

**Supplementary Table 1. The median and interquartile values of CIU genre consistency (correlation coefficients) across aphasia subtypes**

	Total r value	Within genre r	Between genre r
<b>#CIUs</b>			
<b>Anomic</b>	0.59 (0.52-0.67)	0.62 (0.57-0.72)	0.55 (0.51-0.66)
<b>Fluent</b>	0.61 (0.53-0.74)	0.72 (0.56-0.76)	0.60 (0.52-0.67)
<b>Nonfluent</b>	0.55 (0.28-0.69)	0.60 (0.55-0.75)	0.46 (0.26-0.64)*
<b>CIUs/min</b>			
<b>Anomic</b>	0.73 (0.67-0.78)	0.74 (0.70-0.80)	0.71 (0.65-0.76)
<b>Fluent</b>	0.50 (0.24-0.62)	0.50 (0.23-0.61)	0.47 (0.28-0.62)
<b>Nonfluent</b>	0.40 (0.25-0.55)	0.47 (0.37-0.61)	0.35 (0.24-0.50)
<b>%CIUs</b>			
<b>Anomic</b>	0.56 (0.49-0.61)	0.60 (0.39-0.66)	0.55 (0.49-0.61)
<b>Fluent</b>	0.46 (0.33-0.63)	0.45 (0.39-0.65)	0.48 (0.29-0.62)
<b>Nonfluent</b>	0.46 (0.34-0.59)	0.42 (0.34-0.73)	0.46 (0.34-0.53)

\*:  $P < 0.05$  when comparing within and between genre r values.

**Supplementary Table 2. Summary of LSM results without patients whose #CIUs was < 20**

	White matter	Grey matter
<b>#CIUs</b>		
<b>Disconnection LSM</b>	CC 20%, FAT 19%, SLF2 16%	PreCG 22%, MFG 14%
<b>Tract-wise LSM</b>	AF -0.28*, FAT -0.46***, SLF2 -0.49***	
<b>CIUs/min</b>		
<b>Disconnection LSM</b>	AF 11%, CC 21%, SLF2 13%	PreCG 25%, PoCG 11%
<b>Tract-wise LSM</b>	AF -0.47***, FAT -0.40**, SLF2 -0.40**, SLF3 -0.30*	
<b>%CIUs</b>		
<b>Tract-wise LSM</b>	AF -0.32**	

Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All regions are in the left hemisphere. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . LSM: lesion symptom mapping; CIU: correct information unit; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; SLF: superior longitudinal fasciculus; PreCG: precentral gyrus; PoCG: postcentral gyrus; MFG: middle frontal gyrus.

**Supplementary Table 3. Summary of LSM results controlling total lesion size and nonword repetition.**

	White matter	Grey matter
<b>#CIUs</b>		
<b>Disconnection LSM</b>	AF 10%, CC 21%, CST 12%, FAT16%, SLF2 13%, TR_S 11%	PreCG 14%
<b>Tract-wise LSM</b>	AF -0.28*, FAT -0.39***, SLF2 -0.33**	
<b>CIUs/min</b>		
<b>Disconnection LSM</b>	AF 12%, CC 27%, FAT 16%, TR_S 11%	PreCG 14%
<b>Tract-wise LSM</b>	AF -0.42***, FAT -0.41***, SLF2 - 0.27*, SLF3 -0.25*	
<b>%CIUs</b>		
<b>Lesion LSM</b>	AF 14%, FAT 11%, SLF2 15%	PreCG 12%, ROL 15%, STG 33%
<b>Disconnection LSM</b>	CC 16%	PreCG 23%, MFG 14%, PCL 12%, MTG 20%

Lesion/Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All the regions are in the left hemisphere. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . LSM: lesion symptom mapping; CIU: correct information unit; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; SLF: superior longitudinal fasciculus; TR\_S: superior thalamic radiation; CST: corticospinal tract; PreCG: precentral gyrus; MFG: middle

frontal gyrus; ROL: Rolandic operculum; STG: superior temporal gyrus; PCL: paracentral lobule; MTG: middle temporal gyrus.

**Supplementary Table 4. Summary of LSM results controlling total lesion size and apraxia of speech.**

	White matter	Grey matter
<b>#CIUs</b>		
<b>Disconnection LSM</b>	AF 11%, CC 19%, CPT_F 16%, CST 13%, FAT 19%, TR_S 14%	PreCG 10%, MFG 15%
<b>Tract-wise LSM</b>	AF -0.21*, FAT -0.33**, SLF2 -0.29*	
<b>CIUs/min</b>		
<b>Disconnection LSM</b>	AF 10%, CC 20%, SLF2 12%	PreCG 37%, MFG 14%
<b>Tract-wise LSM</b>	AF -0.36**, FAT -0.28*, SLF3 -0.23*	

Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All regions are in the left hemisphere. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . LSM: lesion symptom mapping; CIU: correct information unit; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; CPT\_F: frontal corticopontine tract; CST: corticospinal tract; SLF: superior longitudinal fasciculus; PreCG: precentral gyrus; MFG: middle frontal gyrus.

