

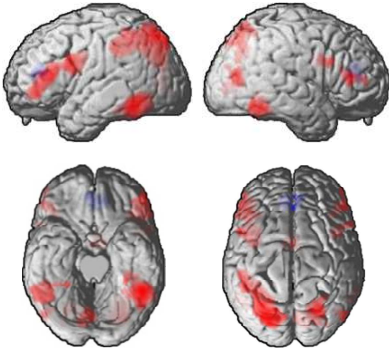
**Supplementary Figures 1-6.** Functional connectivity maps of nonimpaired (left) and dyslexic (middle) readers, and maps of groups differences (right). Maps are separately shown for the resting state, silent reading and the phonological lexical decision. Maps are shown at voxel-wise threshold of  $p < .001$  uncorrected and a cluster extent threshold of  $p < .05$  corrected.

**Supplementary Table.** Reports correlations between brain connectivity estimates (standardized correlation coefficients) and behavioral measures. Details same as Table 3 in the main text.

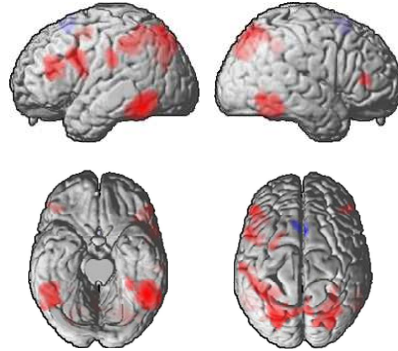
# Functional connectivity of the left fusiform gyrus $x = -46, y = -50, z = -16$

