

MARKETING COLLOQUIA

SPRING 2016

Emily Falk

Associate Professor of Communication

Annenberg School for Communication, University of Pennsylvania

Thursday, April 7, 2016

Where: 741 JMHH

When: 12:00 PM to 1:20 PM

NEURAL PREDICTORS OF BEHAVIOR CHANGE

ABSTRACT: Mass media can powerfully affect health decision-making. Pre-testing through focus groups or surveys is a standard, though inconsistent, predictor of effectiveness. Converging evidence demonstrates that activity within brain systems associated with self-related processing can predict individual behavior in response to health messages. Preliminary evidence also suggests that neural activity in small groups can forecast population-level campaign outcomes. Less is known about the psychological processes that link neural activity and population-level outcomes, or how these predictions are affected by message content. We exposed 50 smokers to antismoking messages and used their aggregated neural activity within a 'self-localizer' defined region of medial prefrontal cortex to predict the success of the same campaign messages at the population level (n=400 000 emails). Results demonstrate that: (i) independently localized neural activity during health message exposure complements existing self-report data in predicting population-level campaign responses (model combined R² up to 0.65) and (ii) this relationship depends on message content—self-related neural processing predicts outcomes in response to strong negative arguments against smoking and not in response to compositionally similar neutral images. These data advance understanding of the psychological link between brain and large-scale behavior and may aid the construction of more effective media health campaigns.