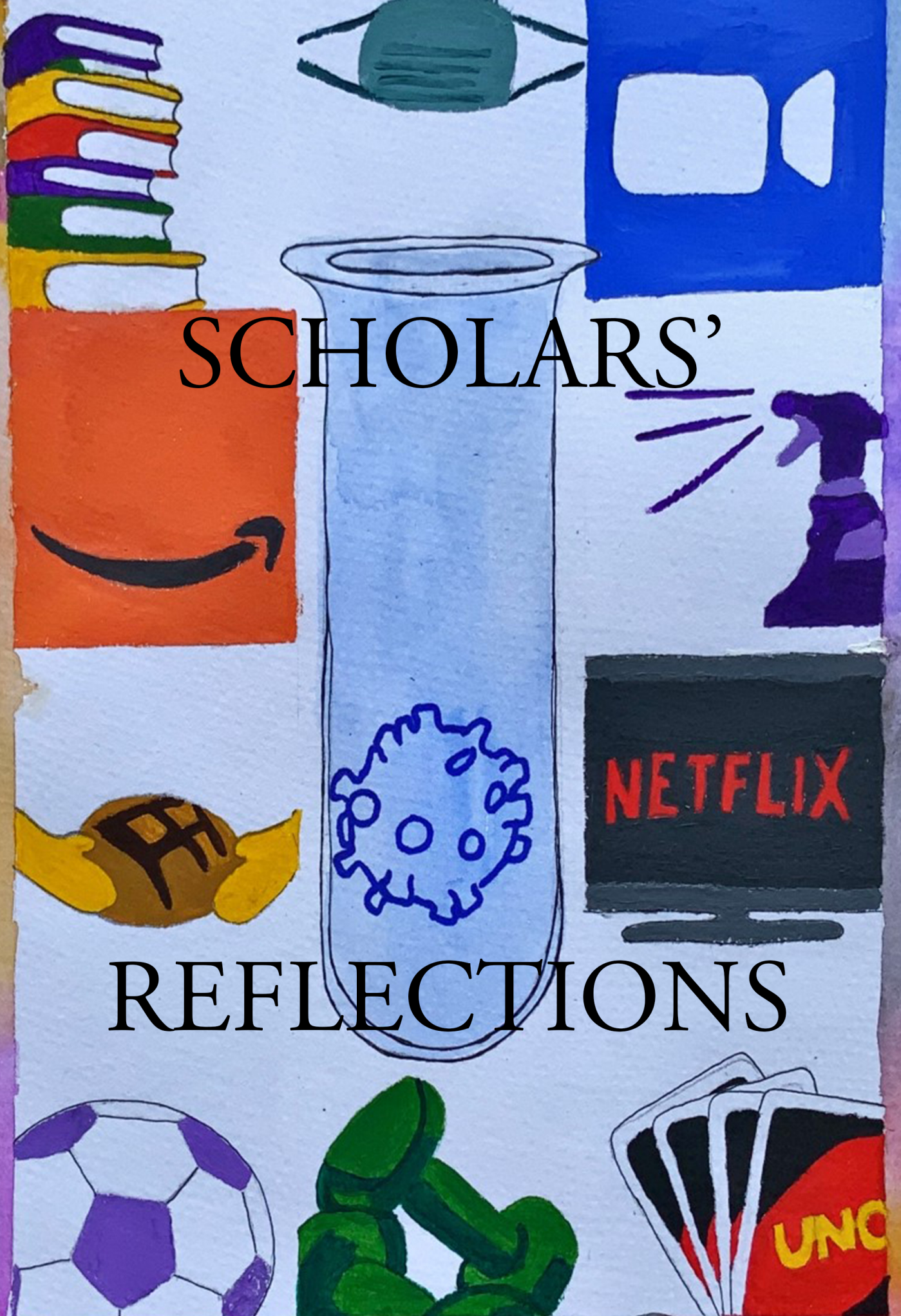


COVER DESIGN BY MADDY AND AMELIA



SCHOLARS'

REFLECTIONS

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PERSONAL REFLECTION DURING A PUBLIC DISASTER

Amelia

Anne Frank questioned in her diary whether anyone would be ‘interested in the musings of a thirteen-year-old school girl’. As she did not know the extent of influence that her diary would go on to gain, she was, like all diary writers, writing primarily for herself.

