

COVID 19: WORKING FROM HOME: TWITTER REVEALS WHY WE'RE EMBRACING IT.

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ABSTRACT

As more than a third of the world's population is now in lock-down, we see COVID-19 not only having severe implications on people's health but also having a significant knock-on effect on their livelihoods. A recent YouGov report highlights that one in twenty people in the UK lost their job due to coronavirus and that 52% of those studied expect the British economy to be in recession within a year (Sparkes, 2020). In this paper we aim to investigate the online social response to the working from home WFH concept, by analysis the twitter activity around the coronavirus and WFH, initial findings suggest, 70.6% positive tweets before the lock-down, on the other hand, 78.6% positive tweets after the lock-down around the WFH.

KEYWORDS

Working from home, coronavirus, online social response, WFH, COVID-19, remote working, post-coronavirus

1. INTRODUCTION

In all this uncertainty, the authors of this article feel that it is essential to highlight some positives especially as technology is, yet again, proving its worth by enabling many of us to keep our jobs and work from home. As PwC research (Teow, 2020) suggests up to half the UK workforce can work from home; technology is enabling as much as 80% of UK finance and insurance industry workers to work remotely. There are, indeed, a lot of people around the world who are suddenly experiencing the full value that digital technology affords for remote working. Technology is enabling us to run our businesses from home, to deliver lectures and classes from our sitting rooms and to undertake other essential work duties while still maintaining efficiency and productivity.

2. WORK AND TECHNOLOGY: THE 'NEW' NORMAL

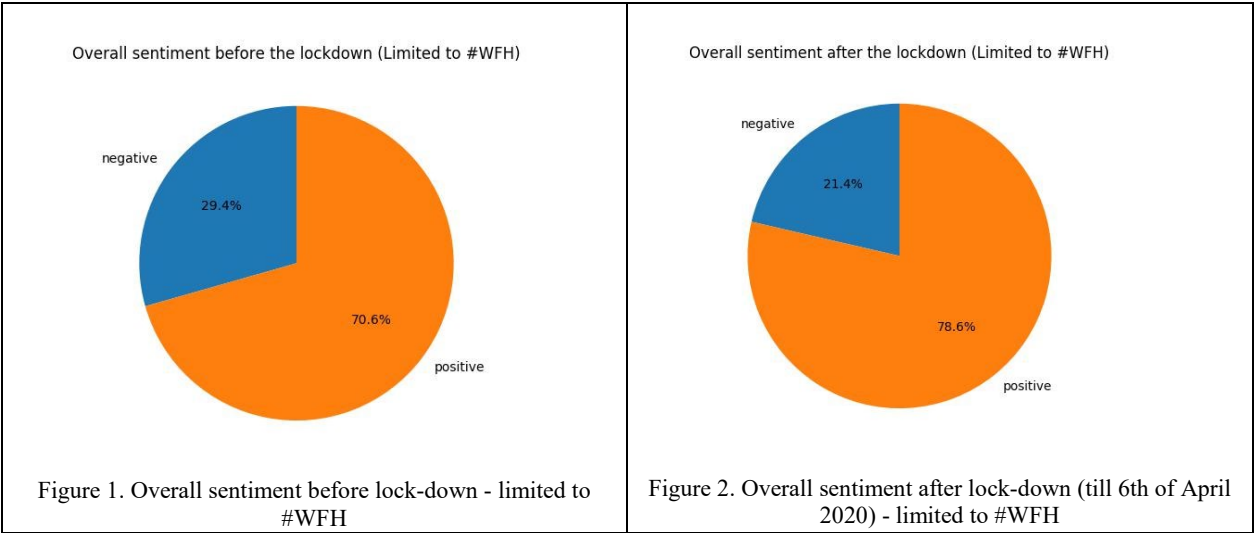
For many of us, technologies are shaping a 'new' typical workplace which is influencing and often improving how we work and communicate with colleagues. However, the debate over, what technology does to work, jobs, and wages has been going on for many years and in not such a positive light. In the eighties, the Nobel Prize-winning economist Wassily Leontief talked about how horses became unnecessary with the advent of new technologies such as tractors, automobiles and trucks. He drew a parallel between human labor and horses: 'a farmer couldn't keep his horses and postpone the change to tractors by feeding them fewer oats. So he got rid of the horses and used the more productive tractor' (Leontief, 1983). In truth, for over two hundred years, people have been worried about what technology will do to their jobs. More recently, Cascio and Montealegre (2016) have considered the disruptive effects of emerging information and communication technologies. In the last few years, there has been a slight 'negative' emphasis on robotics stealing our jobs with several big headlines announcing the future of jobs as robot-shaped (Elliott, 2018).

