Supplemental material for Wilson et al., Neural correlates of syntactic processing in the non-fluent variant of primary progressive aphasia

Supplemental Table 1 Brain regions modulated by syntactic complexity in patients with non-fluent PPA

Brain region	MNI coordinates			Volume (mm^3)	Max *t*	*p*
	x	*y*	*z*			
Left anterior STG	–58	6	–12	1104	5.40	0.11†
Right mid MTG	61	–30	7	1200	6.66	0.08†

MNI coordinates are centers of mass. † Neither of the clusters shown were significant after correction for multiple comparisons based on Gaussian random field theory.

Supplemental Table 2 Brain regions modulated by reaction time on correct trials in controls

Brain region	MNI coordinates			Volume (mm^3)	Max *t*	*p*
	x	*y*	*z*			
Bilateral frontal regions	N/A	N/A	N/A	74000	7.66	< 0.001
Left dorsal posterior IFG and IFS	–38	6	28		7.59	
Left anterior insula	–30	22	2		7.32	
Supplementary motor area	–8	14	50		6.24	
Right dorsal posterior IFG and IFS	38	8	28		6.31	
Left temporal and parietal regions	–28	–61	37	38552	6.58	< 0.001
Left superior parietal lobule	–16	–64	54		6.58	
Left posterior MTG	–54	–38	0		5.70	
Left middle occipital gyrus	–50	–72	6		5.70	
Thalamus and posterior midbrain	0	–10	6	11472	6.00	< 0.001
Right posterior MTG and middle occipital gyrus	42	–74	20	6896	6.37	< 0.001
Right insula	38	25	1	6080	8.60	< 0.001

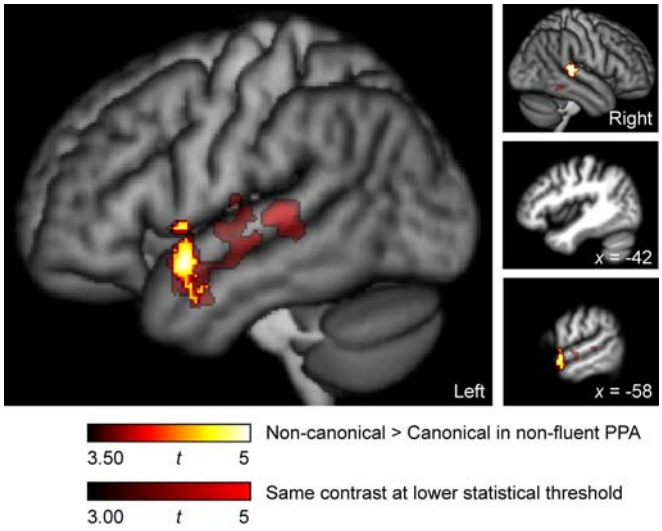
MNI coordinates for clusters are centers of mass, whereas MNI coordinates for multiple regions within a cluster are local maxima.

Supplemental Table 3 Brain regions modulated by reaction time on correct trials in patients with non-fluent PPA

Brain region	MNI coordinates			Volume (mm^3)	Max *t*	*p*
	x	*y*	*z*			
Left middle occipital gyrus	–30	–73	30	2536	8.32	< 0.001
Right posterior MTG	46	–60	11	1608	10.70	0.005

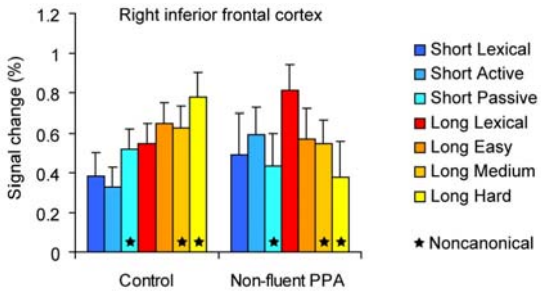
MNI coordinates are centers of mass.

Supplemental Figure 1



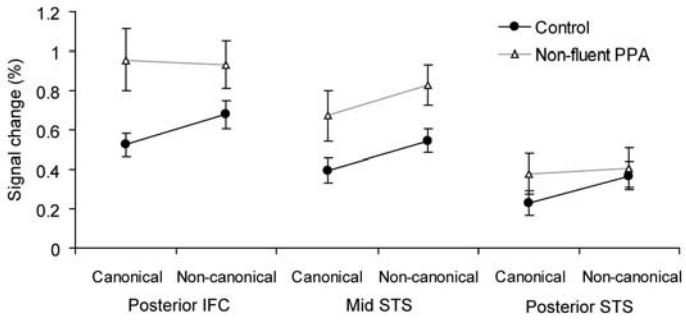
Supplemental Figure 1 Regions modulated by syntactic complexity in non-fluent PPA. Regions activated for non-canonical versus canonical sentences in patients (N = 8) at voxelwise p < 0.005 with an arbitrary minimum cluster size of 100 mm^3 (hot), and at p < 0.01 with an arbitrary minimum cluster size of 50 mm^3 (red). The data are shown at this lower threshold because at p < 0.005, the clusters shown did not survive correction for multiple comparisons based on Gaussian random field theory. Note that this figure should not be directly compared to Fig. 3, because there were many less patients than controls.

Supplemental Figure 2



Supplemental Figure 2 Signal change by condition in non-fluent PPA and in controls, in the region in the right posterior IFS that was modulated by syntactic complexity in controls and atrophic in non-fluent PPA. Similar to the left posterior IFC, signal in this homologous region was modulated by syntactic complexity in controls but not in patients.

Supplemental Figure 3



Supplemental Figure 3 Mean signal change in canonical and non-canonical conditions in non-fluent PPA and in controls. Location of ROIs are shown in Fig. 4. These graphs summarize the data shown in Fig. 5, but as in the imaging contrasts, the seven conditions are consolidated into two: canonical and non-canonical.