In the time of Coronavirus, an increase has been seen in the number of people recording thoughts, acts and emotions around the world, from the residents in Hubei to the social media videos titled ‘quarantine diaries’. Institutions, such as the University of Sussex and the Open University, have made a public plea for the documented thoughts of the nation, in the form of diary entries, to conduct their research and create a “weather map” of the public’s feelings. The power in this ‘living history’ is a real-time recording, not of the government’s actions or the national state of affairs, but the lives of the people. As demonstrated through Anne Frank during WWII; or Samuel Pepys during the reign of Charles II; or even Pliny who documented the eruption of Mt Vesuvius, the scope of power for a diary is vast. If everyone documented their thoughts, it would be a private account that, if all were amassed, would constitute a collection of the thoughts of a nation during this time.

As well as being a mirror to the writer, diaries have often reflected the world-order at the time of writing. Therefore, diaries or journals or even video recordings can act as a cohesive between the lives of so many, all so different right now. The increase in a want of something tangible, when the majority of our days are now spent looking at a computer screen, would suggest that the act of putting pen to paper is not outdated: but what are diaries now?

They could be seen as an outdated method of capturing all the things that a phone, a tweet, or a camera can so easily define. But psychologists, including Dr Liebermann of UCLA, suggest that documenting thoughts is essentially a workout for the mind, the benefits of which are only felt after continuous practice. Whether that be someone who writes a line a day, a paragraph a week, or is on their third notebook since quarantine began, it doesn’t matter.

The toll on many people’s mental-health during this period is routinely mentioned, as a global disaster is sure to affect everyone, whether the disease has harmed them first hand, or not. We may become desensitised to figures on the news, or images of mask-clad shoppers but journaling these thoughts not only helps us to document what we already think and feel, but can also incite thoughts we never knew we had. Verbalising a thought could help bring some form of meaning back into the separate news stories and personal lives we read and lead.

In a world where we can feel powerless as the government tries to legislate our every move, and even follow us when we do, there is autonomy to be found in choosing words and crafting a sentence, whether anyone else ever reads it or not. This has long been an attraction of diary writing and it continues now, as what has ensured the survival of ‘diary-writing’, or thought

documentation in any form, is the adaptability of the medium to our current ways of expression. A diary can essentially be anything we want it to be, as we are the ones in charge.

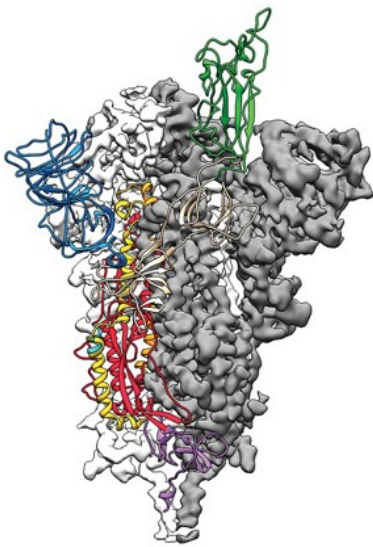
Finally, whether we look back on the things we wrote in fifty years, or burn the pages directly after writing, the act of documenting thoughts in the first place is a reminder, whether for Anne Frank whilst hiding from the Nazis, or for us whilst sheltering from a disease, that we are alive. Oscar Wilde declared: 'I never travel without my diary. One should always have something sensational to read in the train.' So, whilst what we write about may not be 'sensational' and whilst we will not be reading it on the train, diary-writing can be distilled to an activity for the self, with complete control over what we write and what we do with it after.

A BRIEF INSIGHT INTO THE CHEMICAL ACTION BEHIND 2019-NCOV'S SPIKE PROTEIN

Kit

The 2019 pandemic of the novel coronavirus (2019-nCoV, also known as SARS-CoV-2) presents a global health issue. The key to the development of a potential vaccine and treatments against the disease COVID-19, is the understanding of the viral action of the retrovirus 2019-nCoV. At the centre of this action is the spike protein.

