99
	Vermis_1_2	0.97	1.35	1.32	0.96	1.16	0.97
	Vermis_10	1.09	1.22	1.60	1.12	1.16	1.00
	Vermis_3	1.15	1.24	1.47	1.19	1.02	0.97
	Vermis_4_5	1.29	1.36	1.52	1.31	1.21	1.22
	Vermis_6	1.57	1.29	1.75	1.34	1.68	1.37
	Vermis_7	1.40	1.15	1.82	1.19	1.60	1.28
	Vermis_8	1.11	1.40	1.50	1.20	1.28	1.10
	Vermis_9	1.08	1.23	1.49	1.19	1.31	1.03

Table S3. Activated regions for the contrast GE (generation with implicit encoding) vs. baseline. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at $T_{GE} > 6.89$ ($p < 0.05$, FWE). T values marked with * were obtained at $T_{GE} > 3.65$ ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
GE vs. baseline	**69**	**9.99**	**42**	**-60**	**-30**	**Cerebelum_Crus1_R**
		7.97	33	-60	-27	Cerebelum_6_R
		7.74	18	-87	-6	Lingual_R
		6.67*	27	-93	12	Occipital_Mid_R
		7.65	21	-96	15	Occipital_Sup_R
		5.14*	24	-81	-15	Fusiform_R
	52	**9.55**	**21**	**-96**	**9**	**Cuneus_R**
		8.64	15	-93	0	Calcarine_R
		7.69	21	-93	6	Occipital_Sup_R
	34	**9.36**	**-21**	**-93**	**3**	**Occipital_Mid_L**

		7.71	-15	-90	-12	Lingual_L
	40	**9.32**	**-3**	**12**	**60**	**Supp_Mot_Area_L**
		6.76*	-54	-39	12	Temporal_Sup_L
	42	**9.28**	**60**	**-15**	**-9**	**Temporal_Sup_R**
		7.49	60	-12	-12	Temporal_Mid_R
	22	**8.58**	**-54**	**18**	**18**	**Frontal_Inf_Tri_L**
		8.24	-54	15	18	Frontal_Inf_Oper_L
		6.56*	-42	24	-6	Frontal_Inf_Orb_L
	8	**8.28**	**-60**	**-18**	**-3**	**Temporal_Mid_L**
	8	**7.85**	**-39**	**15**	**21**	**Frontal_Inf_Tri_L**
	5	**7.46**	**-57**	**-39**	**3**	**Temporal_Mid_L**
	7	**7.42**	**-45**	**-60**	**-27**	**Cerebelum_Crus1_L**
	68	5.9*	-15	-24	-18	Parahippocampal_L
		5.19*	-18	-24	-9	Hippocampus_L

Table S4. Activated regions for the contrast RECO (recognition) vs. baseline. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) and are presented. Activations were obtained at $T_{RECO} > 7.03$ ($p < 0.05$, FWE). T values marked with * were obtained at $T_{RECO} > 3.65$ ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RECO vs. baseline	**828**	**20.26**	**33**	**-45**	**-18**	**Fusiform_R**
		15.02	36	-81	-12	Occipital_Inf_R
		14.05	21	-93	0	Calcarine_R
		16.4	30	-48	-21	Cerebelum_6_R
		8.68	45	-57	-15	Temporal_Inf_R
		8.08	24	-81	-9	Lingual_R
	845	**17.50**	**-30**	**-87**	**6**	**Occipital_Mid_L**
		14.50	-15	-90	-9	Occipital_Mid_L
		12.51	-30	-81	-6	Occipital_Inf_L
		11.44	-36	-51	-21	Fusiform_L
		11.17	-42	-57	-24	Cerebelum_6_L
		10.39	-42	-48	-15	Temporal_Inf_L
		7.68	-30	-81	-15	Lingual_L
	155	**11.88**	**3**	**15**	**45**	**Supp_Motor_Area_L**
		8.15	-3	6	57	Supp_Motor_Area_L
		7.81	-9	-3	54	Supp_Motor_Area_R
		8.5	-3	21	42	Frontal_Sup_Medial_L
		8.27	-6	12	42	Cingulate_Mid_L
		8.68	6	15	42	Cingulate_Mid_R
	15	**10.20**	**-21**	**-27**	**-3**	**Thalamus_L**
		7.13	-18	-27	3	Thalamus_L
		7.23	-21	-27	-6	Hippocampus_L
	176	**9.54**	**-27**	**-51**	**39**	**Parietal_Inf_L**

	9.52	-30	-9	60	Precentral_L
	8.50	-36	-36	39	Postcentral_L
	7.26	-27	-9	57	Frontal_Sup_2_L
11	**8.50**	**-48**	**3**	**27**	**Precentral_L**
8	**8.23**	**0**	**0**	**72**	**Supp_Motor_Area_L**
17	**7.64**	**-24**	**-6**	**6**	**Putamen_L**
6	**7.55**	**-30**	**21**	**3**	**Insula_L**
6	**7.52**	**-45**	**18**	**21**	**Frontal_Inf_Tri_L**
5	**7.45**	**30**	**21**	**0**	**Putamen_R**
84	**6.55***	**33**	**-3**	**-21**	**Amygdala_R**
	5.71*	30	15	-21	Insula_R
	4.95*	24	-6	-21	Hippocampus_R
86	**5.31***	**30**	**-54**	**48**	**Parietal_Inf_R**

Table S5. Activated regions for the contrast RA (sentence recall) vs. baseline. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) and are presented. Activations were obtained at $T_{RA} > 6.85$ ($p < 0.05$, FWE). T values marked with * were obtained at $T_{RA} > 3.65$ ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RA vs. baseline	**113**	**10.51**	**3**	**30**	**42**	**Frontal_Sup_Medial_L**
		7.39	-3	15	51	Supp_Motor_Area_L
		10.4	6	27	42	Frontal_Sup_Medial_R
		9.24	2	24	4	Supp_Motor_Area_R
		4.85*	-27	-33	-3	Hippocampus_L
	102	**10.50**	**-57**	**-21**	**0**	**Temporal_Mid_L**
		7.76	-54	-36	9	Temporal_Sup_L
	64	**9.14**	**60**	**-12**	**0**	**Temporal_Sup_R**
	85	**4.68***	**-30**	**-63**	**42**	**Parietal_Inf_L**
	43	**8.85**	**30**	**-90**	**12**	**Occipital_Mid_R**
		8.15	27	-90	12	Occipital_Sup_R
	23	**8.57**	**-21**	**-96**	**3**	**Occipital_Mid_L**
	34	**8.32**	**-30**	**27**	**-3**	**Insula_L**
		7.40	-42	21	-9	Frontal_Inf_Orb_2_L
	26	**8.19**	**-48**	**18**	**24**	**Frontal_Inf_Tri_L**
		7.64	-51	15	21	Frontal_Inf_Oper_L
	5	**7.96**	**-36**	**6**	**51**	**Frontal_Mid_2_L**

Table S6. Percentage of the number of activated voxels in our regions of interest for language and memory included in the LMN. We generated maps for terms "language" and "memory" which yielded 1101 and 2744 studies respectively in the Neurosynth database. Those maps were binarized and added up. GE2REC LMN maps for HC and LTLE were obtained using second-level group analyses for each group for all three tasks. These maps were binarized (using as threshold $p < 0.001$, uncorrected and k > 5) and added up. A less permissive threshold ($p < 0.001$, uncorrected and k > 5) was used to binarize GE2REC activation given the limited number of participants compared to the number of meta-analyses and participants in Neurosynth. Each resulting image (Neurosynth LMN, LTLE LMN, and HC LMN) was projected on the AAL atlas. The percentage of activated voxels was calculated for each AAL region by dividing the number of activated voxels by the total number of voxels in a specific region. Regions including more than 30-50% activated voxels are yellow, 50-70% blue, and above 70% green. See also Figure 2. **Abbreviations:** HC = Healthy controls; LTLE = Left temporal lobe epilepsy.

