Residual BOLD Signal

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Sentence comprehension speed is affected by plausibility, with less plausible sentences leading to slower response times. The left frontal region is the only area sensitive to plausibility across all contrasts, and it shows the strongest pattern of agreement between explicit judgment and pre-set plausibility level:

\[ \text{Agreement between explicit judgment and pre-set plausibility level:} \]

\[ \text{Plausible} = 0.8 \]

\[ \text{Implausible} = 0.3 \]

These findings maximize earlier work showing substantial influences of task-specific variables on BOLD signal amplitude (e.g., Caplan et al., 2006).

The specific interactions with task and the correlational analyses suggest:


\[ \text{Correlational analyses also showed that responses to fine-grained plausibility variations within conditions are identical to the inter-condition pattern:} \]

\[ \text{Plausible vs. Implausible} \]

\[ \text{BOLD signal increased with increasing plausibility.} \]

\[ \text{Implausible vs. Implausible} \]

\[ \text{BOLD signal decreased with increasing implausibility.} \]

\[ \text{Implausible vs. Implausible} \]

\[ \text{BOLD signal increased with increasing implausibility.} \]