Much like any other cell, 2019-nCoV possesses many variants of surface proteins, the major protein being the spike protein. There are many spike proteins on the surface of 2019-nCoV, and they are crucial in allowing the virus to enter cells. (Writer, 2020)



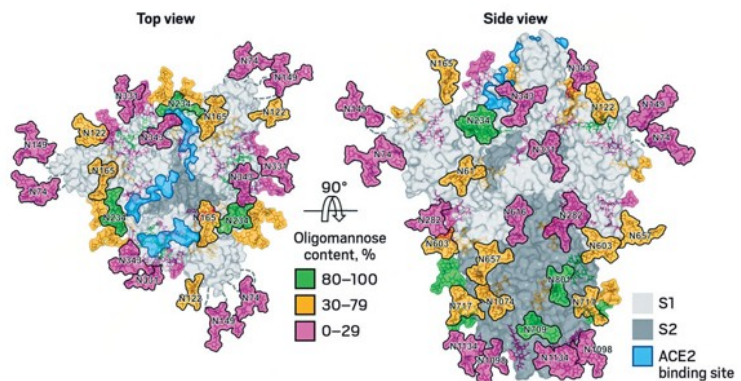
The structure of the protein was unearthed extremely quickly once the genome of 2019-nCoV was published. Scientists from the University of Texas used cryo-electron microscopy – otherwise known as cryo-EM – to determine the spike protein's structure. (Howes, 2020)

This diagram shows a side view of the spike protein associated with 2019-nCoV.

It is key to note that the structure of the spike protein is also highly glycosylated. This is important as glycosylation can act as a camouflage, especially as these sugars are sourced from the human itself during viral reproduction. These sugars would usually be used in human cells to create glycoproteins, instead the virus takes over the enzymes that a human would use for this process and adds the sugars to itself. (Arnaud, 2020)

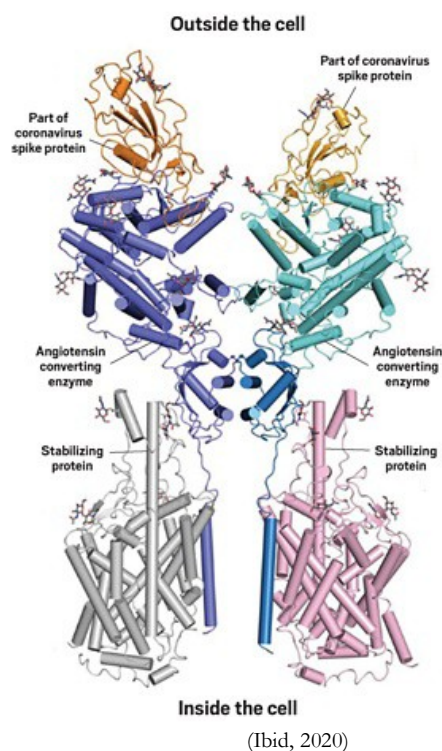
Credit: Jason McLellan/University of Texas at Austin

(Wrapp et al., 2020)



The glycosylated nature of 2019-nCoV (Arnaud, 2020)

The virus uses these spike proteins to enter a human cell by binding to a human cell surface glycoprotein known as angiotensin converting enzyme (ACE2) and does so with a higher affinity than the previous virus, SARS-CoV which was the virus responsible for the 2003 pandemic (Howes, 2020). ACE2, in normal circumstances within the body, is key in regulating blood pressure, natriuresis (excretion of sodium in urine) and blood volume control (Tikellis and Thomas, 2012).



The 2019-nCoV virus has two key subunits relevant when infecting human cells. The first of which is the S1 subunit. The S1 subunit binds directly to the protein cleaving element of ACE2 known as the peptidase domain. This process is shown in the diagram to the left (Satyanarayana, 2020).

The second subunit of the spike protein, the S2 subunit, helps to fuse the virus to the cell surface plasma membrane of the targeted human cell. These two processes are what allows the virus to enter targeted cells and in an ideal world, a treatment for COVID-19 would inhibit both of these functions. (Ibid, 2020)

However, the spike protein may not only be the key to developing treatments for COVID-19 but for developing vaccines against 2019-nCoV itself. In theory, a vaccine could only contain a sample of spike proteins, which the body will use to go through the normal cell mediated immune response to produce T-memory cells, which will be activated if there was an infection of the virus itself.

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WHY IS TIME NON-EXISTENT IN LOCKDOWN?

Keziah

The New Normal seems to be lacking in one particular feature that governs our daily lives: time. You know the feeling of getting to 8pm on a Thursday evening and suddenly realising ‘Oh it’s Thursday!’ as you hear all your neighbours start clapping? The number of Google searches for ‘What day is it?’ have been steadily rising throughout the lockdown and the hashtag #WhatDayIsIt has nearly 400,000 posts on Instagram. I can’t remember the last time I saw something about ‘Motivation Monday’ and it’s as if the lockdown has stolen our clocks and calendars. So what really causes us to lose track of time and how can we re-claim it?