Lobe	region	Neurosynth	GE2REC HC	GE2REC LTLE
Frontal	Frontal_Inf_Oper_L	81.41	84.78	87.76
	Frontal_Inf_Oper_R	8.36	38.10	21.02
	Frontal_Inf_Orb_2_L	69.29	60.81	53.93
	Frontal_Inf_Orb_2_R	2.97	29.63	18.31
	Frontal_Inf_Tri_L	77.50	69.67	74.22
	Frontal_Inf_Tri_R	25.10	18.78	37.94
	Frontal_Med_Orb_L	0.28	0.00	0.00
	Frontal_Med_Orb_R	0.00	0.00	0.00
	Frontal_Mid_2_L	36.15	14.66	16.17
	Frontal_Mid_2_R	23.21	8.48	3.29
	Frontal_Sup_2_L	9.30	14.28	13.87
	Frontal_Sup_2_R	9.19	2.30	0.20
	Frontal_Sup_Medial_L	15.74	16.88	11.90
	Frontal_Sup_Medial_R	1.78	7.45	6.94
	OFCant_L	2.26	0.00	0.90
	OFCant_R	0.46	0.31	0.00
	OFClat_L	61.93	0.00	0.00
	OFClat_R	0.00	0.00	0.00
	OFCmed_L	0.18	0.36	0.00
	OFCmed_R	0.00	0.32	0.00
	OFCpost_L	7.94	19.58	22.40
	OFCpost_R	0.53	13.19	9.27
	Olfactory_L	0.00	14.64	0.00
	Olfactory_R	0.00	2.42	6.92
	Paracentral_Lobule_L	0.00	0.00	0.96
	Paracentral_Lobule_R	0.00	0.00	0.00
	Precentral_L	32.90	58.14	59.61
	Precentral_R	3.43	18.60	0.59
	Rectus_L	0.23	0.00	0.00
	Rectus_R	0.00	2.15	0.00
	Rolandic_Oper_L	4.65	22.42	18.08
	Rolandic_Oper_R	1.35	2.10	6.69
	Supp_Motor_Area_L	28.78	67.68	67.91

	Supp_Motor_Area_R	1.56	47.20	32.60
Insula and Cingulate	Cingulate_Ant_L	0.07	30.64	6.93
	Cingulate_Ant_R	0.00	22.85	3.58
	Cingulate_Mid_L	6.03	23.13	17.52
	Cingulate_Mid_R	3.72	25.51	17.34
	Cingulate_Post_L	54.00	7.13	0.00
	Cingulate_Post_R	9.25	3.88	0.00
	Insula_L	9.47	54.47	35.90
	Insula_R	3.39	38.59	19.60
Temporal	Amygdala_L	0.00	67.73	0.00
	Amygdala_R	0.00	41.53	32.66
	Fusiform_L	35.19	66.06	58.66
	Fusiform_R	17.24	60.72	56.16
	Heschl_L	15.56	27.56	34.22
	Heschl_R	3.61	0.80	30.92
	Hippocampus_L	84.23	56.55	12.77
	Hippocampus_R	83.62	35.41	14.69
	ParaHippocampal_L	65.54	19.84	4.29
	ParaHippocampal_R	61.66	15.55	7.86
	Temporal_Inf_L	19.03	13.16	10.69
	Temporal_Inf_R	3.65	13.24	11.02
	Temporal_Mid_L	55.56	35.63	28.45
	Temporal_Mid_R	12.25	21.46	9.53
	Temporal_Pole_Mid_L	8.74	2.65	0.00
	Temporal_Pole_Mid_R	11.71	6.23	1.43
	Temporal_Pole_Sup_L	31.05	34.55	19.92
	Temporal_Pole_Sup_R	16.67	22.42	11.43
	Temporal_Sup_L	55.57	67.20	56.18
	Temporal_Sup_R	33.78	35.12	42.02
Parietal	Angular_L	44.93	9.38	11.17
	Angular_R	20.66	13.24	4.85
	Parietal_Inf_L	36.09	52.19	53.09
	Parietal_Inf_R	24.01	7.81	7.43
	Parietal_Sup_L	18.74	37.87	21.65
	Parietal_Sup_R	4.32	13.46	2.75
	Postcentral_L	6.27	50.00	39.11
	Postcentral_R	1.44	15.38	0.92
	Precuneus_L	20.80	2.55	1.16
	Precuneus_R	22.11	2.17	0.25
	SupraMarginal_L	5.41	12.10	15.84
	SupraMarginal_R	3.50	3.09	0.30
Occipital	Calcarine_L	7.48	66.08	27.77
	Calcarine_R	4.51	77.92	35.36
	Cuneus_L	7.01	17.37	0.07
	Cuneus_R	3.51	21.70	8.92
	Lingual_L	5.68	80.33	38.81
	Lingual_R	7.91	80.74	32.57
	Occipital_Inf_L	16.58	71.52	62.17
	Occipital_Inf_R	1.01	42.37	37.51

	Occipital_Mid_L	14.65	50.49	51.74
	Occipital_Mid_R	8.67	41.85	33.41
	Occipital_Sup_L	2.42	44.07	27.38
	Occipital_Sup_R	4.74	48.48	16.49
Grey matter nuclei	Caudate_L	3.12	19.02	8.00
	Caudate_R	0.80	59.26	6.34
	Pallidum_L	1.37	76.79	79.52
	Pallidum_R	0.00	41.43	42.86
	Putamen_L	0.50	82.06	69.38
	Putamen_R	0.75	32.80	20.49
	Thalamus_L	0.91	79.64	52.55
	Thalamus_R	0.76	44.75	8.42
Cerebellum	Cerebelum_10_L	0.00	0.00	0.00
	Cerebelum_10_R	0.00	0.00	0.00
	Cerebelum_3_L	4.41	1.47	0.00
	Cerebelum_3_R	5.80	1.45	0.00
	Cerebelum_4_5_L	4.62	34.22	15.73
	Cerebelum_4_5_R	11.85	73.05	32.06
	Cerebelum_6_L	0.71	79.99	58.50
	Cerebelum_6_R	6.96	84.51	85.13
	Cerebelum_7b_L	0.00	4.27	0.00
	Cerebelum_7b_R	4.31	0.00	0.00
	Cerebelum_8_L	0.00	6.68	0.00
	Cerebelum_8_R	2.12	3.16	1.60
	Cerebelum_9_L	0.00	1.73	0.00
	Cerebelum_9_R	0.12	3.83	0.00
	Cerebelum_Crus1_L	2.07	27.24	25.12
	Cerebelum_Crus1_R	9.03	30.10	29.53
	Cerebelum_Crus2_L	0.05	5.86	2.27
	Cerebelum_Crus2_R	2.74	4.96	3.12
	Vermis_1_2	0.00	0.00	0.00
	Vermis_10	0.00	0.00	0.00
	Vermis_3	1.32	17.11	18.42
	Vermis_4_5	3.61	55.79	22.26
	Vermis_6	5.12	93.26	29.38
	Vermis_7	33.51	90.72	62.37
	Vermis_8	0.82	66.26	0.41
	Vermis_9	0.00	47.13	0.00

Since data did not meet the criteria for ANOVA (normality W = 0.879, $p < .001$), we performed Kruskal–Wallis tests for each lobe. The results showed that there was no significant difference in the general coverage of the frontal ($\chi2(2) = 0.682$, $p = .711$), temporal ($\chi2\ (2) = 3.07$, $p = .216$), and parietal lobe ($\chi2(2) = 1.94$, $p = .379$) nor insula and cingulum ($\chi2(2) = 5.87$, $p = .05$). Although by comparing the percentages directly, we can see that the mesial temporal regions were less activated than expected, especially in the LTLE group. Significant differences between the general lobe coverage were found for grey matter nuclei ($\chi2(2) = 16.2$, $p < .001$; DSCF[1] post-hoc showed higher coverage using GE2REC both in HC (W = 4.75, p = .002) and LTLE (W = 4.75, $p = .002$) than based on Neurosynth maps, while there was no difference between HC and LTLE (W = -1.93, $p = .359$)), the occipital lobe ($\chi2(2) = 22.7$, $p < .001$, higher coverage using GE2REC both in HC (W = 5.88, $p < .001$) and LTLE (W = 4.65, $p = .003$) than based on Neurosynth maps, while the coverage was greater in HC than LTLE (W = -3.59, $p = .03$)) and the cerebellum ($\chi2\ (2) = 7.57$, $p = .023$, , higher coverage using GE2REC in HC (W = 3.756, $p = .022$) than based on Neurosynth maps, while there was no difference between Neurosynth and LTLE (W = 0.45, $p = .945$), nor between HC and LTLE (W = -2.845, $p = .109$)).

[1] Dwass-Steel-Critchlow-Flinger pairwise comparisons

Table S7. Lateralization indices for GE2REC tasks in LTLE and HC. Values in bold indicate bilateral (-0.2 < LI < 0.2) and those in red right hemispheric predominance (Seghier, 2019). LIs in LTLE marked with * are significantly different (p < .05) compared to HC (Crawford & Garthwaite, 2002). The number of participants in each group showing left, bilateral and right predominance for frontal, temporal and hippocampus for each task is presented in blue. Levene's test results for the equality of variance and Mann-Whitney U for testing differences between LTLE and HC for each lobe/structure are also presented. **Abbreviations:** N = participant number; LTLE = Left temporal lobe epilepsy; HC = Healthy controls; L = left-lateralized; B = bilateral; R = right lateralized; M = Mean; SD = standard deviation; Var diff = value of Levene's test for the equality of variances with corresponding p value; Diff = Values of Mann-Whitney U for testing differences between LTLE and HC with corresponding p value.