## Resting State

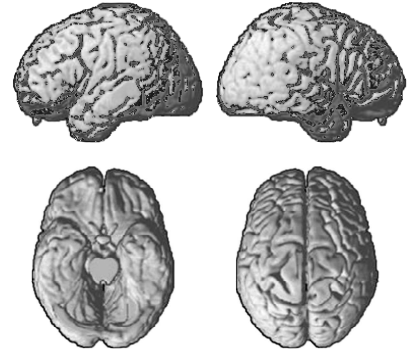
Nonimpaired Readers



Dyslexic Readers

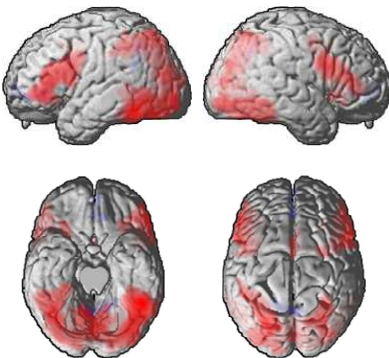


Group Differences

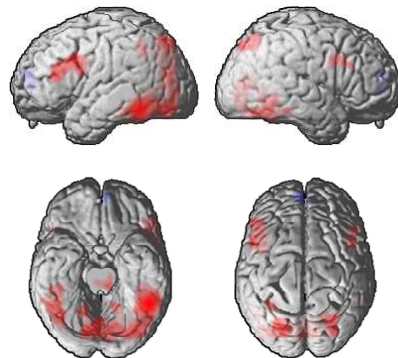


## Silent Reading

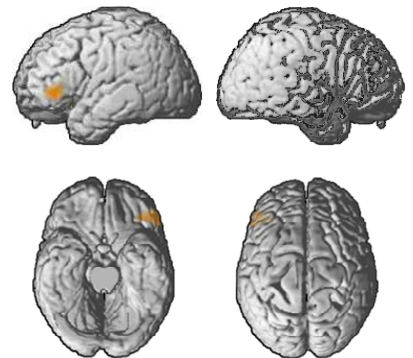
Nonimpaired Readers



Dyslexic Readers

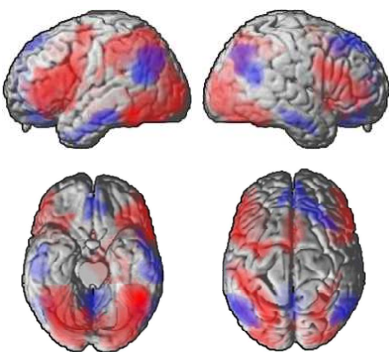


Group Differences



## Phonological Lexical Decision

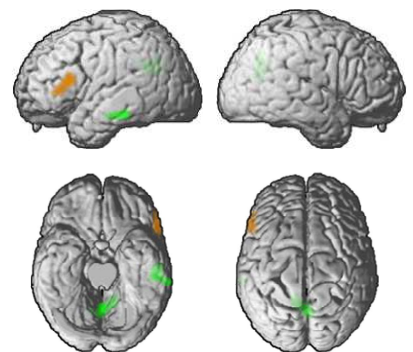
Nonimpaired Readers



Dyslexic Readers



Group Differences



Positive Correlations

Negative Correlations

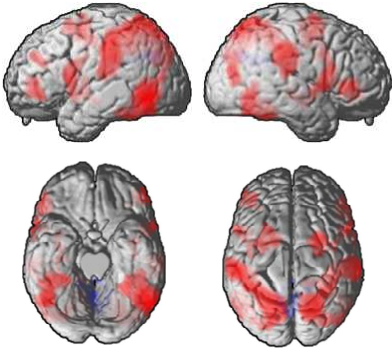
NI > DYS

DYS > NI

**Functional connectivity of the left inferior temporal gyrus  
 $x = -52, y = -62, z = -8$**

Resting State

