Title: The obedient mind and the volitional brain: a neural basis of preserved sense of agency under coercion

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Abstract:

Milgram’s classical studies famously suggested a widespread willingness to obey authority, even to the point of inflicting harm. Important situational factors supporting obedience have been established. Relatively little work has focussed on how coercion affects individual cognition, or on identifying, which cognitive factors drive inter-individual differences in the extent to which people yield to coercion. We have previously shown that coercion reduces the sense of agency, i.e., the feeling that one controls one’s actions and their consequences. Here, we used fMRI to investigate the neural systems that are associated with changes in sense of agency under coercion. Participants either freely chose, or were instructed by the experimenter, to give mildly painful electric shocks to another participant, or to refrain from doing so. We used an implicit measure of sense of agency, based on the perceived interval between an action and its outcome, to measure the degree to which each of 25 participants sense of agency was affected by coercion. Greater activity in the medial frontal gyrus was associated with relatively preserved sense of agency under coercion. A similar effect was found using explicit responsibility ratings. Our findings suggest that volitional processes during action planning and execution help to preserve a strong sense of agency under coercion. Results are also discussed based on how the neural networks of sense of agency differ in paradigms involving socially relevant and irrelevant actions.