In the light of COVID-19, the prospect of robot doctors treating patients, drones transporting supplies and vaccines to infected areas and 3D printers producing quick and cheap face masks does not seem a strange or frightening thing. In many ways, technology has become essential for us; we realize how, 'Yes', robots can make effective support staff enabling doctors to communicate with contagious patients remotely, saving time and saving lives. We can also see how technology is enabling a remote workforce, so we can minimize the effects of the coronavirus on both our personal and work lives. As Evangelista et al. (2014) highlighted digitization has the potential to drive productivity and employment growth; for many of us, today, it is just about keeping the jobs we have, and technological innovations are enabling us to do so. During a COVID-19 pandemic, we are finding ourselves with no other options but to embrace and use technology to undertake our work and maintain our social

lives. Interestingly, we seem to be understanding things for the way that they are, and despite some concerns about the safety of videoconferencing applications (Lyons, 2020), we are generally quite cheerful in this #WFH (work from home) ‘new’ normal.

3. WHAT IS THE ONLINE SOCIAL RESPONSE TO #WFH?

On the 14th of March 2020, we started a Twitter collection streaming service around ‘Coronavirus, COVID-19’ as an observation for the social network reaction to the pandemic. We collected more than 60 million tweets until the 6th of April 2020. After pre-processing the dataset to remove RT retweets, the data-set was queried for the keyword #WFH, taking it to only 6500 tweets and restricted to the UK area. In general, the majority of collected tweets reported a positive sentiment towards the #WFH concept with 70.6%, as shown in figure 1. The data collected after the lock-down suggested the majority of community still had a positive reaction to the working from concept with a rise in the positive feedback sentiment to 78.6% as shown in figure 2.



In an attempt to explain the main topics emerging of Twitter conversations, we gathered all tweets before and after the lock-down and demonstrated a word-cloud figure to present the frequency of the words in the tweets (as shown in figure 3). A similarity, it is noticeable that before the lock-down, the rise a mix of words such as working, employee, home, social distance. The population were talking about working from home even before the lock-down to achieve the social distance enforced. Furthermore, similar words are appearing after the lock-down with the new addition of words such as challenges and cyber-security aligning with the challenges some business faced while their employees worked from home.