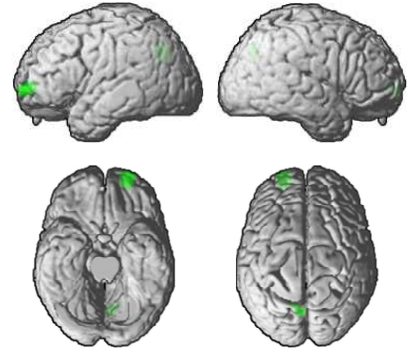
Nonimpaired Readers



Dyslexic Readers

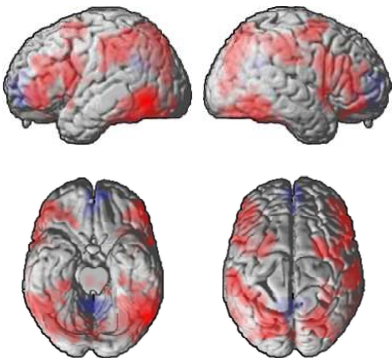


Group Differences

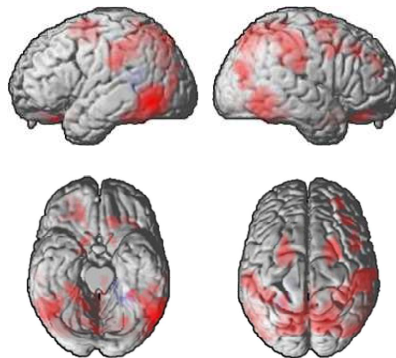


Logographic Cues

Nonimpaired Readers



Dyslexic Readers

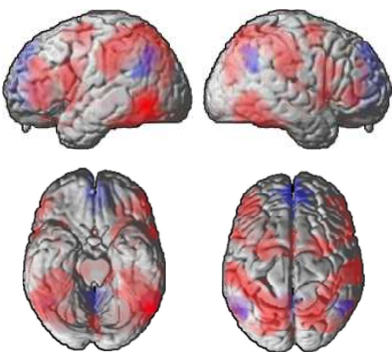


Group Differences

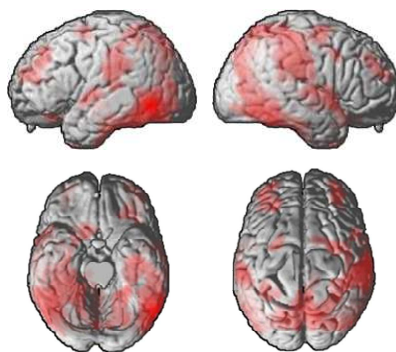


Phonological Lexical Decision

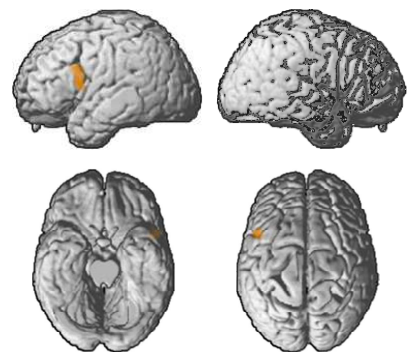
Nonimpaired Readers



Dyslexic Readers



Group Differences



Positive Correlations

Negative Correlations

NI > DYS

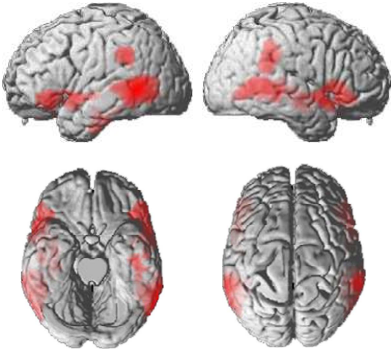
DYS > NI



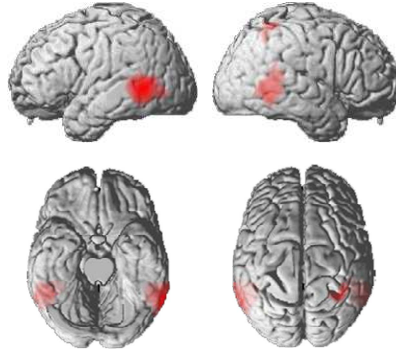
# Functional connectivity of the left middle temporal gyrus $x = -60, y = -56, z = 2$

