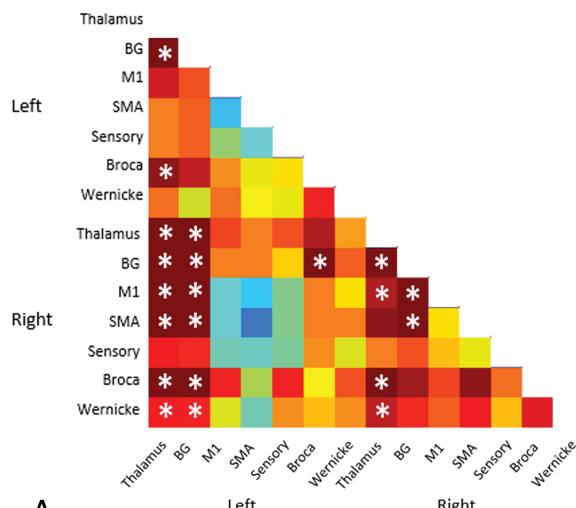


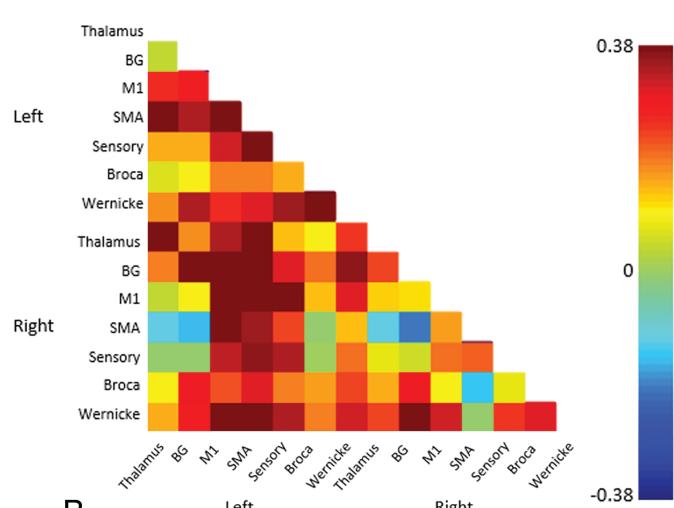
### Correlation coefficient difference map

Normal (sed) - Patient (sed)



A

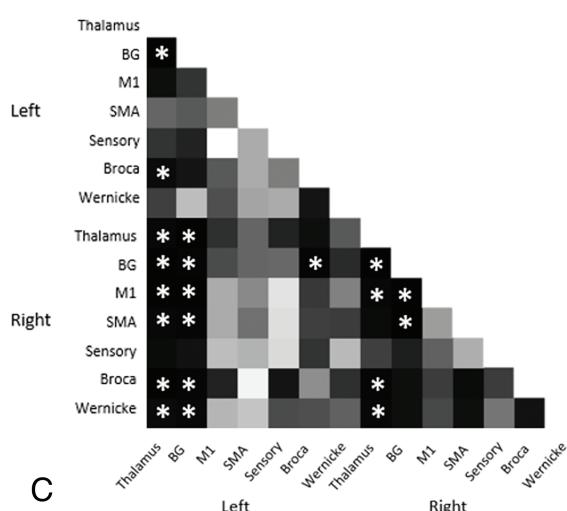
Normal (non-sed) - Normal (sed)



B

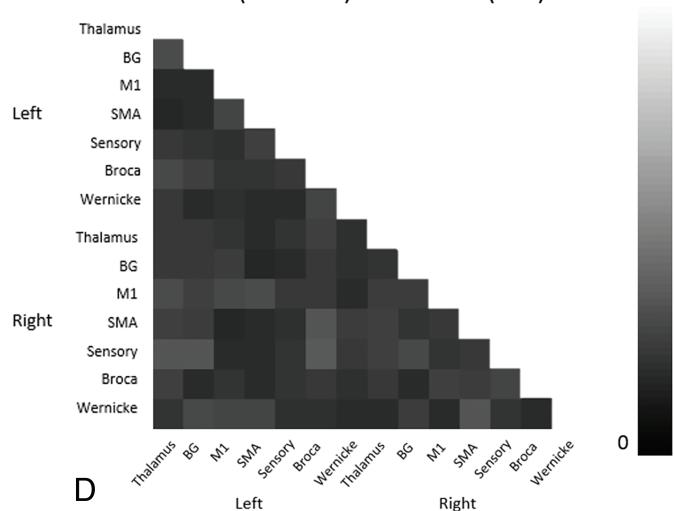
### P value map

Normal (sed) vs Patient (sed)



