Hashtag Quarantine: The Psychological Effects of Quarantine on Twitter Users

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Introduction:

"The very ephemerality of hashtags is what makes them easy and compelling to use in a fast-moving communication medium like Twitter", ~~a statement~~ said ~~by~~ the inventor of hashtags, Chris Messina, ~~has~~ highlighted ~~that the use of~~ hashtags have facilitated the ability to efficiently search and find a massive amount of information ~~in such a fast pace environment like Twitter~~. (Cooper, B., 2020) Hashtags have become an integral part of Twitter acting as a categorical device used to label tweets and as an effective term to ~~plug into the search engine of twitter~~ to find desired information. Twitter ~~has recently grown into a platform of more than just entertaining communication, but~~ a powerful platform where users can spread awareness and invoke change throughout our society by bringing current, sometimes uncomfortable issues to focus. This essay will aim to analyze a corpus of tweets with the hashtag #quarantine in order to ~~find evidence of negative~~ psychological effects caused by prolonged isolation.

Methods:

The collection of tweets were compiled from a larger sample generated by a website, "TAGS", that had a developed and functional code when paired with Google Sheets. "TAGS" generated a spreadsheet of tweets contingent on user entered information. For this paper, the tweets chose by the program had to meet the following criteria: had to have #Quarantine within the tweet, the tweet had to be posted on Monday the 22nd of 2020, and the user posting the tweet had to have a following greater than or equal to 10000. The criterion of limiting the following base of the user was created inorder to focus on tweets that were expected to reach a larger audience ~~and therefore be more relatable~~. With these criteria, "TAGS" generated a list of 1327 tweets while also filtering out the retweets. Next a randomized sample of 96 tweets were chosen using the randomized sorting tool within Google Sheets.

Lastly, I coded the list of 96 tweets into ~~differentiable~~ categories, keeping in mind the mechanics of coding which emphasizes the use of codes that are separated into descriptive and analytic. Descriptive codes answer the questions of "What is going on?", "What are people doing?", "What is the person saying?", while the analytic codes answer "What do these actions and statements take for granted?" and "How do structure and context serve to support, maintain, impede or change these actions and statements~~.~~ (Gibbs, G. R., 2007) With this ~~mechanic~~ in mind I created seven categories that aimed to answer both the descriptive and analytic questions while also focusing on topic-specific questions. The codes developed were: the rationale behind the tweet (emotional or logical), who the poster was (individual or a organization), the type of communication the tweet sought to achieve (social, advertisement, or informative), the type of activity ~~done during~~ quarantine (outdoor or indoor), the user's stance on staying home (for or against), whether the user wants to stay in quarantine or look to reopen, and finally the users age. Eventually, the user's age descriptive category got thrown out for the study due to the high amount of organizational tweets that could not be age identified ~~and therefore inconclusive to make references to an entire population of twitter users~~. After all 96 tweets were coded, I created a variety of column charts, pie graphs, and pivots tables used to present the data in a clear, readable way.

Data Analysis:

In Figure 1, "Tweets Based on Emotion or Logic?", the column chart aims to show the

~~viewer the~~ distribution between the users whose rationale was primarily pathos or logos. The X
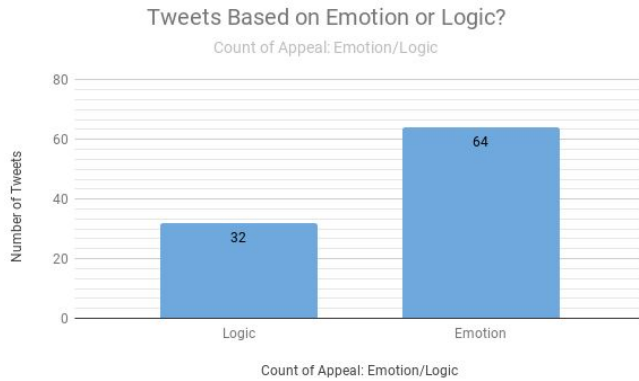
axis is code of the user's rationale while

