# Urban*: Crowdsourcing for the Good of London

Daniele Quercia
Yahoo! Research, Barcelona
dquercia@yahoo-inc.com

## ABSTRACT

For the last few years, we have been studying existing social media sites and created new ones in the context of London. By combining what Twitter users in a variety of London neighborhoods talk about with census data, we showed that neighborhood deprivation was associated (positively and negatively) with use of emotion words (sentiment) [2] and with specific topics [5]. Users in more deprived neighborhoods tweeted about wedding parties, matters expressed in Spanish/Portuguese, and celebrity gossips. By contrast, those in less deprived neighborhoods tweeted about vacations, professional use of social media, environmental issues, sports, and health issues. Also, upon data about 76 million London underground and overground rail journeys, we found that people from deprived areas visited both other deprived areas and prosperous areas, while residents of better-off communities tended to only visit other privileged neighborhoods - suggesting a geographic segregation effect [1, 6]. More recently, we created and launched two crowdsourcing websites. First, we launched `urbanopticon.org`, which extracts Londoners' mental images of the city. By testing which places are remarkable and unmistakable and which places represent faceless sprawl, we were able to draw the recognizability map of London. We found that areas with low recognizability did not fare any worse on the economic indicators of income, education, and employment, but they did significantly suffer from social problems of housing deprivation, poor living conditions, and crime [4]. Second, we launched `urbangems.org`. This crowdsources visual perceptions of quiet, beauty and happiness across the city using Google Street View pictures.

The aim is to identify the visual cues that are generally associated with concepts difficult to define such beauty, happiness, quietness, or even deprivation. By using state-of-the-art image processing techniques, we determined the visual cues that make a place appear beautiful, quiet, and happy [3]: the amount of greenery was the most positively associated visual cue with each of three qualities; by contrast, broad streets, fortress-like buildings, and council houses tended to be negatively associated. These two sites offer the ability to conduct specific urban sociological experiments at scale. More generally, this line of work is at the crossroad of two emerging themes in computing research - a crossroad where "web science" meets the "smart city" agenda.

## Categories and Subject Descriptors

H.4 [**Information Systems Applications**]: Miscellaneous

## Keywords

Social Media, Web Science, Urban Informatics

## 1. REFERENCES

[1] N. Lathia, D. Quercia, and J. Crowcroft. The Hidden Image of the City : Sensing Community Well-Being from Urban Mobility. In *Pervasive Conference*, 2012.

[2] D. Quercia, J. Ellis, L. Capra, and J. Crowcroft. Tracking "Gross Community Happiness" from Tweets. In *ACM CSCW*, 2012.

[3] D. Quercia, N. Ohare, and H. Cramer. Aesthetic Capital: What Makes London Look Beautiful, Quiet, and Happy? *To Appear*, 2013.

[4] D. Quercia, J. P. Pesce, V. Almeida, and J. Crowcroft. Psychological Maps 2.0: A web engagement enterprise starting in London. In *ACM WWW*, 2013.

[5] D. Quercia, D. O. Séeaghda, and J. Crowcroft. Talk of the City: Our Tweets , Our Community Happiness. In *AAAI ICWSM*, 2012.

[6] C. Smith, D. Quercia, and L. Capra. Finger On The Pulse: Identifying Deprivation Using Transit Flow Analysis. In *ACM CSCW*, 2013.