Title:
BIAS ON YOUR SOCIAL MEDIA BRAND PAGE: HOW DO WE MEASURE UNDERLYING BRAND FAVORABILITY AND IDENTIFY POTENTIAL BIAS IN SENTIMENT METRICS?

Abstract:
Brands invest in and cultivate social media communities in an effort to promote to and engage with consumers. This allows marketers both to facilitate word-of-mouth effects and to extract consumer insights. However, research has shown that online word-of-mouth appearing on social media is often subject to bias. Typically, this bias is negative and, if word-of-mouth affects brand performance, has the potential to damage the brand. In this paper, we analyze the behavior of 170 million unique users pertaining to the Facebook fan pages of more than 3000 brands to measure bias and identify factors associated with the presence of bias. We present methodology that measures latent brand favorability based on observed likes and comments on the brand’s Facebook page, adjusting for any positivity (or negativity) bias exhibited by individual users based on their behavior across brands. Research has shown that users vary in their tendencies to express positive opinions. This variation in users’ positivity can be a source of bias in the brand’s social media community. We validate our brand favorability measure against Millward Brown’s BrandZ rankings, which is based on both the financial performance of brands and traditional brand tracking surveys. We then measure bias as the difference between observed social media sentiment and our proposed brand favorability measure and examine how bias differs across brand pages. We specifically consider the effects of various factors related to the quality of the brand community (e.g., number of followers, number of comments and likes, variance in sentiment), brand traits (e.g., industry sector, size of firm, general popularity), and brand activity (e.g., posting behavior, news mentions). We find that smaller brand communities with limited opinion variance are positively biased. This poses challenges for brands in terms of how they can leverage their brand communities.

Short bio:
Kunpeng Zhang (KZ) is a researcher in the area of large-scale data analysis with particular focuses on mining social media data through machine learning, network analysis, and natural language processing techniques. He is currently Assistant Professor in department of Information Systems at the Smith School of Business, University of Maryland, College Park. He received his Ph.D. in Computer Science from Northwestern University in 2013. He published many conference and journal papers in the area of social media, text mining, network analysis, and information systems. He serves as program committees for many international conferences and currently is Associate Editor for Electronic Commerce research journal. For more information, please see his website: http://terpconnect.umd.edu/~kpzhang/