		Sentence generation with encoding			**Recognition of items**			**Recall**		
	N	**Frontal**	**Temporal**	**Hippocampus**	**Frontal**	**Temporal**	**Hippocampus**	**Frontal**	**Temporal**	**Hippocampus**
LTLE	P1	0.71	0.66	0.73	**-0.086***	0.41	**-0.39**	0.59	0.64	**-0.38**
	P2	0.71	0.53	0.38	**0.081***	**0.0034**	**-0.63**	0.7	0.46	0.69
	P3	0.82	**0.14**	0.28	**-0.37***	0.34	0.26	0.91	0.35	0.53
	P4	0.87	0.64	**0.14**	**-0.4***	**0.026**	**-0.55**	0.53	0.37	0.84
	P5	0.83	0.35	**-0.73**	**0.033***	**0.072**	0.49	0.56	0.24	**-0.31**
	P6	**-0.042***	0.27	**-0.73**	0.66	**-0.24**	**0.13**	**0.079**	**0.2**	0.96
	P7	0.86	0.38	0.81	0.52	**-0.29**	**-0.8**	0.43	0.32	**-0.38**
	P8	**-0.58***	**0.12**	**-0.57**	0.63	0.25	**-0.13**	**-0.81***	**-0.71***	**-0.15**
	P9	0.56	**0.14**	**0.1**	0.53	**-0.45***	0.25	**-0.14***	0.21	0.48
	P10	0.94	0.61	0.97	0.62	0.52	0.31	0.7	0.31	0.39
	P11	0.83	0.55	**0.059**	0.84	0.4	**0.11**	0.85	0.71	**0.11**
	P12	0.53	0.75	**-0.91**	0.67	**-0.35**	**-0.58**	**0.036**	0.52	0.86
	P13	**-0.52***	**-0.2***	**-0.55**	0.57	0.29	**-0.44**	**-0.42***	0.26	**-0.82**
	P14	0.76	0.63	0.75	0.58	**-0.51***	**-0.26**	0.46	0.55	0.64
	P15	0.8	0.65	0.44	0.56	**-0.19**	**-0.41**	0.84	0.75	0.81
	P16	0.43	0.74	**-0.74**	0.71	**0.15**	**-0.25**	0.69	0.4	**0.017**
	P17	0.71	0.81	0.77	0.78	**-0.34**	0.79	0.85	0.83	0.77
	P18	0.82	0.48	**-0.84**	0.57	**-0.2**	**-0.64**	0.73	0.5	**-0.8**
HC	HC1	0.65	0.68	0.94	0.52	**-0.12**	**0.17**	0.49	0.75	**0.11**
	HC2	0.79	0.58	**-0.29**	0.65	**-0.41**	0.39	0.62	**-0.12**	**-0.12**
	HC3	0.83	0.53	**-0.085**	0.43	**-0.14**	**-0.51**	0.6	0.56	**-0.017**

	HC4	**0.00**	**-0.077**	0.3	0.33	0.34	**-0.049**	**-0.12**	**0.19**	**-0.81**
	HC5	0.54	**0.031**	0.33	0.58	**0.0071**	0.77	0.49	**-0.34**	0.68
	HC6	0.70	0.58	0.56	0.73	**0.16**	0.53	0.82	0.71	0.83
	HC7	**0.12**	**0.2**	0.35	0.4	0.4	0.29	0.81	0.71	0.75
	HC8	0.70	0.72	**0.11**	0.38	0.49	0.24	0.67	0.63	**-0.24**
	HC9	0.76	0.68	0.67	0.7	**0.078**	**-0.057**	0.66	0.41	**0.1**
	HC10	0.50	**-0.039**	0.46	0.55	**-0.17**	0.027	0.57	0.38	**-0.87**
	HC11	0.72	0.58	**-0.49**	0.68	0.29	0.29	0.74	0.22	**-0.7**
	HC12	0.74	0.56	0.54	0.68	**-0.1**	0.51	0.42	**0.1**	**0.022**
	HC13	0.58	0.56	0.36	0.69	**0.068**	**-0.089**	0.46	**0.16**	0.63
	HC14	0.85	0.51	0.23	0.77	0.27	**-0.089**	0.72	**0.18**	0.35
	HC15	0.79	**0.015**	0.57	0.54	**0.16**	**-0.5**	0.51	**-0.21**	**-0.69**
	HC16	0.84	0.81	0.69	0.56	0.58	**-0.41**	0.77	0.76	**-0.9**
	HC17	0.67	0.62	0.63	0.75	**-0.29**	**-0.3**	0.58	0.68	0.85
	HC18	0.44	0.81	0.65	0.63	**0.15**	0.5	**0.061**	0.53	0.47
	HC19	0.53	0.57	0.59	0.64	0.23	**0.052**	0.57	0.54	0.57
LTLE	L	15 (83.3%)	14 (77.8%)	8 (44.4%)	13 (72.2%)	6 (33.3%)	5 (27.8%)	13 (72,2%)	16 (88.9%)	10 (55.6%)
	B	1 (5.6%)	4 (22.2%)	3 (16.7%)	3 (16.7%)	6 (33.3%)	3 (16.7%)	3 (16.7%)	1 (5.6%)	3 (16.7%)
	R	2 (11.1%)	0 (0%)	7 (38.9%)	2 (11.1%)	6 (33.3%)	10 (55.6%)	2 (11.1%)	1 (5.6%)	5 (27.8%)
HC	L	17 (89.5%)	14 (73.7%)	15 (78.9%)	19 (100%)	7 (36.8%)	8 (42.1%)	17 (89.5%)	12 (63.2%)	8 (42.1%)
	B	2 (10.5%)	5 (26.3%)	2 (10.5%)	0 (0%)	10 (52.6%)	7 (36.8%)	2 (10.5%)	5 (26.3%)	5 (26.3%)
	R	0 (0%)	0 (0 %)	2 (10.5%)	0 (0%)	2 (10.5%)	4 (21.1%)	0 (0%)	2 (105%)	6 (31.6%)
M	LTLE	0.56	0.46	0.02	0.42	-0.01	-0.15	0.42	0.38	0.24
	HC	0.62	0.47	0.37	0.59	0.11	0.09	0.55	0.36	0.05
SD	LTLE	0.462	0.273	0.664	0.385	0.326	0.45	0.11	0.332	0.139
	HC	0.231	0.289	0.358	0.131	0.265	0.367	0.05	0.339	0.14
Var diff.		3.98	0.04	12.69	16.45	1.85	1.356	7.36	1.05	0.003
p		0.054	0.842	<.001*	<.001*	0.183	0.252	0.01*	0.310	0.953
Diff		145	167	124	138	135	112	167	163	139
p		0.438	0.903	0.158	0.323	0.274	0.073	0.903	0.808	0.331

Table S8. Activation differences between healthy and patients during GE (generation with implicit encoding). For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.35 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC> LTLE	**155**	**5.05**	**-15**	**-12**	**48**	**Cingulate_Mid_L**
		4.59	-6	12	51	Supp_Motor_Area_L
		4.43	12	12	57	Supp_Motor_Area_R
	80	**4.95**	**-21**	**-54**	**45**	**Parietal_Sup_L**
		3.51	-27	-51	48	Parietal_Inf_L
	156	**4.81**	**45**	**-18**	**45**	**Precentral_R**
		4.37	45	-36	48	Parietal_Inf_R
		4.11	42	-27	54	Postcentral_R
	84	**4.51**	**27**	**45**	**21**	**Frontal_Sup_2_R**
		4.12	33	36	24	Frontal_Mid_2_R
	9	**4.48**	**-9**	**-21**	**0**	**Thalamus_L**
	29	**4.47**	**48**	**0**	**30**	**Precentral_R**
	50	**4.32**	**54**	**12**	**3**	**Frontal_Inf_Oper_R**
	27	**4.25**	**6**	**6**	**0**	**Caudate_R**
	10	**4.12**	**-36**	**12**	**30**	**Frontal_Inf_Oper_L**
	23	**4.08**	**-48**	**9**	**0**	**Frontal_Inf_Oper_L**
	20	**4.06**	**-9**	**18**	**30**	**Cingulate_Ant_L**
	5	**4.04**	**6**	**-30**	**66**	**Paracentral_Lobule_R**
	12	**3.93**	**-15**	**12**	**-3**	**Putamen_L**
	18	**3.84**	**-48**	**-33**	**6**	**Temporal_Sup_L**
	19	**3.73**	**-45**	**0**	**45**	**Precentral_L**
		3.72	-36	-3	42	Precentral_L
	7	**3.71**	**-12**	**-42**	**51**	**Cingulate_Mid_L**
	6	**3.69**	**9**	**-24**	**51**	**Supp_Motor_Area_R**
	25	**3.65**	**24**	**-57**	**42**	**Angular_R**
		3.50	12	-66	42	Precuneus_R
	6	**3.57**	**-33**	**18**	**-3**	**Insula_L**
	7	**3.54**	**-45**	**-18**	**42**	**Postcentral_L**
LTLE > HC	No suprathreshold clusters					

Table S9. Activation differences between healthy and patients during RECO (recognition). For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.35 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > LTLE	**63**	**5.07**	**-33**	**-36**	**45**	**Postcentral_L**
		3.76	-27	-45	42	Parietal_Inf_L
	70	**4.58**	**27**	**-54**	**-12**	**Fusiform_R**

		3.77	21	-45	-15	Fusiform_R
		3.60	45	-48	0	Temporal_Mid_R
	12	**4.25**	**24**	**-84**	**-9**	**Lingual_R**
	10	**3.89**	**-45**	**-21**	**24**	**Rolandic_Oper_L**
	12	**3.89**	**27**	**-72**	**51**	**Parietal_Sup_R**
	8	**3.88**	**-33**	**-18**	**57**	**Precentral_L**
	12	**3.86**	**-33**	**-75**	**15**	**Occipital_Mid_L**
		3.61	-24	-84	15	Occipital_Mid_L
	15	**3.86**	**-24**	**-63**	**-9**	**Lingual_L**
		3.76	-27	-60	-9	Fusiform_L
	8	**3.69**	**-39**	**-75**	**-3**	**Occipital_Mid_L**
		3.63	-33	-84	-3	Occipital_Mid_L
	5	**3.67**	**0**	**3**	**30**	**Cingualate_Ant_L**
	11	**3.64**	**45**	**-54**	**-15**	**Temporal_Inf_R**
	8	**3.57**	**36**	**-75**	**0**	**Occipital_Mid_R**
LTLE > HC	No suprathreshold clusters					

