Using fMRI to detect conscious awareness

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“The limits of consciousness are hard to define satisfactorily and we can only infer the self-awareness of others by their appearance and their acts”

Plum and Posner, *The Diagnosis of Stupor and Coma*, 1966
Speech-specific responses are common in disorders of consciousness

Coleman et al., Brain, 2009
Speech-specific responses in VS and MCS

Coleman et al., Brain, 2009
“….Imagine playing tennis”
Instructions:
“If you want to say ‘yes’, imagine playing tennis”

“Is your husband called Charlie?”
“Is your husband called Terry?”
“Is your dog called Terry?”
“Is your dog called Charlie?”
TENNIS IMAGERY

HEALTHY VOLUNTEERS

VEGETATIVE PATIENT

Owen et al., Science, 313, 1402, 2006
Monti/Vanhaudenuyse et al., NEJM, 2010
“The limits of consciousness are hard to define satisfactorily and we can only infer the self-awareness of others by their appearance and their acts”

Plum and Posner, *The Diagnosis of Stupor and Coma*, 1966
Thanks…

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