**Supplementary Table 5. Summary of LSM results using different genres**

	White matter	Grey matter
<b>Personal/Procedural information</b>		
<b>#CIUs</b>		
<b>Disconnection LSM</b>	CC 19%, CPT_F 13%, CST 13%, FAT 17%, SLF2 12%, TR_S 12%	MFG 11%
<b>Tract-wise LSM</b>	AF -0.25*, FAT, -0.35**, SLF2 -0.31**	

CIUs/min		
<b>Lesion LSM</b>	AF 15%, FAT 13%, SLF2 10%, SLF3 11%	PreCG 13%, SMG: 22%, STG: 14%
<b>Disconnection LSM</b>	AF 11%, CC 21%, FAT 12%	PreCG 12%
<b>Tract-wise LSM</b>	AF -0.39***, FAT -0.34**, SLF2 - 0.30**, SLF3 -0.39***	
Single picture		
#CIUs		
<b>Disconnection LSM</b>	CC 19%, CPT_F 12%, CST 11%, FAT 18%, SLF2 11%, TR_S 13%	PreCG 12%, MFG 12%
<b>Tract-wise LSM</b>	AF -0.22*, FAT, -0.36**, SLF2 - 0.39***	
CIUs/min		
<b>Lesion LSM</b>	AF 17%, FAT 14%, SLF2 11%	PreCG 11%, SMG 12%, MTG 14%
<b>Disconnection LSM</b>	AF 14%, CC 21%	PreCG 11%
<b>Tract-wise LSM</b>	AF -0.41***, FAT -0.32**, SLF2 - 0.30**, SLF3 -0.31**	
Picture sequence		
#CIUs		
<b>Lesion LSM</b>	AF 28%, CC 10%, FAT 17%	IFGtri 17%
<b>Disconnection LSM</b>	CC 20%, SLF2 10%	MFG 12%, IPL 11%
<b>Tract-wise LSM</b>	AF -0.27*, FAT, -0.36**, SLF2 - 0.32**	
CIUs/min		
<b>Disconnection LSM</b>	CC 25%, FAT 12%, SLF2 10%	PreCG 12%
<b>Tract-wise LSM</b>	AF -0.33**, FAT -0.37**, SLF2 - 0.31**, SLF3 -0.24*	
%CIUs		
<b>Tract-wise LSM</b>	AF -0.25*	

Lesion/Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All the regions are in the left hemisphere.  $*p < 0.05$ ;  $**p < 0.01$ ;  $***p < 0.001$ . LSM: lesion symptom mapping; CIU: correct information unit; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; SLF: superior longitudinal fasciculus; TR\_S: superior thalamic radiation; CPT\_F: frontal corticopontine tract; CST: corticospinal tract; PreCG: precentral gyrus; MFG: middle frontal gyrus; SMG: supramarginal gyrus; MTG: middle temporal gyrus; IFGtri: inferior frontal gyrus, Pars triangularis; IPL: inferior parietal lobe.

**Supplementary Table 6. Summary of LSM results on the older adult template**

	White matter	Grey matter
<b>#CIUs</b>		
<b>Lesion LSM</b>	AF 23%, CC 18%, FAT 23%, SLF2 11%, TR_S 11%	SMG 10%
<b>Disconnection LSM</b>	CC 27%	
<b>Tract LSM</b>	AF -0.24*, FAT -0.36**, SLF2 -0.30**	
<b>CIUs/min</b>		
<b>Lesion LSM</b>	AF 31%, FAT 25%, SLF2 22%, SLF3 10%	PreCG 31%
<b>Disconnection LSM</b>	CC 25%	
<b>Tract LSM</b>	AF -0.42***, FAT -0.36**, SLF2 -0.27*, SLF3 -0.28*	
<b>%CIUs</b>		
<b>Tract LSM</b>	AF -0.22*	

Lesion/Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All the regions are in the left hemisphere.  $*p < 0.05$ ;  $**p < 0.01$ ;  $***p < 0.001$ . LSM: lesion symptom mapping; CIU: correct information unit; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; SLF: superior longitudinal fasciculus; TR\_S: superior thalamic radiation; SMG: supramarginal gyrus; PreCG: precentral gyrus.

**Supplementary Table 7. Summary of LSM results of the Western aphasia battery fluency**

	White matter	Grey matter
<b>Lesion LSM</b>	AF 14%	SMG 11%, STG 10%, MTG 12%
<b>Disconnection LSM</b>	AF 15%, CC 18%, FAT 12%	
<b>Tract LSM</b>	AF -0.34**, FAT -0.22*, SLF2 -0.29**, SLF3 -0.26*	

Lesion/Disconnection LSM presents the percentage of results map in atlas regions (only regions containing >10% of the result map are shown). The tract-wise LSM presents the partial correlation coefficients. All the regions are in the left hemisphere. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . LSM: lesion symptom mapping; AF: arcuate fasciculus; FAT: frontal aslant tract; CC: corpus callosum; SLF: superior longitudinal fasciculus; SMG: supramarginal gyrus; STG: superior temporal gyrus; MTG: middle temporal gyrus.