Table S10. Activation differences between healthy and patients during RA (sentence recall). For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 3.35 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > LTLE	**19**	**4.40**	**51**	**15**	**3**	**Frontal_Inf_Oper_R**
	13	**4.08**	**39**	**12**	**-9**	**Insula_R**
	21	**3.82**	**0**	**15**	**51**	**Supp_Motor_Area_L**
		3.43	6	15	54	Supp_Motor_Area_R
	11	**3.73**	**36**	**24**	**0**	**Insula_R**
LTLE > HC	No suprathreshold clusters					

Table S11. Activated regions for the contrast GE (generation with implicit encoding) vs. baseline for P1 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.59 ($p < 0.05$, FWE). Values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
GE vs. baseline	**172**	**6.47**	**-63**	**-6**	**-6**	**Temporal_Mid_L**
		6.40	-57	-30	0	Temporal_Mid_L
		5.73	-48	-33	0	Temporal_Mid_L
	11	**6.16**	**-9**	**-96**	**24**	**Cuneus_L**
		4.35*	-15	-102	12	Occipital_Sup_L
	15	**5.58**	**54**	**-27**	**0**	**Temporal_Sup_R**
	15	**5.51**	**21**	**-69**	**-48**	**Cerebelum_8_R**
	114*	**4.96**	**-15**	**6**	**72**	**Frontal_Sup_2_L**
	6	**4.89**	**6**	**-81**	**-3**	**Lingual_R**

	4.71	12	-78	-9	Lingual_R
114	**4.71**	**-9**	**-63**	**-3**	**Lingual_L**
	4.50*	-30	27	-3	Insula_L
	4.22*	-30	21	-9	Insula_L
20	**3.66***	**-30**	**18**	**-18**	**Insula_L**
	4.40*	-57	-24	21	SupraMarginal_L
55	**4.23***	**-21**	**-78**	**-21**	**Cerebelum_6_L**
	3.48*	-36	-72	-24	Cerebelum_Crus1_L
47	**4.20***	**33**	**24**	**6**	**Insula_R**
36	**4.01***	**-51**	**24**	**24**	**Frontal_Inf_Tri_L**
	3.77*	-42	24	21	Frontal_Inf_Tri_L
51	**3.99***	**-42**	**-60**	**-33**	**Cerebelum_Crus1_L**
	3.77*	-48	-63	-39	Cerebelum_Crus1_L
8	**3.62***	**-6**	**42**	**12**	**Cingulate_Ant_L**
17	**3.61***	**60**	**0**	**-12**	**Temporal_Sup_R**
18	**3.56***	**-42**	**-42**	**-15**	**Temporal_Inf_L**
6	**3.47***	**21**	**-27**	**24**	**Caudate_R**
5	**3.45***	**-33**	**42**	**15**	**Frontal_Mid_2_L**
11	**3.39***	**-21**	**51**	**27**	**Frontal_Sup_2_L**
5	**3.34***	**-24**	**-36**	**0**	**Hippocampus_L**
6	**3.32***	**-15**	**-93**	**-12**	**Lingual_L**
7	**3.32***	**45**	**-63**	**-30**	**Cerebelum_Crus1_R**

Table S12. Activation differences between P1 and HC during GE (generation with implicit encoding) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) and are presented. Activations were obtained at T > 3.61 (p < 0.001, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	**56**	**5.89**	**18**	**-54**	**39**	**Precuneus_R**
P1 > HC	**9**	**7.86**	**24**	**-39**	**30**	**Cingulate_Mid_R**
		4.51	60	-24	36	SupraMarginal_R
	9	**4.73**	**-27**	**-39**	**-3**	**Hippocampus_L**
	9	**4.63**	**33**	**-54**	**12**	**Calcarine_R**
	5	**4.51**	**60**	**-24**	**36**	**SupraMarginal_R**
	5	**4.06**	**-39**	**-42**	**-9**	**Temporal_Inf_L**

Table S13. Activated regions for the contrast GE (generation with implicit encoding) vs. baseline in P1 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) and are presented. Activations were obtained at T > 4.58 (p < 0.05, FWE). Values marked with * were obtained at T > 3.1 (p < 0.001, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
GE	**79**	**6.81**	**-9**	**9**	**72**	**Supp_Motor_Area_L**
	57	**5.78**	**-54**	**6**	**0**	**Temporal_Pole_Sup_L**

vs. baseline		5.53	-51	6	9	Frontal_Inf_Oper_L
		4.10*	-33	15	9	Insula_L
	57	**5.77**	**-54**	**-30**	**-6**	**Temporal_Mid_L**
		5.26	-54	-21	-15	Temporal_Mid_L
	23	**4.48***	**-42**	**0**	**57**	**Precentral_L**
	13	**4.48***	**24**	**-69**	**-51**	**Cerebelum_8_R**
	27	**4.11***	**-21**	**45**	**27**	**Frontal_Sup_2_L**
	33	**4.02***	**-48**	**6**	**33**	**Precentral_L**
		3.29*	-33	3	33	Precentral_L
	29	**3.93***	**-42**	**-45**	**-24**	**Fusiform_L**
	16	**3.89***	**-15**	**-99**	**9**	**Occipital_Mid_L**
	10	**3.60***	**-18**	**-81**	**-21**	**Cerebelum_Crus1_L**
		3.32*	-27	-75	-21	Cerebelum_6_L
	7	**3.42***	**9**	**18**	**36**	**Cingulate_Mid_R**

Table S14. Activation differences between P1 and HC during GE (generation with implicit encoding) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	**14**	**5.88**	**12**	**-57**	**51**	**Precuneus_R**
	18	**5.08**	**-12**	**-63**	**45**	**Precuneus_L**
	7	**4.92**	**42**	**-48**	**12**	**Temporal_Mid_R**
	8	**4.76**	**-42**	**-39**	**9**	**Temporal_Sup_L**
	22	**4.47**	**-21**	**-48**	**48**	**Parietal_Sup_L**
	6	**4.43**	**6**	**-66**	**42**	**Precuneus_R**
	17	**4.33**	**57**	**-36**	**9**	**Temporal_Sup_R**
		4.33	63	-30	15	Temporal_Sup_R
	7	**4.19**	**-3**	**-12**	**6**	**Thalamus_L**
	5	**3.86**	**18**	**-45**	**60**	**Parietal_Sup_R**
P1 > HC	**25**	**5.53**	**-48**	**-33**	**-12**	**Temporal_Mid_L**
		4.42	-51	-24	-15	Temporal_Mid_L

Table S15. Activated regions for the contrast RECO (recognition) vs. baseline in P1 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.59 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RECO vs. baseline	**628**	**8.57**	**36**	**-87**	**6**	**Occipital_Mid_R**
		7.49	33	-72	-15	Fusiform_R
		6.77	21	-93	-9	Lingual_R
	640	**8.51**	**-33**	**-81**	**-18**	**Fusiform_L**
		8.48	-30	-54	-21	Cerebelum_6_L
		7.27	-45	-75	-12	Occipital_Inf_L

184	**7.79**	**42**	**-12**	**63**	**Precentral_R**
	6.21	18	-6	72	Frontal_Sup_2_R
	6.18	45	-24	60	Precentral_R
93	**6.45**	**-54**	**9**	**36**	**Precentral_L**
	4.88	-45	0	51	Precentral_L
52	**6.39**	**-30**	**-60**	**48**	**Parietal_Inf_L**
83	**5.43**	**-6**	**6**	**45**	**Supp_Motor_Area_L**
	5.41	6	9	45	Supp_Motor_Area_R
	5.02	-3	-3	54	Supp_Motor_Area_L
274	**6.39**	**-30**	**-60**	**48**	**Parietal_Inf_L**
	4.50*	-36	-51	39	Parietal_Inf_L
	4.18*	-39	-39	36	Parietal_Inf_L
187	**4.55***	**12**	**-66**	**6**	**Calcarine_R**
	4.40*	24	-63	3	Calcarine_R
	3.67*	6	-75	-6	Lingual_R
40	**4.54***	**39**	**3**	**24**	**Frontal_Inf_Oper_R**
117	**4.40***	**21**	**-30**	**-3**	**Hippocampus_R**
	3.81*	9	-21	3	Thalamus_R
	3.80*	12	-12	6	Thalamus_R
272	**4.29***	**-36**	**30**	**-12**	**Frontal_Inf_Orb_2_L**
	4.24*	-33	21	0	Insula_L
	4.05*	-30	18	9	Insula_L
10	**4.29***	**-57**	**-21**	**42**	**SupraMarginal_L**
14	**4.26***	**66**	**0**	**18**	**Postcentral_R**
41	**4.15***	**21**	**0**	**-18**	**Amygdala_R**
	3.37*	30	9	-27	Temporal_Pole_Sup_R
	3.18*	18	-6	-9	Hippocampus_R
55	**4.10***	**-15**	**6**	**-21**	**ParaHippocampal_L**
	3.63*	-18	-6	-21	Hippocampus_L
12	**4.07***	**-15**	**-3**	**75**	**Frontal_Sup_2_L**
10	**3.99***	**15**	**-75**	**-48**	**Cerebelum_8_R**
27	**3.75***	**39**	**15**	**6**	**Insula_R**
	3.42*	30	24	0	Insula_R
16	**3.74***	**-51**	**6**	**-3**	**Temporal_Pole_Sup_L**
22	**3.42***	**18**	**6**	**0**	**Pallidum_R**
	3.35*	27	0	3	Putamen_R
8	**3.35***	**3**	**30**	**30**	**Cingulate_Mid_R**