## Resting State

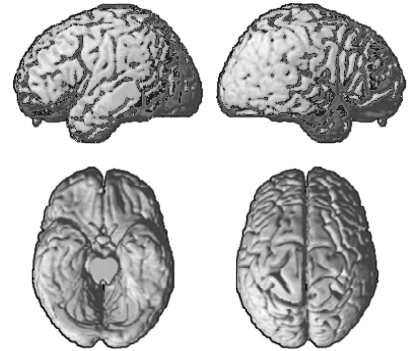
Nonimpaired Readers



Dyslexic Readers

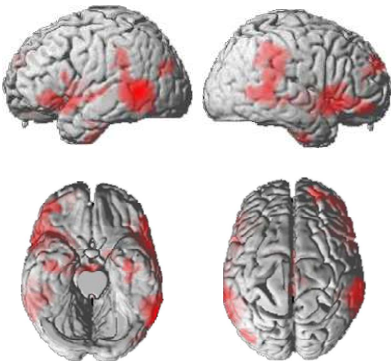


Group Differences

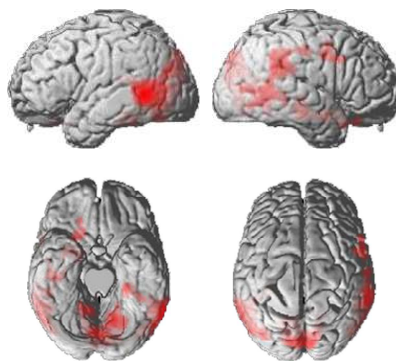


## Silent Reading

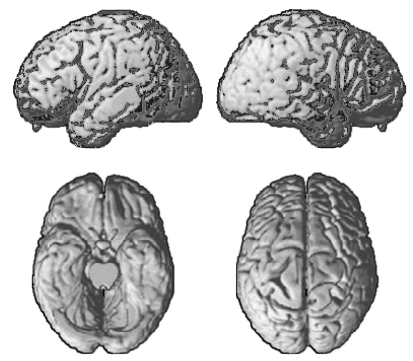
Nonimpaired Readers



Dyslexic Readers

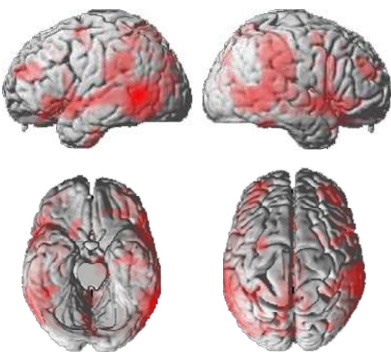


Group Differences

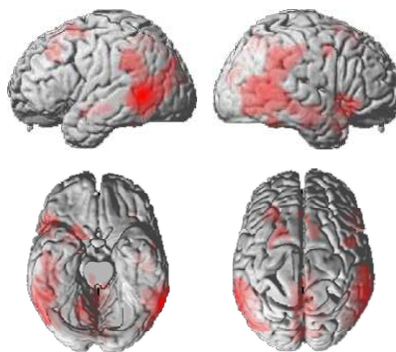


## Phonological Lexical Decision

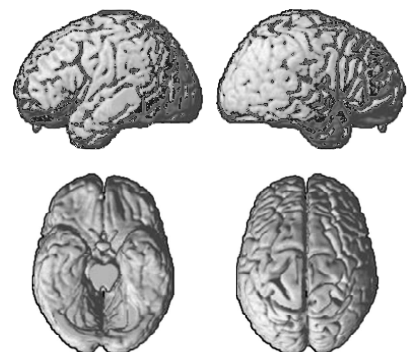
Nonimpaired Readers



Dyslexic Readers



Group Differences



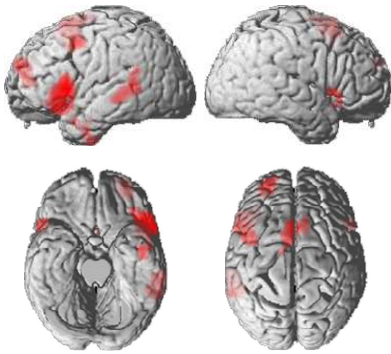
■ Positive Correlations  
■ NI > DYS

■ Negative Correlations  
■ DYS > NI

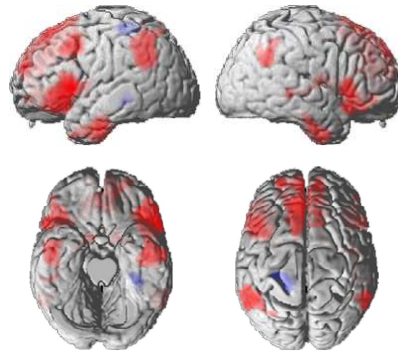
## Functional connectivity of the left inferior frontal gyrus $x = -46, y = 16, z = 6$