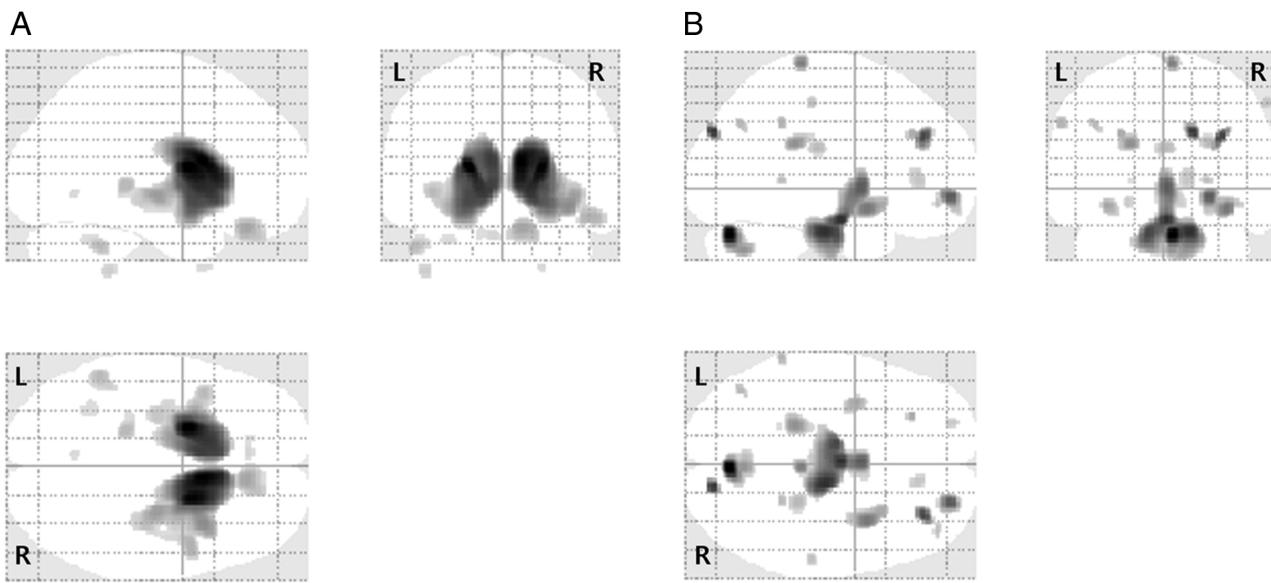
C

Normal (non-sed) vs Normal (sed)



D

**ON-LINE FIG 1.** Correlation matrices representing functional connectivity between seed regions; (A) correlation coefficient difference map of the sedated control group minus the sedated AS group, (B) correlation coefficient difference map of the nonsedated control group minus the sedated control group, (C) P-value map of the sedated control group versus the sedated AS group, and (D) P-value map of the nonsedated control group versus the sedated normal group (white asterisk: FDR-corrected,  $P < .05$ ).



**ON-LINE FIG 2.** Statistical parametric maps showing regions of significantly reduced (A) GM volume and (B) WM volume in the AS group compared with the age- and sex-matched control group using voxel-based morphometry. Age was covaried out, and familywise error rate corrections for multiple comparisons have been done, with cluster voxel extent threshold set as zero to see all regions of significance (uncorrected  $P < .001$ ).

**On-line Table: Comparison of mean DTI values between patients with Angelman syndrome and controls**

	FA			MD ( $\times 10^{-3} \text{ mm}^2\text{s}^{-1}$ )			RD ( $\times 10^{-3} \text{ mm}^2\text{s}^{-1}$ )		
	Control <sup>a</sup>	AS <sup>a</sup>	P Value	Control <sup>a</sup>	AS <sup>a</sup>	P Value	Control <sup>a</sup>	AS <sup>a</sup>	P Value
Right ACC	0.79 ± 0.04	0.72 ± 0.06	.001 <sup>b</sup>	0.80 ± 0.06	0.86 ± 0.05	.001 <sup>b</sup>	0.90 ± 0.03	1.03 ± 0.05	.026 <sup>b</sup>
Left ACC	0.78 ± 0.04	0.72 ± 0.05	.001 <sup>b</sup>	0.83 ± 0.08	0.95 ± 0.08	.000 <sup>b</sup>	0.95 ± 0.03	1.13 ± 0.07	.003 <sup>b</sup>
Right PLIC	0.69 ± 0.03	0.66 ± 0.04	.005 <sup>b</sup>	0.76 ± 0.04	0.76 ± 0.03	.668	0.81 ± 0.02	0.92 ± 0.04	.007 <sup>b</sup>
Left PLIC	0.70 ± 0.04	0.66 ± 0.04	.002 <sup>b</sup>	0.76 ± 0.04	0.76 ± 0.05	.907	0.82 ± 0.02	0.90 ± 0.05	.039 <sup>b</sup>
Right AF	0.63 ± 0.04	0.60 ± 0.05	.022 <sup>b</sup>	0.75 ± 0.03	0.78 ± 0.05	.038 <sup>b</sup>	0.84 ± 0.02	0.96 ± 0.05	.004 <sup>b</sup>
Left AF	0.62 ± 0.04	0.58 ± 0.04	.005 <sup>b</sup>	0.76 ± 0.04	0.80 ± 0.05	.020 <sup>b</sup>	0.85 ± 0.02	0.97 ± 0.04	.006 <sup>b</sup>
PCC	0.80 ± 0.04	0.76 ± 0.05	.009 <sup>b</sup>	0.89 ± 0.10	0.98 ± 0.19	.113	0.99 ± 0.03	1.17 ± 0.20	.031 <sup>b</sup>

**Note:** ACC indicates anterior corpus callosum; AF, arcuate fasciculus; PCC, posterior corpus callosum; PLIC, posterior limb of internal capsule.

<sup>a</sup>Mean and standard deviation values are shown.

<sup>b</sup>Significant difference ( $P < .05$ , unpaired 2-tailed t test).