Table S16. Activation differences between P1 and HC during RECO (recognition) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	**30**	**4.92**	**-21**	**-42**	**21**	**Cingulate_Post_L**
	10	**4.50**	**9**	**-48**	**-12**	**Cerebelum_4_5_R**
P1 > HC	**37**	**7.01**	**-18**	**-3**	**-24**	**ParaHippocampal_L**

	4.76	-12	-12	-21	Hippocampus_L
39	**6.70**	**12**	**-6**	**75**	**Supp_Motor_Area_R**
	4.53	24	-15	72	Precentral_R
	3.80	12	6	72	Supp_Motor_Area_R
17	**5.85**	**33**	**3**	**-24**	**Temporal_Pole_Sup_R**
11	**5.38**	**63**	**0**	**18**	**Postcentral_R**
70	**5.24**	**45**	**-12**	**51**	**Precentral_R**
	5.08	45	-24	54	Postcentral_R
14	**4.74**	**24**	**-36**	**0**	**Hippocampus_R**
50	**4.46**	**-9**	**-30**	**6**	**Thalamus_L**
	4.41	12	-24	3	Thalamus_R
	4.26	3	-30	12	Thalamus_R
5	**4.17**	**3**	**-6**	**18**	**Thalamus_R**
5	**3.76**	**39**	**12**	**6**	**Insula_R**

Table S17. Activated regions for the contrast RECO (recognition) vs. baseline in P1 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.58 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RECO vs. baseline	**158**	**6.16**	**-18**	**-90**	**3**	**Occipital_Sup_L**
		6.13	-27	-87	9	Occipital_Mid_L
		5.62	-24	-93	15	Occipital_Mid_L
	107	**6.05**	**27**	**-81**	**-9**	**Fusiform_R**
		5.94	21	-93	15	Occipital_Sup_R
		4.83	15	-96	3	Calcarine_R
	70	**5.65**	**-36**	**-78**	**-12**	**Occipital_Inf_L**
		4.99	-36	-60	-24	Cerebelum_6_L
		4.59	-30	-72	-9	Fusiform_L
	5	**4.80**	**-39**	**0**	**33**	**Precentral_L**
	47	**4.79**	**-30**	**-63**	**45**	**Parietal_Sup_L**
	66	**4.24***	**-3**	**-6**	**57**	**Supp_Motor_Area_L**
		3.33*	-3	3	48	Supp_Motor_Area_L
	7	**3.84***	**15**	**-90**	**33**	**Cuneus_R**
	15	**3.64***	**15**	**-6**	**69**	**Supp_Motor_Area_R**
	10	**3.59***	**-42**	**-18**	**45**	**Postcentral_L**
	12	**3.56***	**-39**	**-15**	**57**	**Precentral_L**

Table S18. Activation differences between P1 and HC during RECO (recognition) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	**277**	**9.59**	**36**	**-45**	**15**	**Temporal_Mid_R**
		6.80	21	-42	24	Precuneus_R

		6.74	39	-39	21	Temporal_Sup_R
	58	**7.10**	**-24**	**-54**	**21**	**Cuneus_L**
		5.43	-15	-48	21	Cingulate_Post_L
	20	**6.05**	**-27**	**-6**	**-21**	**Hippocampus_L**
	9	**5.60**	**-42**	**-69**	**42**	**Angular_L**
	8	**5.44**	**-9**	**24**	**60**	**Supp_Motor_Area_L**
	7	**5.43**	**-54**	**-12**	**-6**	**Temporal_Sup_L**
	10	**5.26**	**27**	**-75**	**48**	**Parietal_Sup_R**
	29	**5.20**	**45**	**-9**	**-12**	**Temporal_Sup_R**
		4.31	60	-6	-21	Temporal_Mid_R
		4.04	54	-12	-18	Temporal_Mid_R
	13	**5.14**	**-42**	**-42**	**0**	**Temporal_Mid_L**
	17	**5.11**	**12**	**30**	**54**	**Frontal_Sup_Medial_R**
	23	**5.04**	**-60**	**-57**	**3**	**Temporal_Mid_L**
	19	**5.02**	**-42**	**-18**	**-15**	**Temporal_Inf_L**
	20	**5.01**	**3**	**9**	**24**	**Cingulate_Ant_R**
	13	**4.93**	**-39**	**-57**	**3**	**Occipital_Mid_L**
		3.89	-36	-69	9	Occipital_Mid_L
	20	**4.65**	**-24**	**30**	**48**	**Frontal_Sup_2_L**
	8	**4.54**	**-66**	**-27**	**3**	**Temporal_Mid_L**
	8	**4.33**	**-39**	**-51**	**24**	**Angular_L**
	7	**4.28**	**12**	**45**	**-3**	**Frontal_Med_Orb_R**
	6	**4.10**	**18**	**-48**	**39**	**Precuneus_R**
P1 > HC			No suprathreshold clusters			

Table S19. Activated regions for the contrast RA (sentence recall) vs. baseline in P1 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.59 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RA vs. baseline	**396**	**7.15**	**15**	**-78**	**-18**	**Cerebelum_6_R**
		5.91	27	-63	-24	Cerebelum_6_R
		5.65	6	-84	-6	Lingual_R
	81	**6.78**	**-60**	**9**	**0**	**Rolandic_Oper_L**
		5.28	-51	6	12	Frontal_Inf_Oper_L
	54	**5.80**	**-39**	**-60**	**-33**	**Cerebelum_Crus1_L**
		4.98	-24	-60	-24	Cerebelum_6_L
	92	**5.64**	**-57**	**-15**	**-3**	**Temporal_Mid_L**
		5.44	18	-72	-45	Cerebelum_8_R
	33	**5.43**	**-15**	**6**	**72**	**Frontal_Sup_2_L**
	13	**4.83**	**0**	**6**	**57**	**Supp_Motor_Area_L**
		4.78	-54	-54	-6	Temporal_Inf_L
	6	**4.73**	**-36**	**48**	**18**	**Frontal_Mid_2_L**
	5	**4.97**	**-57**	**-24**	**21**	**SupraMarginal_L**
	39	**4.88**	**63**	**-12**	**-3**	**Temporal_Sup_R**

181	**4.13***	**60**	**3**	**-12**	**Temporal_Pole_Sup_R**
	3.92*	54	-18	-3	Temporal_Sup_R
	4.73*	-36	48	18	Frontal_Mid_2_L
198	**4.51***	**-51**	**36**	**12**	**Frontal_Inf_Tri_L**
	4.67*	-33	18	12	Insula_L
	3.58*	-21	18	-3	Putamen_L
65	**4.16***	**-24**	**-75**	**-51**	**Cerebelum_7b_L**
	3.93*	-39	-54	-54	Cerebelum_8_L
	4.10*	51	0	51	Frontal_Mid_2_R
56	**4.07***	**-18**	**-69**	**57**	**Parietal_Sup_L**
	3.99*	-24	-72	51	Parietal_Sup_L
14	**3.70***	**39**	**42**	**30**	**Frontal_Mid_2_R**
89	**3.66***	**39**	**48**	**21**	**Frontal_Mid_2_R**
	3.70*	-60	-48	12	Temporal_Sup_L
39	**3.66***	**27**	**-39**	**-39**	**Cerebelum_10_R**
	3.59*	39	18	6	Insula_R
7	**3.32***	**30**	**9**	**9**	**Putamen_R**

Table S20. Activation differences between P1 and HC during RA (sentence recall) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	No suprathreshold clusters					
P1 > HC	**78**	**7.15**	**24**	**-51**	**42**	**Angular_R**
		5.14	27	-51	51	Parietal_Inf_R
		4.83	21	-39	39	Cingulate_Mid_R
	39	**5.62**	**-24**	**-60**	**6**	**Calcarine_L**
		4.57	-15	-63	6	Calcarine_L
	14	**5.39**	**-57**	**-57**	**-9**	**Temporal_Inf_L**
	23	**5.10**	**-12**	**-60**	**-18**	**Cerebelum_6_L**
	9	**4.84**	**-39**	**-69**	**-33**	**Cerebelum_Curs1_L**
	30	**4.67**	**9**	**-66**	**-18**	**Cerebelum_6_R**
		4.49	0	-66	-15	Vermis_6
	6	**4.57**	**36**	**-42**	**-12**	**Fusiform_R**
	19	**4.31**	**24**	**-75**	**27**	**Occipital_Sup_R**
	5	**4.17**	**9**	**-81**	**-24**	**Cerebelum_Crus1_R**