### Resting State

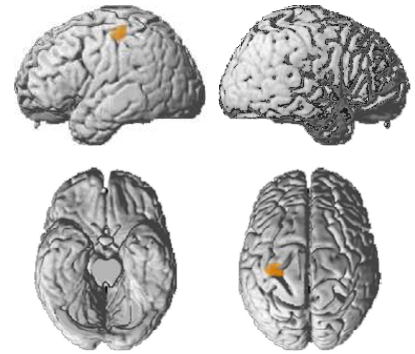
Nonimpaired Readers



Dyslexic Readers

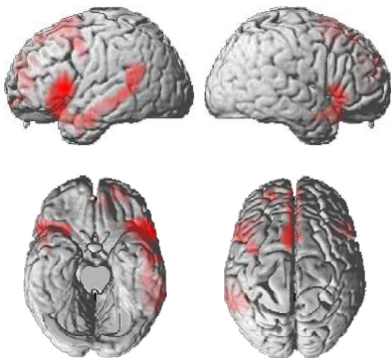


Group Differences

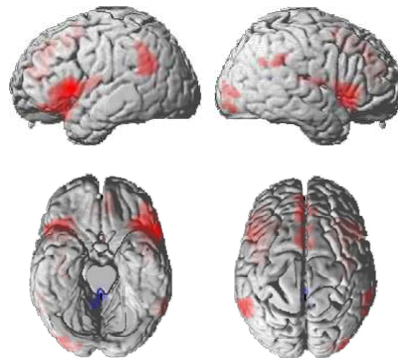


### Logographic Cues

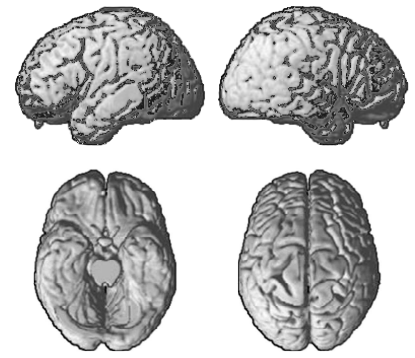
Nonimpaired Readers



Dyslexic Readers

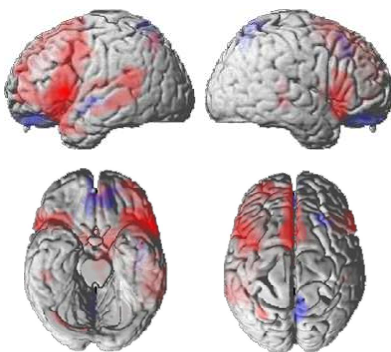


Group Differences

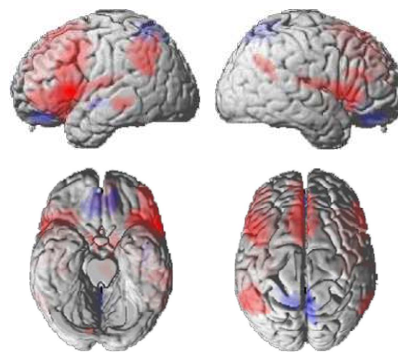


### Phonological Lexical Decision

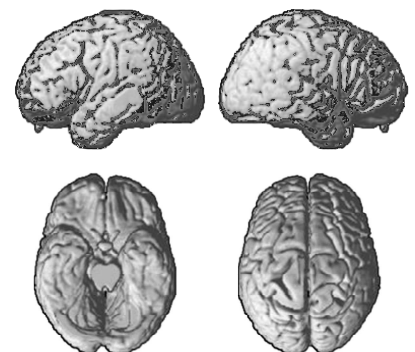
Nonimpaired Readers



Dyslexic Readers



Group Differences



■ Positive Correlations  
■ NI > DYS

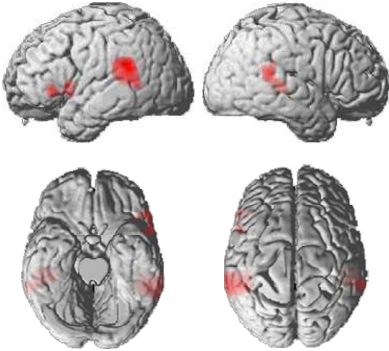
■ Negative Correlations  
■ DYS > NI



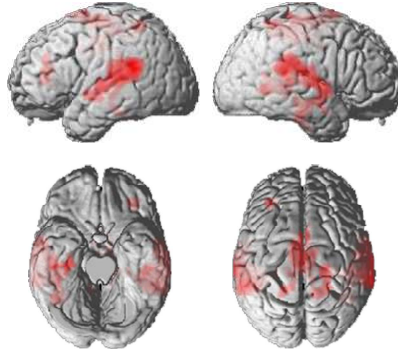
# Functional connectivity of the left superior temporal gyrus $x = -52, y = -44, z = 20$

