

In Search of Alignment between Survey Responses and Social Media Posts

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The benefits of tracking public opinion by analyzing social media posts are potentially great, especially if such measures might sometimes stand in for certain survey measures. An important step in establishing the plausibility of this approach is demonstrating that patterns of survey responses and social media posts change over time in much the same way, i.e., their movement is aligned. An early demonstration that the sentiment of tweets containing the word “jobs” aligned with consumers’ responses to survey questions about their economic expectations (O’Connor, et al., 2010) created enthusiasm for the approach. In the first part of the talk, I present our efforts (Conrad, et al., 2021) to extend this pattern to more recent years and our discouraging conclusion that that the original relationship was likely a chance occurrence. In the second part of the talk I present our current work in which we focus on when alignment might be more (and less) likely to be observed, namely when (1) survey responses vary enough over time so that there is movement with which social media might align, (2) the social media corpus includes content semantically related to particular survey questions, and (3) the social media metric makes sense for the survey question, e.g., volume of all posts when the survey question concerns awareness of a topic, but volume of negative posts when it measures negative and positive opinions. To test these proposals, we assess alignment between responses (n=76,919) to each of the 23 questions in the US Census Tracking Survey collected between January and September 2020 and a corpus of tweets (n=3,499,628) from the same time-period containing text relevant to the 2020 US decennial census. We are largely accurate in predicting when alignment will be observed (for about 1/3 of the questions) and when it will not. These results point to a way forward in understanding when and how social media can credibly be used to measure public opinion and thinking.