

The University of Hong Kong  
Department of Psychology

*Departmental Seminar*

***Adopting a Data Science Approach for Well-Being Research:  
Where're We and What's Next***

Date: November 23, 2015 (Monday)  
Time: 12:00 noon – 1:00 p.m.  
Venue: Room 813, 8/F, The Jockey Club Tower, Centennial Campus, HKU  
Speaker: Dr. Chan Man Pui Sally  
University of Illinois at Urbana - Champaign

Understanding human social behaviors resembles checking details (finding a pixel) of high-resolution pictures. However, the high-resolution pictures are often too expensive for researchers. The main objective of this project is to investigate whether a data science approach can generate insights in an accurate and timely manner. Two studies were carried out to take forward the knowledge of using Facebook Likes to understand individuals' personality characteristics to forecast well-being for millions of people who never answer anything.

In Study 1, we used a large national database of 25,568 survey responses and about 2 millions forecasts to scrutinize the relationships between cooperation and well-being in highly unequal (equal) environments and the underlying mechanism of such relationships. The analyses of survey data and forecasts showed consistent results that inequalities hamper well-being among people who act cooperatively. In highly unequal environments, people higher in cooperation are more sensitive to aversive outcomes and thus reduce their happiness. In Study 2, we further examined whether a machine learning model can address the sampling challenges for public health research. Sample sizes, ranging from 1,000 to 30,000, were used to compute the survey-based and forecast-based state (level) averages of high blood pressure, diabetes, smoking, and binge drinking. The model evaluation results showed that the forecast-based state averages are highly

correlated with public health statistics, whereas the survey-based state averages are only weakly to moderately correlated with public health statistics.

