

Title: Priming Pathogens: Effects on Culture and Perceptions

Presenter: Cindy Teng

Faculty Advisor: Joan Y. Chiao, Ph.D.

The culture-gene coevolution theory describes a positive correlation between geographical pathogen prevalence and the cultural attribute of collectivism across nations. Regions with higher prevalence of pathogens were associated with populations that display higher levels of collectivism (Fincher et al., 2008; Chiao & Blizinsky, 2009). Certain collectivistic behaviors such as heightened vigilance and avoidance of foreign pathogen risks could reduce introduction of new pathogens into one's community, which could be evolutionarily adaptive in regions of high pathogen prevalence (Tanaka et al., 2002; Hamamura & Park, 2010). The exposure to and one's perception of environmental health risks such as transmission of infectious diseases could influence one's behavior and attitudes, which could ultimately influence the development of certain cultural values. The current study examined the directionality of the pathogen-culture correlation on an individual level and determined if simulated pathogen risks elicit different cultural attitudes (individualism or collectivism), behaviors towards diseases, and levels of anxiety. Participants were randomly assigned to receive either health- or pathogen-salient pictorial primes. The pictorial pathogen prime consisted of 60 images of sections of the human body with visible symptoms of infectious diseases while the health prime consisted of 60 images of corresponding healthy body parts. Participants then responded to essay prompts related to either healthy living or infectious disease epidemics. Following the essay prime, participants completed surveys measuring levels of collectivism, perceived vulnerability to disease, and anxiety. We hypothesized that compared to participants primed with health concepts, participants primed with pathogen risks would show higher levels of collectivism, germ aversion, and state-dependent anxiety. This study examined how simulated exposure to pathogen risks influences development of cultural values, attitudes towards diseases, and levels of anxiety. The findings from this research could contribute to our understanding of diversity and has implications in global health.