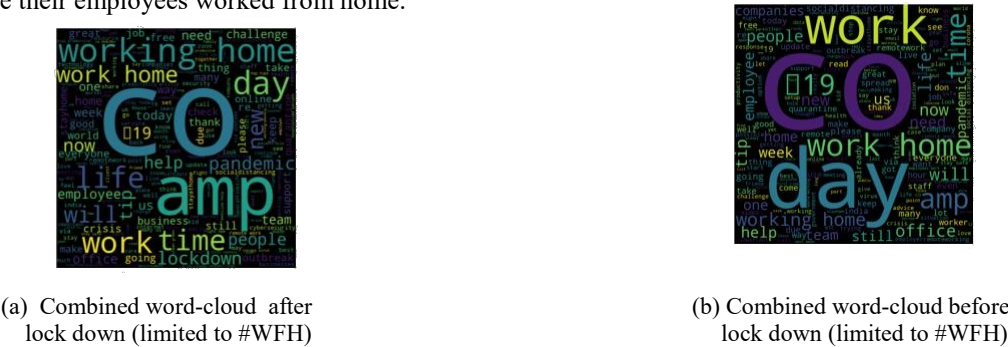


Figure 3. Word-clouds from before and after lock-down

3.1 Topic modelling

Social Networks have been a vital resource in highlighting the main topics and trends locally and globally (Chapman et al., 2018). Twitter, in particular, is where people connect with their passions, share their thoughts and feelings, and find out what is happening in the world. In Crisis management, Twitter was a significant player in detecting the sentiment of public reactions to events (Chapman et al., 2018) and the feedback received from Twitter had helped decision-makers to make decisions on significant issues. To probe the Twitter data further, we apply topic modelling and consider the techniques of Latent Dirichlet Allocation (LDA), which is a generative probabilistic model for a collection of discrete data (Ostrowski, 2015). We used LDA to generate the topics from the tweets, and then we divided the tweets into two central part (Before the lockdown) and (After the lockdown).

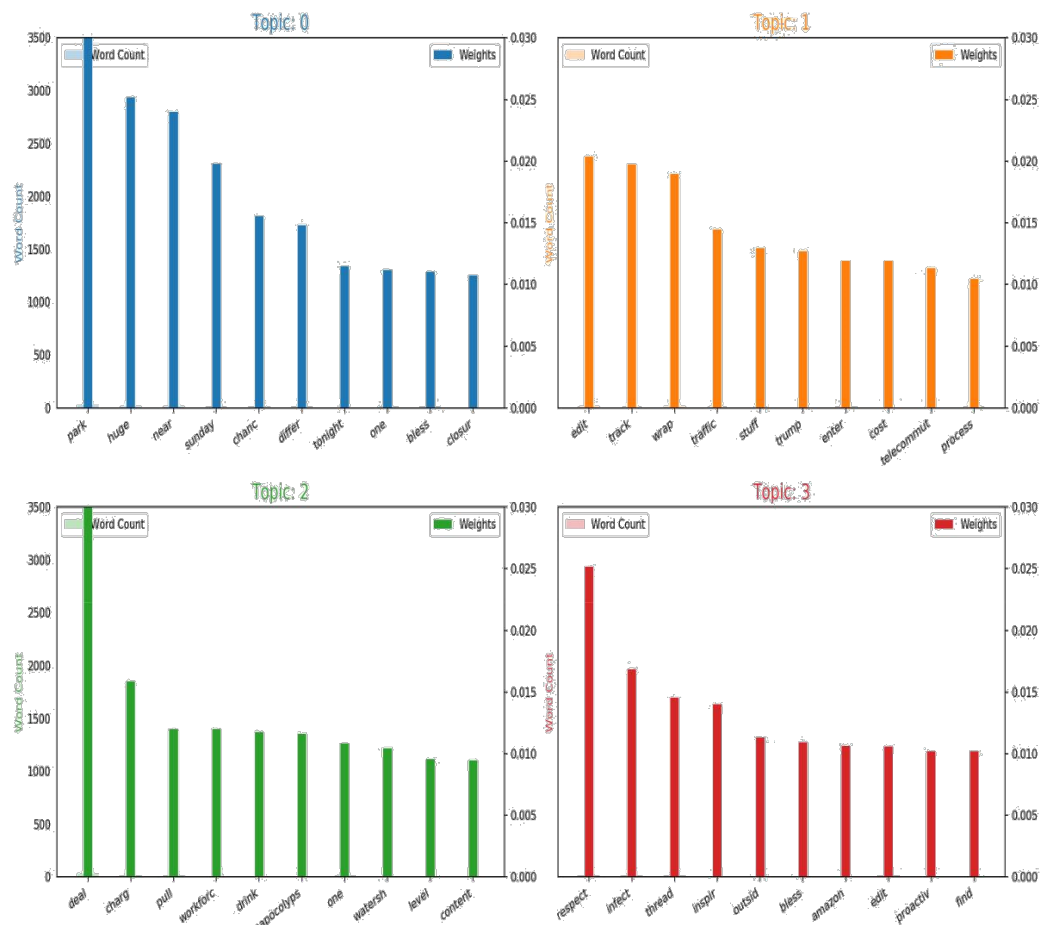


Figure 4: Before lock-down - Topic modelling (Word Count and Importance of Topic Keywords) #WFH