A normal week for most of us is filled with routines. What you eat, what you wear, when you get up and go to bed is all dictated by your routine for that day. In lockdown, all these routines have gone and despite trying to replace them it doesn’t form an equivalent substitute. This same behaviour of a drop in the ability to perceive time has also been seen in explorers who are socially isolated.¹ Although there is limited research into it, it could be possible that social interaction enhances the ability to perceive time.

Humans are social beings who have an innate need to belong. Due to this we are acutely sensitive to social stressors, for example being disconnected and being deprived of social interaction. A study carried out by Hedger, Necka, Barakzai and Norman² found that experiencing social stress, on average, caused participants to perceive time as lasting longer, for both positive and negative stimuli. Perhaps our lack of social interactions could be in part responsible for our loss of time. Indeed, they would also interact with our routines, with many daily routines being based around social interactions such as school, work and gatherings.

Although every day is the same length when it is measured in hours, research has shown that when time is empty, we perceive it to pass slower than if it is filled with activity, however the opposite is true viewing time retrospectively.³ Therefore, although we may not be able to change our social interactions, by introducing landmark events such as a themed dinner in black tie or a virtual talent show we will be able to begin to regain a sense of time, and structure our memory of this experience.

Although our perception of time is affected by many factors, there are ways of regaining some control over it. As the lockdown begins to be lifted, I urge you to arrange walks and meet ups with a friend where it is safe to do so and try and introduce some landmark events to help structure your memory when you look back at this experience in years to come.

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³ Shaw, J. (2020, April 29). Lockdown Is Distorting Our Memories – But There Are Ways To Regain Control | Julia Shaw. *The Guardian*. Retrieved May 29, 2020, from <https://www.theguardian.com/commentisfree/2020/apr/29/lockdown-distorting-memories-daily-landmarks-brains-false-memories>

HOW SIMILAR IS THE CORONAVIRUS PANDEMIC TO THE POLIO PANDEMIC?

Chloe

The first recorded outbreak of polio – an infection which can cause paralysis - in epidemic form was in 1894 with 132 cases. The greatest outbreak occurred in New York in 1916 leaving 27000 paralysed and 9000 dead. However, most people only experienced mild symptoms with only 1-2% resulting in paralysis and only 1 in 400 leading to death; when compared to coronavirus, with a current estimated fatality rate of between 1-2%, the polio rate is considerably lower.

Surprisingly the R_0 , or the number of people someone with the disease infects, was between 4-7 with polio and is a significantly higher than the 2-2.5 R_0 with coronavirus, despite polio predominantly being transmitted by a faecal-oral route as aerosol droplets containing the virus struggle to survive in the throat. It would be thought that Coronavirus would have a much higher R_0 considering it is airborne and a large distance must be kept to avoid infection, however, this lower infection rate must be credited to improved hygiene and more effective PPE.

The polio vaccine was developed in 1954 to be given to American schoolchildren, 60 years after the first outbreak of the disease and reduced an incidence in 80-90% of those who received it. For coronavirus, a huge amount of funding has been put towards finding a vaccine with £8 billion having been put into research globally. A Beijing-based biotech company has already gone through to stage 2 of vaccination development and if successful, will progress to human trials in autumn. The difference in response between polio and coronavirus with vaccine development is not only due to more innovative technology and a greater knowledge of how to create them but also because of the multiple global vaccination campaigns of the World Health Organisation who have spent \$2 billion eradicating polio alone. The improvement in speed for developing a vaccine is evident from the Ervebo vaccine for Ebola, which was approved in 2019, 5 years after research for it began. However, with many saying that life cannot return to normal without a vaccine, the prospect of waiting five years seems unimaginable.

A major difference between the two viruses is the impact they have had on the economy. Many large economies have been hurt during the coronavirus pandemic due to their reliance on globalisation and, despite many being able to work from home, the UK government alone has estimated to have spent £123 billion. As polio was spread over a larger timescale and had a much lower fatality rate, as well only local lockdowns being enforced, it had a relatively minimal effect on the economies, to such an extent that the profit from the polio vaccine of \$7 billion outweighed money lost during it. As many are now concerned with how global economies will recover, despite previous pandemics, the unprecedented nature of our situation makes it hard to predict.

DEAR CORONA

Lara

Dear Corona

I don't know whether to hate you or thank you.