## Resting State

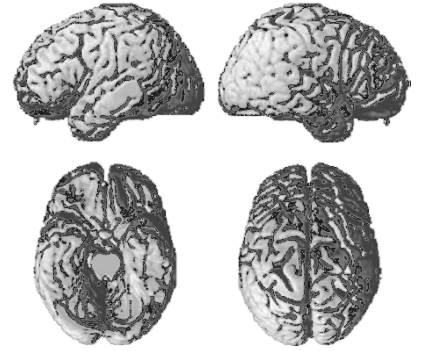
Nonimpaired Readers



Dyslexic Readers

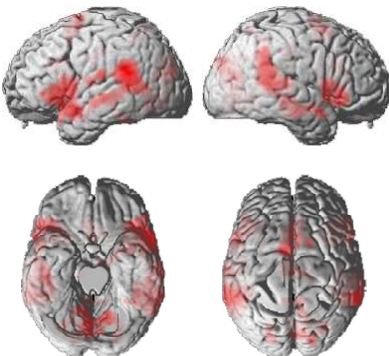


Group Differences

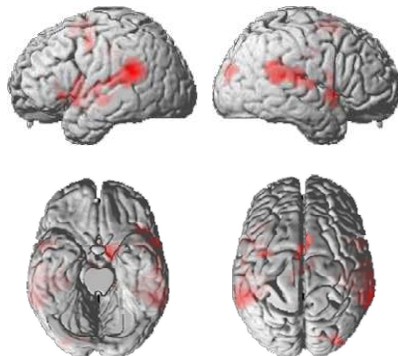


## Silent Reading

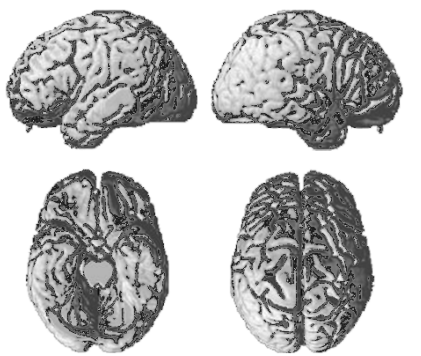
Nonimpaired Readers



Dyslexic Readers

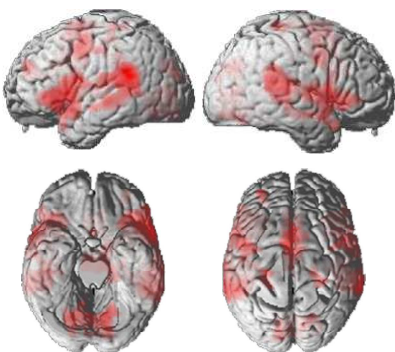


Group Differences

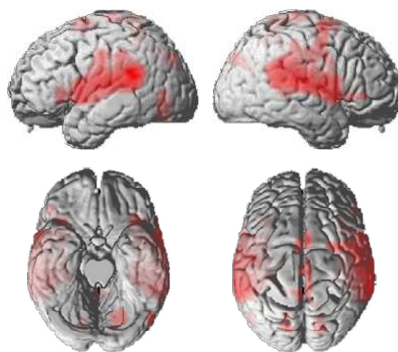


## Phonological Lexical Decision

Nonimpaired Readers



Dyslexic Readers



Group Differences



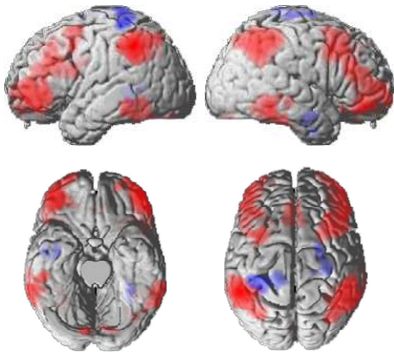
■ Positive Correlations  
■ NI > DYS

■ Negative Correlations  
■ DYS > NI

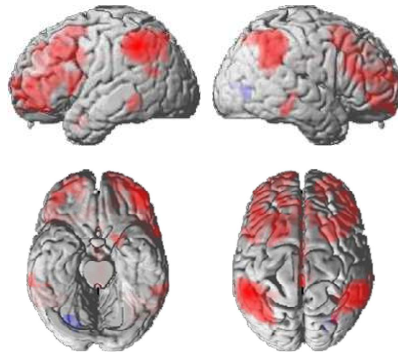
# Functional connectivity of the left inferior parietal lobe $x = -52, y = -46, z = 44$