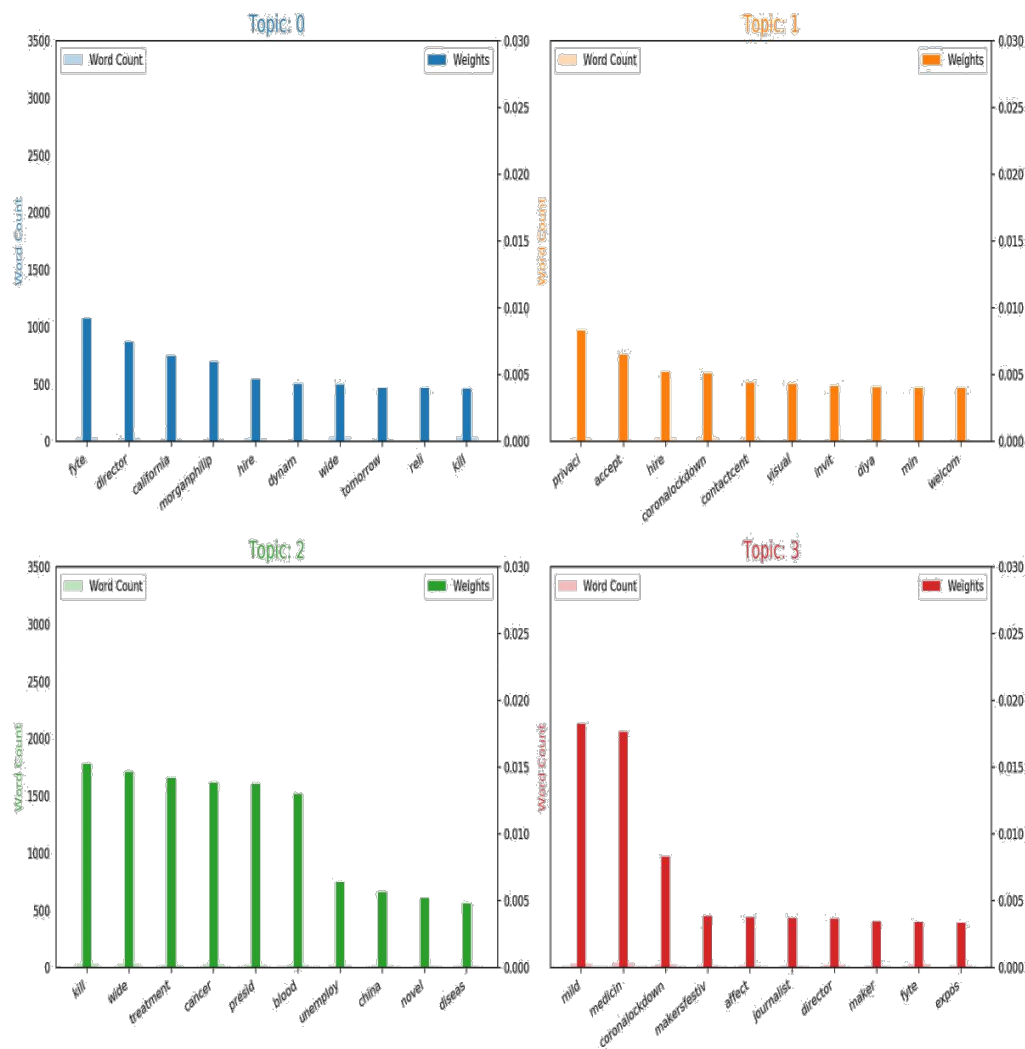


Figure 5: After lock-down - Topic modelling (Word Count and Importance of Topic Keywords) #WFH