Table S21. Activated regions for the contrast RA (sentence recall) vs. baseline in P1 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.58 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RA	**440**	**9.13**	**-18**	**-96**	**6**	**Occipital_Mid_L**

vs. baseline		8.96	-12	-96	18	Occipital_Sup_L
		7.22	-9	-93	-6	Calcarine_L
	275	**8.23**	**21**	**-93**	**15**	**Occipital_Sup_R**
		7.52	12	-90	-6	Lingual_R
		5.58	36	-63	-27	Cerebelum_6_R
	399	**8.07**	**-42**	**3**	**51**	**Frontal_Mid_2_L**
		7.64	-6	12	72	Supp_Motor_Area_L
		6.44	0	6	54	Supp_Motor_Area_L
	121	**7.92**	**-54**	**-30**	**-3**	**Temporal_Mid_L**
	88	**6.79**	**12**	**-72**	**6**	**Calcarine_R**
	43	**6.06**	**-54**	**6**	**15**	**Precentral_L**
		5.28	-54	6	3	Rolandic_Oper_L
	29	**5.54**	**-21**	**-60**	**3**	**Calcarine_L**
	70	**5.48**	**-51**	**21**	**18**	**Frontal_Inf_Tri_L**
		5.45	-39	42	15	Frontal_Mid_2_L
	20	**5.42**	**-21**	**45**	**27**	**Frontal_Sup_2_L**
	6	**5.38**	**-27**	**27**	**-3**	**Insula_L**
	6	**5.04**	**-45**	**-42**	**-15**	**Temporal_Inf_L**
	9	**4.50***	**54**	**15**	**-18**	**Temporal_Pole_Sup_R**
	16	**3.97***	**21**	**-72**	**-51**	**Cerebelum_8_R**
	10	**3.95***	**12**	**21**	**30**	**Cingulate_Mid_R**
	7	**3.78***	**-12**	**63**	**-3**	**Frontal_Med_Orb_L**
	14	**3.68***	**-24**	**9**	**9**	**Putamen_L**
	5	**3.33***	**0**	**-72**	**51**	**Precuneus_L**

Table S22. Activation differences between P1 and HC during RA (sentence recall) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P1	**24**	**6.16**	**-24**	**-33**	**60**	**Postcentral_L**
	9	**5.07**	**-48**	**-3**	**-15**	**Temporal_Sup_L**
	7	**4.24**	**48**	**-33**	**45**	**SupraMarginal_R**
	5	**4.15**	**24**	**-48**	**36**	**Angular_R**
	6	**4.06**	**36**	**-27**	**57**	**Precentral_R**
P1 > HC	**116**	**7.75**	**-12**	**-93**	**18**	**Occipital_Sup_L**
		5.89	-12	-87	30	Cuneus_L
		5.13	-21	-78	18	Occipital_Mid_L
	25	**6.25**	**-24**	**-60**	**6**	**Calcarine_L**
	34	**5.07**	**12**	**-72**	**9**	**Calcarine_R**
	25	**4.55**	**21**	**-81**	**30**	**Occipital_Sup_R**
	5	**4.35**	**15**	**-90**	**18**	**Cuneus_R**
	17	**4.33**	**-60**	**-21**	**-12**	**Temporal_Mid_L**
		4.17	-51	-24	-15	Temporal_Mid_L
		3.93	-45	-33	-9	Temporal_Mid_L

	7	**4.14**	**-42**	**39**	**15**	**Frontal_Mid_2_L**

Table S23. Activated regions for the contrast GE (generation with implicit encoding) vs. baseline in P2 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.64 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
GE vs. baseline	**336**	**7.84**	**-3**	**12**	**66**	**Supp_Motor_Area_L**
		7.25	-3	18	42	Frontal_Sup_Medial_L
		6.06	0	15	51	Supp_Motor_Area_L
		6.16	-3	21	36	Cingulate_Mid_L
	240	**7.44**	**-51**	**12**	**-3**	**Temporal_Pole_Sup_L**
		6.20	-36	18	-9	Insula_L
		5.86	-48	24	-9	Frontal_Inf_Orb_2_L
		6.41	-51	15	6	Frontal_Inf_Tri_L
	151	**6.94**	**12**	**-93**	**9**	**Calcarine_R**
		5.36	12	-99	-9	Lingual_R
		4.44*	33	-75	-15	Fusiform_R
	92	**6.81**	**-45**	**6**	**51**	**Frontal_Mid_2_L**
		6.27	-48	6	39	Precentral_L
	135	**6.72**	**-36**	**39**	**30**	**Frontal_Mid_2_L**
		5.91	-33	51	15	Frontal_Mid_2_L
		5.20	-21	63	3	Frontal_Sup_2_L
	34	**6.51**	**-66**	**-36**	**3**	**Temporal_Mid_L**
		5.18	-63	-42	24	SupraMarginal_L
	14	**5.97**	**-66**	**-42**	**21**	**Temporal_Sup_L**
	85	**5.75**	**-21**	**-96**	**9**	**Occipital_Mid_L**
		5.57	-27	-93	3	Occipital_Mid_L
		5.47	-42	-84	-9	Occipital_Inf_L
	14	**5.51**	**42**	**-81**	**-9**	**Occipital_Inf_R**
	6	**5.38**	**39**	**45**	**27**	**Frontal_Mid_2_R**
	7	**5.24**	**57**	**-24**	**-3**	**Temporal_Sup_R**
	6	**5.14**	**-63**	**-21**	**9**	**Temporal_Sup_L**
	8	**5.00**	**-3**	**48**	**42**	**Frontal_Sup_Medial_L**
		4.68	-27	-93	-12	Occipital_Inf_L
	42	**4.27***	**24**	**-63**	**63**	**Parietal_Sup_R**
	60	**4.25***	**42**	**27**	**-3**	**Frontal_Inf_Orb_2_R**
		3.30*	45	15	-9	Insula_R
		3.21*	54	21	-3	Frontal_Inf_Tri_R
	6	**3.58***	**-18**	**-72**	**54**	**Parietal_Sup_L**

Table S24. Activation differences between P2 and HC during GE (generation with implicit encoding) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	**73**	**10.50**	**3**	**-42**	**12**	**Cingulate_Post_R**
	36	**5.80**	**-18**	**6**	**24**	**Caudate_L**
	5	**4.70**	**-3**	**-12**	**3**	**Thalamus_L**
	15	**4.66**	**-15**	**-87**	**-3**	**Lingual_L**
		3.81	-18	-78	-6	Lingual_L
	21	**4.38**	**-9**	**-63**	**-3**	**Lingual_L**
		4.01	-15	-54	-9	Lingual_L
	6	**4.25**	**-27**	**-42**	**-27**	**Cerebelum_4_5_L**
	8	**4.24**	**9**	**-36**	**48**	**Cingulate_Mid_R**
P2 > HC	**19**	**8.87**	**-39**	**-84**	**-6**	**Occipital_Inf_L**
	13	**5.67**	**-36**	**18**	**-9**	**Insula_L**
	6	**5.36**	**63**	**-3**	**27**	**Postcentral_R**
	5	**4.79**	**39**	**45**	**30**	**Frontal_Mid_2_R**
	7	**4.78**	**-24**	**60**	**6**	**Frontal_Sup_2_L**
	13	**4.25**	**39**	**-69**	**-9**	**Occipital_Inf_R**
	8	**4.21**	**-36**	**39**	**27**	**Frontal_Mid_2_L**
	7	**4.11**	**3**	**42**	**39**	**Frontal_Sup_Med_L**

Table S25. Activated regions for the contrast GE (generation with implicit encoding) vs. baseline in P2 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.65 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
GE vs. baseline	**128**	**8.64**	**-3**	**9**	**69**	**Supp_Motor_Area_L**
		6.26	0	18	42	Frontal_Sup_Medial_L
		5.28	6	27	33	Cingulater_Mid_R
	40	**7.76**	**-12**	**-99**	**15**	**Occipital_Sup_L**
		6.65	-12	-102	6	Occipital_Mid_L
	128	**7.23**	**36**	**57**	**12**	**Frontal_Sup_2_R**
		6.38	36	45	30	Frontal_Mid_2_R
		5.41	33	54	24	Frontal_Sup_2_R
	65	**7.07**	**-63**	**-36**	**3**	**Temporal_Mid_L**
		6.76	-63	-24	6	Temporal_Sup_L
	65	**6.95**	**-48**	**15**	**9**	**Frontal_Inf_Oper_L**
		5.08	-48	24	-6	Frontal_Inf_Orb_2_L
		4.96	-54	18	9	Frontal_Inf_Tri_L
	84	**6.58**	**-33**	**33**	**30**	**Frontal_Mid_2_L**
		5.99	-33	45	27	Frontal_Mid_2_L