## Resting State

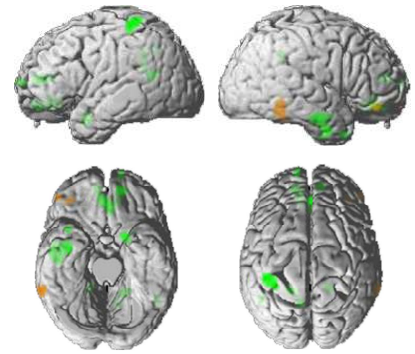
Nonimpaired Readers



Dyslexic Readers

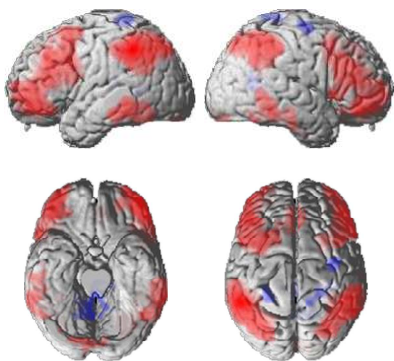


Group Differences

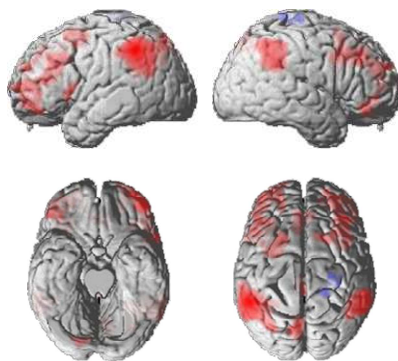


## Silent Reading

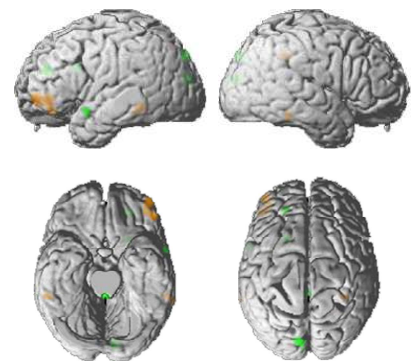
Nonimpaired Readers



Dyslexic Readers

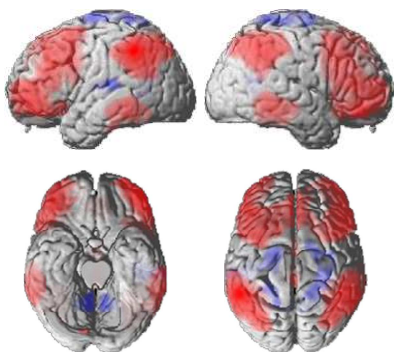


Group Differences

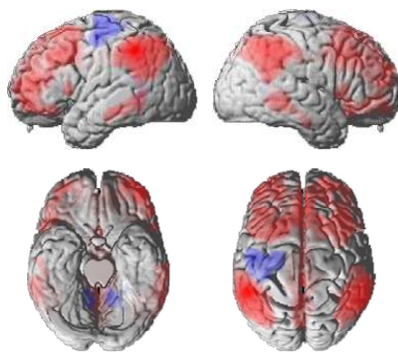


## Phonological Lexical Decision

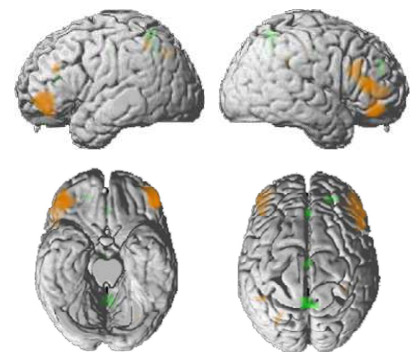
Nonimpaired Readers



Dyslexic Readers



Group Differences



Positive Correlations

Negative Correlations

NI > DYS

DYS > NI

**Supplementary Table.** Brain-behavior correlations (pearson's *r*) for left hemispheric reading related connections.

Connection		Reading	Naming	Verbal IQ
FFG ⇔ L Cereb./OT	Rest	.16	.28	.06
	Silent reading	.66***	.42*	.46*
	Phon. Lex. Dec.	.58**	.37	.71***†
FFG ⇔ L IFG tr.	Rest	.55**	.27	.53**
	Silent reading	.62**	.28	.40*
	Phon. Lex. Dec.	.48**	.26	.49**
FFG ⇔ R precuneus	Rest	-.20	-.08	-.04
	Silent reading	-.49**	-.52**	-.42*
	Phon. Lex. Dec.	-.57**	-.48**	-.57**
ITG ⇔ L OT	Rest	.43*	.06	.33
	Silent reading	.65***	.47*	.53***
	Phon. Lex. Dec.	.28	.09	.25
ITG ⇔ L IFG op.	Rest	.56**	.48*	.29
	Silent reading	.64***	.57***†	.47*
	Phon. Lex. Dec.	.65***	.38*	.44*
ITG ⇔ L Prec.	Rest	-.48*	-.40*	-.50**
	Silent reading	-.32	-.36	-.41*
	Phon. Lex. Dec.	-.14	-.19	-.29
ITG ⇔ R IFG tr.	Rest	.57**	.51**	.52**
	Silent reading	.50**	.27	.47**
	Phon. Lex. Dec.	.67***†	.13	.52**
ITG ⇔ L IFG tr.	Rest	.54**	.11	.42*
	Silent reading	.57**	.21	.35
	Phon. Lex. Dec.	.59**	.15	.43*
MTG ⇔ L IFG orb.	Rest	.59**	.18	.19
	Silent reading	.54**	.31	.16
	Phon. Lex. Dec.	.18	.22	-.23†
MTG ⇔ R MFG	Rest	.47*	.17	.49*
	Silent reading	.51**	.11	.09
	Phon. Lex. Dec.	.23	-.05	.10
MTG ⇔ L Calc.	Rest	-.59**	-.31	-.46*