In line with this, figure 4 highlights keywords like Park, Deal and Respect as being most significant to peoples' experiences before the COVID-19 lockdown. In addition, words like process, edit, track, charge, deal and find give us the strong impression that people are thinking about the practicalities of working from home. There is also a strong positive feeling, with words like respect, inspire, bless, proactive and chance showing that people are embracing the concept of working from home in the time of COVID-19. In contrast, words featuring in the tweets after the lockdown, highlight a slightly different tone. As we can see from figure 5, keywords such as kill, mild and privacy are featuring most frequently in the Twitter #WFH conversations. There is a stronger emphasis on the impact of the actual virus with words such as treatment, disease, cancer, medicine, accept and lockdown. Also, from the tweets, we sense more concerns around the far-reaching impacts on jobs, with frequently tweeted words such as director, hire, Morgan Philips and unemployment.

3.2 Drilling into the data

Moreover, figure 6 shows the sentiment (emotions) generated from the tweets per day before the lock-down in the UK. It is very noticeable that the line-plot is not continuous every day, and the reason is, most of the tweets before the lock-down were not about the #WFH. However, on 15th of March 2020, 16th of March 2020 and 22nd of March 2020 there is an increase in the mentioning of #WFH. One possible explanation for this is that the United States' Centre for Disease Control advised against gatherings of more than 50 people (Abbruzzese, 2020).