the Y axis measures the number of

tweets. As highlighted by the chart, the

emotional appeal category is double the

logic appeal category indicating that

when making a tweet about quarantine

the majority of users have a primarily

emotional response. This alludes to the fact that quarantine can massively affect a person's
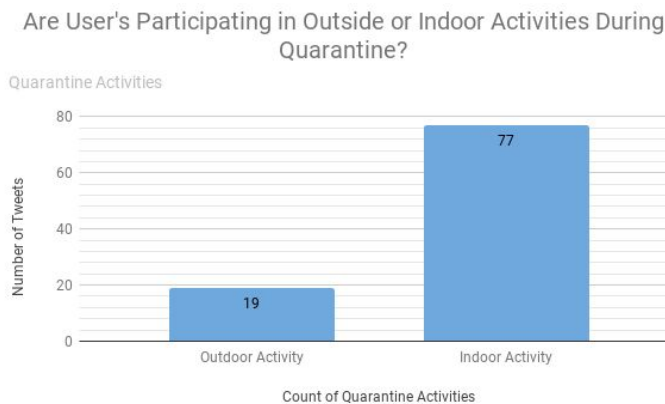
psychological state.

Figure 2, "Are User's Participating in

Outside or Indoor Activities During

Quarantine?", ~~emphasizes this idea~~

~~by showing the relationship between~~

~~those who decide to participate in an~~

~~indoor or outdoor activity during the~~

~~course of their individual quarantine.~~

~~Clearly,~~ the overwhelming majority of twitter users who use #quarantine are participating in

indoor activities. The indoor activities column can be divided by the outdoor activity column 4.05

times indicating a massive majority for indoor activity. Health organizations such as the CDC

have published information encouraging those who are living in an isolated confinement to

continue outdoor exercise as a healthy coping mechanism to the effects of quarantine, (Mental

Health and Coping During COVID-19., 2020). It has also been ~~studied~~ that, "The severity of

COVID-19 in an individual's home city predicts their life satisfaction, and this relationship is contingent upon individuals' existing chronic health issues and their hours of exercise." (Zhang StephenX., Wang YiFei, Rauch, A., & Wei Feng., 2020) This published report about life satisfaction one month into the COVID-19 outbreak in China furthers the notion that outdoor activity like exercise is vital to a sustained satisfaction of life especially during a quarantine, however figure 2 shows that the majority of user's are participating in indoor activity such as entertainment media alluding to possible negative psychological effects.

Lastly figure 3, a pivot table, compares the stance of those for or against quarantine with whether the user wants to reopen or stay in quarantine. As seen through the

COUNTA of Quarantine or Reopening?	User's stance on Staying Home		
Quarantine or Reopening?	Against	For	Grand Total
Quarantine	1	62	63
Reopening	31	2	33
Grand Total	32	64	96

pivot table, the majority of users who are for quarantine would like to stay in quarantine, while the majority of those against quarantine would like to look to reopen their community. There is an even spread amongst both categories of "Quarantine or Reopening?" with "User's stance on Staying Home". However, the user's for staying home and for quarantine are nearly double their contending options. The table further highlights that the majority of twitter users prioritize their safety during this time of the CoronaVirus pandemic. However, researches are publishing information that prolonged quarantine can be negative for one's mental health.

Discussion & Conclusion:

The CoronaVirus pandemic has completely shifted the global sphere, much of the population was forced into a state-mandated quarantine to fight the contagious spread of the infection. Isolated confinement has flipped priorities, a large amount of residents have lost their

job or are required to work remotely from the safety of individual's quarantine spaces, schools from elementary to university level has shut down sending all of their students home with virtual classes, the stock of the stores became increasingly low selling out of many necessities like toilet paper and hand sanitizers, and face masks are the new normal being highly encouraged and in some states mandatory when attending a public space. The data above was a small, randomized sample and cannot not accurately match every single community's thoughts with 100% confidence, however the data does give good insight to the emotions of those who are vocal on twitter. The tweets in the sample space contained motivational messages, resources of those struggling with continued isolations, complaints, opinions of the current global situation, and news related information.

