

Figure S1. The W measure of ROI-to-ROI DFC largely reflects the balance of positive and negative coefficients from ROI A to ROI B, which is captured by the PR measure. Points indicate approximately 10,000 measurements of ROI-to-ROI DFC between the DAN and VOC. Yellow line indicates best linear fit. W and PR are highly correlated at $r = 0.79$, which corresponds to $\sim 60\%$ shared variance. Because a coefficient's sign is less subject to estimation error than its magnitude, we considered PR as the more accurate measure of ROI-to-ROI DFC.

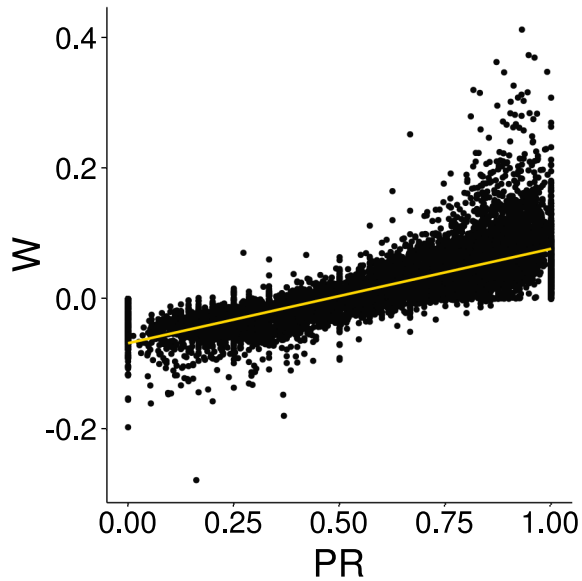
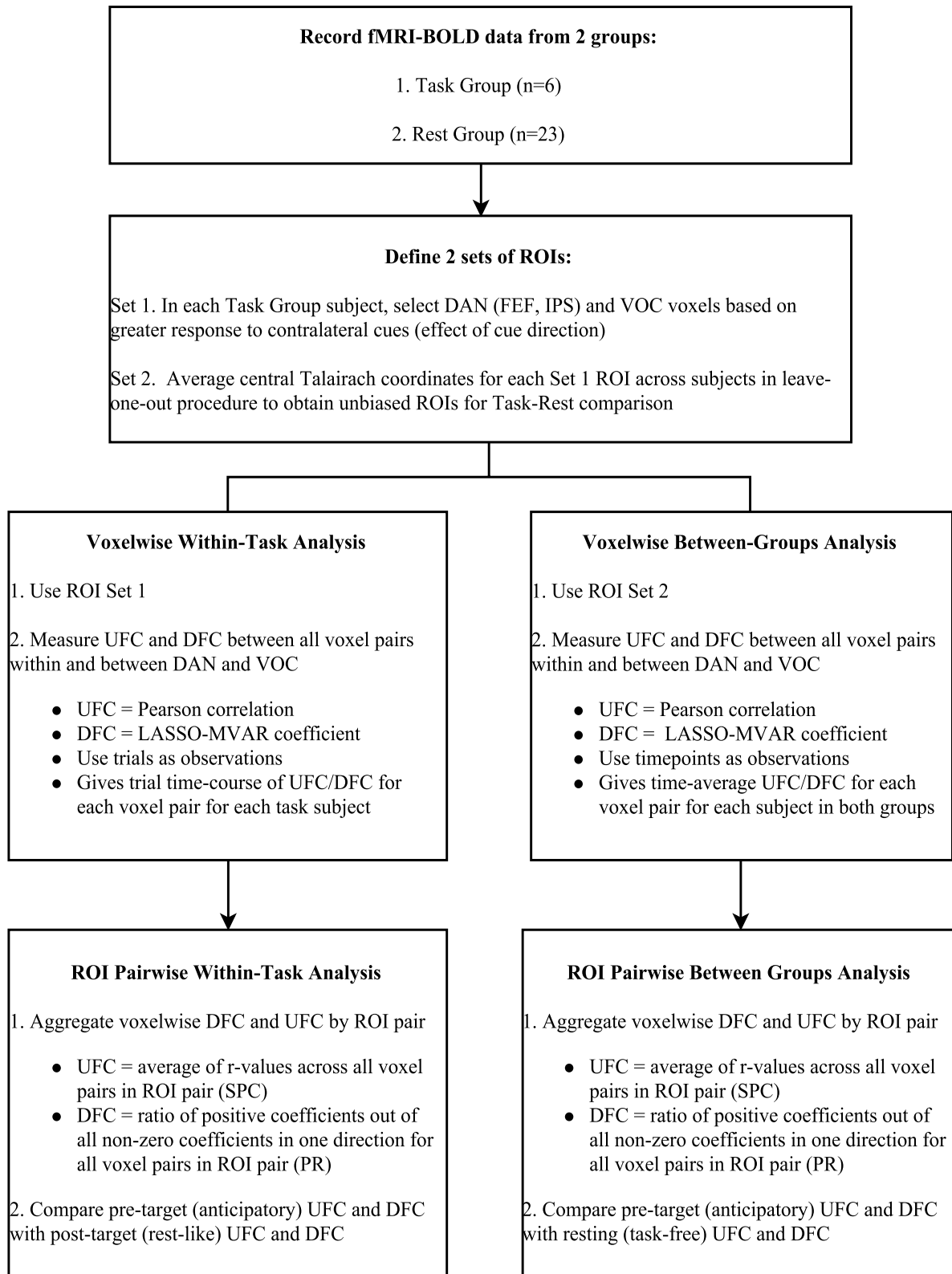