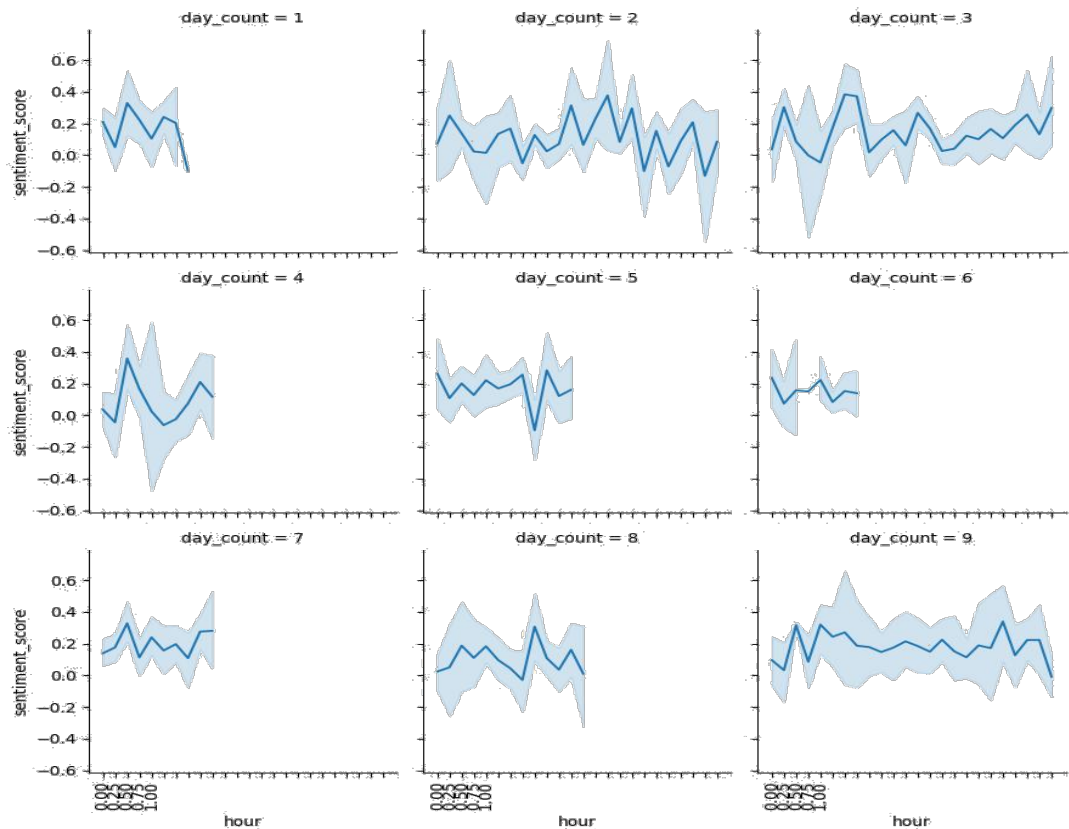


Figure 6: Sentiment in Twitter before the UK lock-down #WFH¹

On the 15th of March and the 16th of March, the United States Schools close for nearly 30 million children of the 56.6 million students (only 53%) (Kristof & Thompson, 2020). On the 22nd of March, the talking around #WFH rapidly increased with the majority of positive sentiment towards the concept. The sentiment of the tweets per day after the lock-down in the UK, days 24th of March 2020, 25th of March 2020, 26th of March 2020 show a noticeable rise in the overall sentiment being shared, in line with the increase of reported global coronavirus cases. We believe that the #WFH boosted the sentiment for a big portion of the community. However, at the end of the day 14 there was a steep drop which lasted for three days, we investigated these three days, generating a word-cloud to observe the frequency of the words appearing in the tweets during this period. In figure 7, it is clear that some concern started to be raised regarding the kids well-being, Cyber-security and Zoom which is aligned with the news reported around Zoom's software security (Baker and Shaw, 2020).

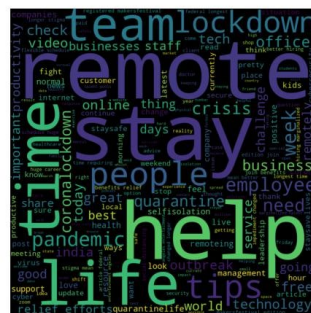


Figure 7. Word-cloud from 27th of March 2020 to 30th of March 2020) #WFH

Generally, the overall sentiment of the social response to the #WFH is positive with a clear sense of productivity as shown in 7 and words such as team, tips, office, business, staff, employee, satisfaction, service, remote, support, good, normal, internet.

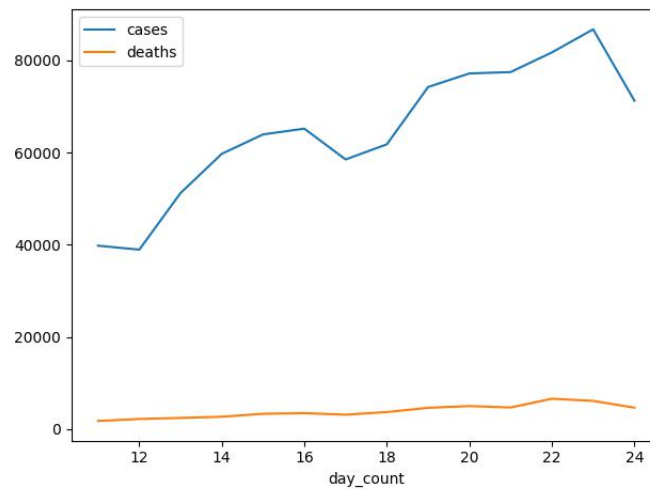


Figure 8. After the lock-down - reported COVID-19 cases globally) #WF

4. CONCLUSION

This is a preliminary study to observe the online social response to the #WFH. Although 'work from home' is not a new concept, this pandemic has forced the #WFH practice out to a broader sector of our workforce. Furthermore, despite natural concerns about the coronavirus, the main findings from our study show that most of the online responses seem positive, as shown in figure 2. This raises the question, what will happen after the lock-down lifted? Will businesses start to widen this practice to allow more flexibility to their employees? Or we will go back to our 'old' normal?

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