For those who are or have been in quarantine, "Studies reported on general psychological symptoms, emotional disturbance, depression, stress, low mood, irritability, insomnia, post-traumatic stress symptoms (rated on Weiss and Marmar's Impact of Event Scale–Revised), anger, and emotional exhaustion. Low mood (660 [73%] of 903) and irritability (512 [57%] of 903) stand out as having high prevalence." (Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J., 2020) These attributes can be seen throughout the twitter analysis due to the large amount of tweets backed with an emotional rationale. Moreover, many of the tweets describe the concept of "the quarantine fifteen" which is a term used to describe the weight much of the population is gaining throughout quarantine due to stress-eating and boredom.

Obviously the effects of quarantine will differ from person to person and situation to situation. The CDC describes, "How you respond to the COVID-19 pandemic can depend on your background, your social support from family or friends, your financial situation, your health and emotional background, the community you live in, and many other factors. The changes

that can happen because of the COVID-19 pandemic and the ways we try to contain the spread of the virus can affect anyone." (Mental Health and Coping During COVID-19., 2020) Many people are experiencing loss of employment and therefore income which adds to the added stress of a pandemic and can lower the satisfaction of life. Support is extremely vital within our current term of quarantine and a variety of tweets within our sample space are talking about how important support is and encouraging users to check up on their friends, family, and neighbors.

So this poses the question, is quarantine really allowed? Many users have questioned the legality and ethics of a state-mandated quarantine referencing the right to freedom written in the constitution. However it has been noted, "Under any ethical tradition, well-designed, evidence-based quarantines are permissible. Individuals have freedom of movement only until they pose a significant risk to others. "(Gostin, L., 2020) State-mandated isolated confinement is a necessary and overall an ethical step to limit the spread of a sometimes fatal disease. Also, quarantine is a legal precaution that can be used to reduce danger. While it may seem that the 2020 quarantine is the first quarantine we have experienced, there have been other instances of quarantine specifically with the 2003 outbreak of SARS in primarily China and Canada. (Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J., 2020) This quarantine was proven successful and the majority of twitter users are for quarantine and value the health and safety of themselves and their neighbors.

However, there are user's who would like to look to reopen their communities and shift back into normal society with reopening business. In the United States of America, today (June 28, 2020) every state is reopening, however only seven of our fifty states meet the criteria to safely reopen. "They should see a two-week drop in coronavirus cases, indicating that the virus is actually abating. They should have fewer than four daily new cases per 100,000 people per

day — to show that cases aren't just dropping, but also below dangerous levels. They need at least 150 new tests per 100,000 people per day, letting them quickly track and contain outbreaks. They need an overall positive rate for tests below 5 percent — another critical indicator for testing capacity. And states should have at least 40 percent of their ICU beds free to actually treat an influx of people stricken with Covid-19 should it be necessary." (Lopez, G., 2020) This criteria was developed for the safety of our population and state governments in the US are disregarding the importance of quarantine. Residents of these communities are eager to get back to work and be able to shop and dine leading to dangerous effects. Some states have had to extend their phases of reopening or have had to fall back a phase due to unprecedented spikes in confirmed CoronaVirus cases.

Overall, the fear and effects of quarantine are affecting the psychological state of users at a negative rate and it can be seen through the contents of the tweets as well as the twitter analysis where there is less outdoor activity, more emotional rationale, and user's fighting for an unsafe end to quarantine. The hashtag has become an efficient way to search for information about a particular topic or subtopic of that event. #quarantine has been tagged in tweets where users can be seen struggling with quarantine and trying to uplift others. Although quarantine can lead to negative psychological consequences, the majority of users understand the dangerous implications of a contagion like the CoronaVirus and will continue to be safe and support others.

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