HOW DO I LOOK IN THESE TWEETS? GAUGING WELL-BEING THROUGH "CALORIC CONTENT" OF TWEETS

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From hedonometers [1] to feel-o-meters (the Fühlometer, or Stimmungsgasometer) [2] to Gallup polls [3], tools attempting to measure social and psychological well-being on a population level are important for public policy purposes and public health surveillance [4]. These tools vary widely in the types of data they collect and collection methods. The source data may simply be obtained by surveying [4], or the data collection process may be as intricate as using area-wide surveillance cameras to measure smile-to-frown ratios at any given time in a city [2]. With the growing adoption of social media around the world, public data created directly by the population of interest (and without survey bias) are now available en mass for analysis. With these data, word-based measures of emotional valence— perhaps more intuitively thought of as "happiness"— have shown great value in observing major world events [1], and have additionally shown significant geospatial correlation to sociopolitical indices [5]. Much in this manner, we develop measures of social input and output of "caloric energy" in Twitter from text-extracted phrases [6] relating to food and physical activity. We find that our measures are strong geospatial correlates with surveyed demographics, and moreover, that when they are combined to a true input/output, or "flux" measure of energy, are often most powerful in correlation.

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