Figure S2. Flowchart describing the analysis steps.



Tables S1-S6. Comparisons of ANOVAs computed with the aov function and ANOVAs derived from multi-level models using the lme4 package in R for the between-groups analyses in which the condition factor (cond) was unbalanced. Multi-level models, which are robust to unbalanced designs, agree strongly with the mixed ANOVAs computed with aov.

Supplementary Table 1

	DAN-VOC DFC conditionXdirectionXhemisphere			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	15.43	<0.001	15.43	<0.001
dir	77.99	<0.001	100.30	<0.001
hemi	8.79	<0.01	9.11	<0.01
condXdir	9.50	<0.01	11.87	<0.001
condXhemi	0.91	n.s.	0.94	n.s.
dirXhemi	0.34	n.s.	0.35	n.s.
condXdirXhemi	4.00	n.s.	2.84	n.s.

Supplementary Table 2

	Within-DAN DFC conditionXdirectionXhemisphere			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	4.69	<0.05	4.69	<0.05
dir	4.89	<0.05	4.95	<0.05
hemi	8.02	<0.01	0.48	n.s.
condXdir	0.33	n.s.	0.36	n.s.
condXhemi	7.52	<0.05	7.68	<0.01
dirXhemi	3.30	n.s.	1.67	n.s.
condXdirXhemi	0.28	n.s.	0.02	n.s.

Supplementary Table 3

	DAN-VOC UFC conditionXhemisphere			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	1.82	n.s.	1.82	n.s.
hemi	30.17	<0.001	5.94	<0.05
condXhemi	11.80	<0.01	11.80	<0.01

Supplementary Table 4

	Within-DAN UFC conditionXhemisphere			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	4.69	<0.05	4.70	<0.05
hemi	16.01	<0.001	0.62	0.44
condXhemi	17.52	<0.001	17.52	<0.001

Supplementary Table 5

	DAN-VOC DFC conditionXdirectionXpair			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	15.43	<0.001	15.43	<0.001
dir	77.99	<0.001	270.06	<0.001
pair	6.04	<0.001	4.62	<0.001
condXdir	9.50	<0.01	31.95	<0.001
condXpair	1.28	n.s.	1.30	n.s.
dirXpair	3.53	<0.001	3.19	<0.001
condXdirXhemi	1.61	n.s.	1.36	n.s.

Supplementary Table 6

	DAN-VOC UFC conditionXpair			
	aov		lme4	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
cond	1.82	n.s.	1.82	n.s.
pair	5.19	<0.001	4.38	<0.001
condXpair	2.1	<0.01	2.10	<0.01