36	**6.56**	**-48**	**3**	**42**	**Precentral_L**
88	**6.26**	**0**	**18**	**42**	**Frontal_Sup_Medial_L**
	5.28	6	27	33	Cingualte_Mid_R
60	**5.60**	**39**	**27**	**3**	**Insula_R**
	4.49*	57	24	6	Frontal_Inf_Tri_R
	4.55*	54	21	-6	Frontal_Inf_Orb_2_R
	3.57*	42	15	3	Frontal_Inf_Oper_R
11	**5.58**	**18**	**-63**	**-54**	**Cerebelum_8_R**
14	**5.58**	**-33**	**-90**	**6**	**Occipital_Mid_L**
	5.23	-27	-93	12	Occipital_Mid_L
9	**5.34**	**60**	**-18**	**0**	**Temporal_Sup_R**
22	**5.27**	**-51**	**27**	**-3**	**Frontal_Inf_Tri_L**
7	**5.22**	**48**	**-63**	**-30**	**Cerebelum_Crus1_R**
	4.68	36	-66	-24	Cerebelum_6_R
20	**4.99**	**24**	**-96**	**9**	**Occipital_Sup_R**
	4.97	9	-90	9	Calcarine_R
	4.79	15	-99	9	Cuneus_R
22	**4.92**	**57**	**6**	**42**	**Precentral_R**
24	**4.22***	**66**	**-33**	**9**	**Temporal_Sup_R**
45	**4.04***	**-48**	**-78**	**-15**	**Occipital_Inf_L**
16	**3.99***	**39**	**-12**	**-39**	**Fusiform_R**

Table S26. Activation differences between P2 and HC during GE (generation with implicit encoding) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	**49**	**6.60**	**-18**	**-51**	**36**	**Precuneus_L**
		4.66	-9	-57	18	Precuneus_L
	34	**5.42**	**-15**	**18**	**-6**	**Putamen_L**
	15	**5.40**	**9**	**-42**	**12**	**Cingulate_Post_R**
	38	**5.10**	**-24**	**-69**	**15**	**Calcarine_L**
		4.73	-9	-72	18	Calcarine_L
	20	**5.01**	**-15**	**-75**	**30**	**Cuneus_L**
	4	**4.25**	**54**	**-18**	**-12**	**Temporal_Mid_R**
	6	**4.21**	**3**	**-39**	**54**	**Precuneus_R**
	7	**4.14**	**-6**	**57**	**3**	**Frontal_Sup_Medial_L**
P2 > HC	No suprathreshold clusters					

Table S27. Activated regions for the contrast RECO (recognition) vs. baseline in P2 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.64 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL

RECO vs. baseline	**1117**	**9.61**	**36**	**-72**	**-9**	**Occipital_Inf_R**
		9.02	27	-87	9	Occipital_Mid_R
		8.39	27	-60	-15	Fusiform_R
		7.18	45	-57	-9	Temporal_Inf_R
		4.74	45	-54	-3	Temporal_Mid_R
	901	**8.94**	**-39**	**-72**	**-12**	**Occipital_Inf_L**
		8.92	-39	-60	-15	Fusiform_L
		8.73	-30	-87	9	Occipital_Mid_L
		6.33	-45	-63	-6	Temporal_Inf_L
		4.69	-45	-54	-3	Temporal_Mid_L
	83	**7.51**	**45**	**39**	**3**	**Frontal_Inf_Tri_R**
		5.91	39	42	6	Frontal_Mid_2_R
		4.41	36	27	-6	Frontal_Inf_Orb_2_R
	194	**7.32**	**-36**	**-21**	**54**	**Precentral_L**
		5.76	-54	-18	39	Postcentral_L
	98	**7.22**	**-27**	**-69**	**30**	**Occipital_Mid_L**
		5.94	-33	-66	51	Parietal_Sup_L
	37	**7.00**	**33**	**-63**	**54**	**Parietal_Sup_R**
	175	**6.79**	**9**	**21**	**42**	**Frontal_Sup_Medial_R**
		6.45	6	3	60	Supp_Motor_Area_R
		6.31	-6	6	54	Supp_Motor_Area_L
	119	**6.65**	**-36**	**15**	**27**	**Frontal_Inf_Tri_L**
		5.21	-36	6	24	Frontal_Inf_Oper_L
	53	**6.42**	**39**	**24**	**21**	**Frontal_Mid_2_R**
		5.60	54	3	33	Precentral_R
		4.73	39	9	27	Frontal_Inf_Oper_R
	34	**6.20**	**36**	**24**	**-3**	**Insula_R**
	110	**5.88**	**-45**	**45**	**18**	**Frontal_Mid_2_L**
		5.85	-39	33	6	Frontal_Inf_Tri_L
	15	**5.65**	**-57**	**0**	**39**	**Precentral_L**
	12	**5.60**	**54**	**3**	**33**	**Precentral_R**
	8	**5.23**	**-51**	**-18**	**21**	**Postcentral_L**
		4.83	-60	-15	21	Postcentral_L
	9	**5.01**	**-33**	**21**	**-3**	**Insula_L**
	24	**4.76**	**-24**	**33**	**-15**	**OFCpost_L**
		4.27*	-24	33	-12	Frontal_Inf_Orb_2_L
	33	**4.32***	**-18**	**-63**	**-54**	**Cerebelum_8_L**
	13	**4.01***	**42**	**-18**	**63**	**Precentral_R**
	6	**4.01***	**69**	**-33**	**18**	**Temporal_Sup_R**
	10	**3.69***	**21**	**42**	**-12**	**OFCant_R**
	5	**3.45***	**39**	**39**	**27**	**Frontal_Mid_2_R**
	5	**3.44***	**9**	**-75**	**-36**	**Cerebelum_Crus2_R**
	11	**3.42***	**-6**	**-78**	**-33**	**Cerebelum_Crus2_L**
	5	**3.22***	**18**	**-3**	**-15**	**Hippocampus_R**

Table S28. Activation differences between P2 and HC during RECO (recognition) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	**19**	**4.83**	**-6**	**57**	**6**	**Frontal_Sup_Medial_L**
		3.95	-9	48	6	Frontal_Sup_Medial_L
	8	**4.83**	**-18**	**-54**	**6**	**Calcarine_L**
	46	**4.74**	**6**	**-60**	**18**	**Calcarine_R**
		4.17	-9	-63	12	Calcarine_L
	7	**4.48**	**-21**	**-36**	**-3**	**Hippocampus_L**
	7	**4.35**	**-30**	**-21**	**-18**	**Hippocampus_L**
	5	**4.29**	**-18**	**33**	**45**	**Frontal_Sup_2_L**
	6	**4.12**	**9**	**-60**	**-3**	**Lingual_R**
P2 > HC	**41**	**5.71**	**39**	**39**	**3**	**Frontal_Mid_2_R**
	5	**4.61**	**-36**	**42**	**24**	**Frontal_Mid_2_L**
	5	**4.50**	**-9**	**12**	**-6**	**Caudate_L**
	7	**4.29**	**-33**	**33**	**9**	**Frontal_Inf_Tri_L**
	5	**4.14**	**-45**	**42**	**12**	**Frontal_Inf_Tri_L**

Table S29. Activated regions for the contrast RECO (recognition) vs. baseline in P2 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.65 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RECO vs. baseline	**1263**	**9.73**	**39**	**-69**	**-12**	**Occipital_Inf_R**
		9.60	21	-84	-12	Lingual_R
		9.36	36	-90	-9	Occipital_Inf_R
		8.43	42	-63	-9	Temporal_Inf_R
		3.83	36	-27	-6	Hippocampus_R
	960	**9.48**	**-36**	**-69**	**-15**	**Fusiform_L**
		7.49	-51	-66	-12	Occipital_Inf_L
		7.44	-39	-81	-6	Occipital_Inf_L
	454	**7.75**	**-42**	**-15**	**54**	**Precentral_L**
		6.89	-54	-15	39	Postcentral_L
		4.91	-60	-21	9	Temporal_Sup_L
		3.64*	-60	-24	15	SupraMarginal_L
	62	**7.20**	**45**	**42**	**3**	**Front_Mid_2_R**
		4.02*	36	51	9	Frontal_Sup_2_R
	99	**6.08**	**18**	**-63**	**-54**	**Cerebelum_8_R**
		5.29	0	-66	-36	Vermis_8
	40	**5.82**	**0**	**0**	**66**	**Supp_Motor_Area_L**
		4.88	-9	-9	72	Supp_Motor_Area_L
	15	**5.76**	**-63**	**3**	**27**	**Precentral_L**

48	**5.66**	**57**	**0**	**39**	**Precentral_R**
	5.56	60	-12	39	Postcentral_R
	4.22*	63	-30	18	Temporal_Sup_R
18	**5.54**	**60**	**-15**	**21**	**Postcentral_R**
	5.43	63	-24	21	SupraMarginal_R
16	**5.50**	**-39**	**33**	**9**	**Front_Inf_Tri_L**
50	**5.38**	**0**	**0**	**51**	**Supp_Motor_Area_L**
	5.16	3	18	42	Frontal_Sup_Medial_L
9	**5.22**	**-6**	**-9**	**54**	**Supp_Motor_Area_L**
85	**4.79**	**36**	**-30**	**39**	**Postcentral_R**
	3.54*	30	-45	42	Angular_R
	3.28*	42	-42	48	Parietal_Inf_R
57	**4.70**	**24**	**36**	**-15**	**OFCant_R**
58	**4.53***	**39**	**24**	**21**	**Frontal_Mid_2_R**
24	**4.35***	**18**	**66**	**3**	**Frontal_Sup_2_R**
61	**4.24***	**-6**	**-24**	**9**	**Thalamus_L**
46	**4.19***	**30**	**15**	**63**	**Frontal_Sup_2_R**
36	**4.02***	**-33**	**21**	**-9**	**Insula_L**
35	**3.99***	**-30**	**-69**	**48**	**Parietal_Sup_2_L**
29	**3.99***	**33**	**-66**	**54**	**Parietal_Sup_R**
13	**3.97***	**-24**	**33**	**-15**	**OFCpost_L**
23	**3.93***	**57**	**21**	**33**	**Frontal_Inf_Oper_R**
8	**3.93***	**45**	**-3**	**-33**	**Temporal_Inf_R**
12	**3.92***	**3**	**54**	**-9**	**Frontal_Med_Orb_R**
13	**3.71***	**-15**	**51**	**-9**	**Frontal_Sup_2_L**
50	**3.65***	**15**	**-18**	**15**	**Thalamus_R**
	3.53*	24	-18	24	Caudate_R
5	**3.64***	**-18**	**63**	**6**	**Frontal_Sup_2_L**
6	**3.60***	**45**	**-33**	**21**	**Rolandic_Oper_R**
9	**3.54***	**-6**	**42**	**-9**	**Frontal_Med_Orb_L**
5	**3.50***	**-18**	**-3**	**18**	**Caudate_L**
8	**3.48***	**-36**	**-60**	**36**	**Angular_L**
6	**3.42***	**0**	**-36**	**27**	**Cingulate_Post_L**