	Silent reading	-.58**	-.18	-.35
	Phon. Lex. Dec.	-.03	.04	-.04
MTG ⇔ L IFG op.	Rest	.41*	.15	.38
	Silent reading	.45*	.34	.37*
	Phon. Lex. Dec.	.35	.10	.20
STG ⇔ L IFG tr.	Rest	.55**	.31	.57**
	Silent reading	.65***	.33	.49**
	Phon. Lex. Dec.	.47*	-.13	.20



**Supplementary Table.** Continued.

IPL ⇔ L MFG orb.				
	Rest	.50**	.32	.52**
	Silent reading	.58**†	.37*	.42*
	Phon. Lex. Dec.	.54**	.22	.40*
IPL ⇔ R IFG orb.				
	Rest	.52**	.29	.44*
	Silent reading	.45*	.14	.50**
	Phon. Lex. Dec.	.71**	.26	.66**
IPL ⇔ R ITG				
	Rest	.61**	.59**	.64***
	Silent reading	.30	.31†	.24
	Phon. Lex. Dec.	.39*	.16	.48**
IPL ⇔ R Hipp.				
	Rest	-.58**	-.30	-.41*
	Silent reading	-.37*	.10†	-.14
	Phon. Lex. Dec.	-.38*	-.29	-.36
IPL ⇔ L Prec.				
	Rest	-.51**	-.27	-.39*
	Silent reading	-.47**	-.24	-.30
	Phon. Lex. Dec.	-.54**	-.15	-.48*
IPL ⇔ L ACC				
	Rest	-.34	-.21	-.13
	Silent reading	-.56**	-.43*	-.66***†
	Phon. Lex. Dec.	-.50**	-.05	-.53**
IPL ⇔ L Post. Cent.				
	Rest	-.48*	-.18	-.48*
	Silent reading	-.01†	-.10	.08
	Phon. Lex. Dec.	.29	.07	.12
IFG ⇔ L MTG peak				
	Rest	.55**†	.49*	.46*
	Silent reading	.69***	.22	.57**
	Phon. Lex. Dec.	.49**	-.09	.30
IFG ⇔ L MTG subcl.				
	Rest	.45*	.22	.33
	Silent reading	.33	-.06	.07
	Phon. Lex. Dec.	.30	.09	-.05†
IFG ⇔ SMA				
	Rest	.37	.19	.38
	Silent reading	.48**	.39*	.29
	Phon. Lex. Dec.	.48*	.20	.44*
IFG ⇔ R rol. operc.				
	Rest	-.35	-.13	-.19
	Silent reading	-.49**	-.14	-.45*
	Phon. Lex. Dec.	-.57**	-.47*	-.54**
IFG ⇔ R AG.				
	Rest	-.55**	-.53**	-.49*
	Silent reading	-.28	-.35	-.25
	Phon. Lex. Dec.	-.39*	-.46*	-.31
IFG ⇔ L IPL/AG				
	Rest	-.55**	-.51**	-.47*
	Silent reading	-.31	-.29	-.32
	Phon. Lex. Dec.	-.39*	-.28	-.11

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , †  $p < .05$  in partial correlation controlling for group factor.