

Big data on social media platform reveals positive facial expressions of female visitors in urban forests

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A study led by Prof. He Xingyuan from Urban Forests and Wetlands in Northeast Institute of Geography and Agroecology of the Chinese

Academy of Sciences assessed the mental satisfaction of urban forest visitors using big data from social network service for the first time. The results were published online in *Forests*.

For modern city dwellers, getting close to nature can improve their well-being and health. In the field of medicine, studies assess the well-being of people through an urban [forest](#) experience by measuring physiological activities such as [blood pressure](#), heart rate, spit enzyme, and subgenual prefrontal cortex activation. To know mental status and emotional preference of urban-forest visitors, questionnaire has always been the primary approach.

In this study, the researchers focused on capital cities, Harbin, Changchun, and Shenyang, in Northeast China. Within each city, they chose three urban forest parks of different distances from downtown as the locations for [data collection](#). The data was obtained from Sina Weibo, the social media platform where selfies were uploaded up by visitors with check-in geographical records during the National Day holiday of 2017.

The researchers analyzed the photos by a software that has been trained to have artificially intelligence to recognize Asian people faces and give scores for eight basic facial expressions. As a result, a big database with 935 photos and 7,480 scores of facial expressions was established and analyzed using the Friedman's test for stratifying effects of cities and locations and the maximum likelihood regression with multiple independent variables of demographics.

The results revealed that visitors showed lower scores in negative expressions with the increase of distance from the forest park to downtown, and female visitors generally showed positive emotional expressions in [urban forests](#) less than 10 km from the downtown but male visitors mostly showed careless expressions.

More information: Hongxu Wei et al. Facial Expressions of Visitors in Forests along the Urbanization Gradient: What Can We Learn from Selfies on Social Networking Services?, *Forests* (2019). [DOI: 10.3390/f10121049](https://doi.org/10.3390/f10121049)

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