Table S30. Activation differences between P2 and HC during RECO (recognition) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	No suprathreshold clusters					
P2 > HC	**17**	**5.65**	**-60**	**-6**	**33**	**Precentral_L**
	5	**4.70**	**-6**	**33**	**48**	**Frontal_Sup_Medial_L**
	5	**4.34**	**-9**	**-30**	**9**	**Thalamus_L**
	8	**4.10**	**42**	**42**	**3**	**Frontal_Mid_2_R**

Table S31. Activated regions for the contrast RA (sentence recall) vs. baseline in P2 before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.64 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RA vs. baseline	**664**	**15.11**	**-12**	**-102**	**6**	**Occipital_Mid_L**
		11.48	-30	-90	9	Occipital_Mid_L
		11.26	-24	-96	-12	Occipital_Inf_L
	525	**11.36**	**15**	**-96**	**-6**	**Calcarine_R**
		11.32	24	-87	-9	Lingual_R
	204	**9.10**	**-63**	**-21**	**9**	**Temporal_Sup_L**
		7.31	-66	-39	6	Temporal_Mid_L
	168	**7.86**	**60**	**-21**	**0**	**Temporal_Sup_R**
		6.40	63	-33	3	Temporal_Sup_R
		6.31	63	-6	-9	Temporal_Sup_R
	88	**7.66**	**30**	**-66**	**60**	**Parietal_Sup_R**
	60	**6.93**	**-36**	**21**	**-9**	**Frontal_Inf_Orb_2_L**
	91	**6.60**	**3**	**6**	**63**	**Supp_Motor_Area_R**
		5.63	-12	9	69	Supp_Motor_Area_L
	90	**6.58**	**-48**	**3**	**48**	**Precentral_L**
		5.42	-51	12	30	Precentral_L
		5.40	-36	3	60	Front_Mid_2_L
	10	**5.90**	**-18**	**63**	**3**	**Front_Sup_2_L**
	119	**5.89**	**-39**	**45**	**6**	**Frontal_Inf_Tri_L**
		5.15	-39	42	24	Frontal_Mid_2_L
		5.31	-51	12	6	Frontal_Inf_Oper_L
	20	**5.72**	**-48**	**15**	**6**	**Frontal_Inf_Tri_L**
	18	**5.34**	**-18**	**-72**	**57**	**Parietal_Sup_L**
		3.90	-39	-57	42	Angular_L
	15	**5.23**	**6**	**21**	**42**	**Frontal_Sup_Medial_R**
		4.91	-3	18	42	Frontal_Sup_Medial_L
	7	**5.21**	**-30**	**9**	**66**	**Frontal_Mid_2_L**
	22	**5.17**	**-33**	**30**	**18**	**Frontal_Inf_Tri_L**
		5.12	-33	21	21	Frontal_Inf_Tri_L
	7	**5.16**	**36**	**24**	**0**	**Insula_R**
	55	**4.97**	**57**	**3**	**42**	**Precentral_R**
	29	**4.78**	**39**	**24**	**21**	**Frontal_Mid_2_R**
	37	**4.58**	**-3**	**48**	**48**	**Frontal_Sup_Medial_L**
	32	**4.11***	**42**	**-39**	**54**	**Parietal_Inf_R**
	30	**4.06***	**45**	**-66**	**-33**	**Cerebelum_Crus1_R**
	8	**4.02***	**39**	**-15**	**-39**	**Fusiform_R**
	27	**3.92***	**63**	**-24**	**45**	**SupraMarginal_R**
	27	**3.85***	**-12**	**-57**	**72**	**Precuneus_L**
	11	**3.83***	**-21**	**30**	**-21**	**OFCant_L**
	16	**3.73***	**-9**	**48**	**-9**	**Frontal_Med_Orb_L**

24	**3.71***	**9**	**12**	**3**	**Caudate_R**
10	**3.67***	**27**	**-60**	**33**	**Occipital_Sup_R**
6	**3.56***	**45**	**-36**	**9**	**Temporal_Sup_R**
7	**3.43***	**-15**	**-3**	**18**	**Caudate_L**
12	**3.38***	**18**	**-48**	**-24**	**Cerebelum_4_5_R**

Table S32. Activation differences between P2 and HC during RA (sentence recall) before surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	**194**	**6.39**	**-30**	**-63**	**-9**	**Fusiform_L**
		5.85	-18	-51	-9	Lingual_L
		5.51	6	-60	-3	Lingual_R
	101	**6.20**	**15**	**-72**	**21**	**Cuneus_R**
		5.19	12	-75	9	Calcarine_R
	62	**5.70**	**-15**	**-84**	**-3**	**Lingual_L**
		4.68	-6	-84	15	Cuneus_L
		4.55	-15	-81	18	Occipital_Sup_L
	10	**4.42**	**-12**	**-69**	**15**	**Calcarine_L**
	5	**4.17**	**-24**	**-69**	**15**	**Calcarine_L**
	8	**3.98**	**24**	**-51**	**6**	**Calcarine_R**
P2 > HC	**13**	**5.56**	**-39**	**-84**	**-9**	**Occipital_Inf_L**
		4.67	-33	-90	0	Occipital_Mid_L
	14	**5.37**	**27**	**-63**	**60**	**Parietal_Sup_R**
	16	**5.21**	**-36**	**-72**	**-18**	**Fusiform_L**
	7	**4.39**	**-12**	**-96**	**21**	**Cuneus_L**
	23	**4.16**	**21**	**-96**	**-6**	**Cacalrine_R**
		4.13	21	-87	-12	Lingual_R

Table S33. Activated regions for the contrast RA (sentence recall) vs. baseline in P2 after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. Activations were obtained at T > 4.65 ($p < 0.05$, FWE). T values marked with * were obtained at T > 3.1 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
RA vs. baseline	**92**	**7.37**	**60**	**-18**	**-3**	**Temporal_Sup_R**
		6.4	66	-12	6	Temporal_Sup_R
		3.7*	60	-18	12	Rolandic_Oper_R
		3.5*	60	-27	-3	Temporal_Mid_R
		3.28*	57	6	-9	Temporal_Pole_Sup_R
	37	**6.88**	**-60**	**-18**	**6**	**Temporal_Sup_L**
		4.79	-57	-18	0	Temporal_Mid_L
	6	**3.52***	**57**	**0**	**45**	**Precentral_L**

Table S34. Activation differences between P2 and HC during RA (sentence recall) after surgery. For each peak, the number of voxels in the cluster (k), T value, x, y, z coordinates (in mm) and region label (AAL atlas, Tzourio-Mazoyer et al., 2002) are presented. All activations were obtained at T > 3.61 ($p < 0.001$, uncorrected). Regions in bold represent cluster peaks.

Contrast	k	T	x	y	z	AAL
HC > P2	**54**	**6.56**	**51**	**18**	**36**	**Frontal_Inf_Oper_R**
		3.95	39	18	24	Frontal_Inf_Tri_R
	76	**6.56**	**-39**	**-51**	**48**	**Parietal_Inf_L**
		5.68	-45	-39	51	Parietal_Inf_L
	72	**6.22**	**-48**	**9**	**24**	**Frontal_Inf_Oper_L**
	46	**5.57**	**-45**	**39**	**12**	**Frontal_Inf_Tri_L**
	25	**5.39**	**42**	**-63**	**51**	**Angular_R**
		3.87	39	-57	42	Parietal_Inf_R
	58	**5.35**	**-9**	**33**	**45**	**Frontal_Sup_medial_L**
		5.06	9	33	48	Frontal_Sup_medial_R
	51	**5.25**	**9**	**-75**	**-27**	**Cerebelum_Crus1_R**
		5.11	9	-78	-36	Cerebelum_Crus2_R
		4.33	-3	-75	-30	Cerebelum_Crus2_L
	9	**4.47**	**51**	**39**	**15**	**Frontal_Inf_Tri_R**
	7	**4.40**	**30**	**-78**	**45**	**Occipital_Sup_R**
	11	**4.39**	**-24**	**-69**	**48**	**Patietal_Sup_L**
	8	**4.34**	**-15**	**-87**	**-3**	**Lingual_L**
P2 > HC	No suprathreshold clusters					