You've given the world a time for self-reflection, for discovery and for rest. You may be a global reset button. The atmosphere is healing, people are outside, instead of inside of a world of LED screens, families are talking, but really speaking. More than what the previous week held. You've given us a chance to appreciate who is important to us, who we care about and the value they bring to us. People are cooking, there are no take-out containers littering floors. People are walking, there are no trains to pump fumes into a damaged world. People are talking. We're seeing each other and talking. The sense of community is palpable. All over the planet people are experiencing the same feelings, which are utterly beautiful. The idea that seven billion people, divided by colour of skin or gender or sexuality, all seven billion people are going through the same thing.

Poetry in action.

But you're a killer. So many lives pointlessly lost. Not only the ones who caught you, but the ones in small studio apartments with no lover or friend to lean on, and the silence becomes too loud. People have lost livelihoods because of you, jobs and parents and homes. People's futures may be gone, with grades which can't guarantee the education they've worked for. You've given us time to reflect, but too much introspection is dangerous. It's terrifying and sometimes the silence is deafening.

Suffering in silence.

You're complex. Six months ago, your name was just a beer brand to be drunk with a lime on a warm summer's day. Yet now it's something which will go down in history. I wonder how you will be remembered. As a murdering force with no mercy who took lives and economic stability? Or a chance to see what our world needs and react accordingly? Will you go down as the great reappraisal or the greater depression?

'Hindsight is 2020'

I started by saying I don't know whether to thank you or hate you. Because for me you've done so much. You know, I hadn't had time to read a book, for entertainment not education, in about a year? I've discovered how beautiful where I live can be. In all of the chaos, all of the pain, all of the suffering; I may come out the other side a better person.

And I thank you for that

But there's so much to hate. You took away exams I spent years working towards. I miss my friends, actually no. I miss *people*. Socialisation is a defining part of being alive and without it it's easy to

get lost. I picture the families who have lost someone they loved because of you and it makes me so angry. It hurts to think of wasted humanity. At least in a war you're fighting for something; a cause, a country. Not just for your life.

And it's hard not to hate you.

Dear Corona,

Whether you should be thanked or hated, appreciated or loathed, whether you've fixed or broken the planet; there's one thing which is certain. One thing which is undisputable. And in a time of such unknowns, that is rare.

It's that your name will never be forgotten.

And that you have changed the world.

THE POSITIVE EFFECTS OF COVID-19

Ollie

In physics, Isaac Newton notoriously understood that “For every action, there is an equal and opposite reaction.” This is universally identified as Newton’s 3rd Law. Philosophers are known to manipulate this and testify that for every negative occurrence there is also a positive conclusion. In this article, to a certain extent, I intend to modify one’s view on the existing coronavirus pandemic. I am sure everyone would agree that the ultimate aftermath of COVID-19 will have extensive impairment to the economy, social lives and will take many lives and, thus, overall will immensely offset any apparent ‘positive effects’. In spite of this, one thing that has developed into a quotidian occurrence is the rhythmic pessimistic publications regarding a negatively impacted global population. However, the coronavirus does have some discrete benefits.

Firstly, from cleaner air to unshackled wildlife, coronavirus lockdowns throughout the planet appear to have had copious positive effects on the environment. With COVID-19 initiating the majority to be confined to home and the local area, the crime rate has consequently plummeted, with the exclusion of a few specific offences. Moreover, traffic and pollution have also plunged comprehensively. NASA satellites have commenced documenting the extent to which pollution has subsided in so many regions of the globe. The results of this demonstrate how carbon emissions have fallen by over 25% in the most polluted areas including near Wuhan, China. A multitude of flights have been abandoned and crude oil has become relatively ‘worthless’. The population could only hope of such a scenario amidst the era of pollution and emission. Therefore, I would agree with the USA’s Dr Burke who rightfully claims, “A pandemic is a terrible way to improve environmental health”.

The Chinese word for ‘crisis’ originates from two words: one connoting ‘danger’ the other meaning ‘opportunity’. Due to the ruinous present coronavirus epidemic, the world has also seen some progressive health effects from major modifications in human behaviour. To begin with, the pandemic is said to have extended everyone’s alertness of general hygiene and health. Having been constantly prompted to wash hands and stay healthy, hopefully this will persist in the future and reduce fatalities from flu or more common communicable diseases. Furthermore, during the pandemic, people have been encouraged to volunteer and offer support within local communities as much as possible. As a result of this, residents all over the world have seen how we have come together amidst some of the hardest times. People have made connections within these communities which perhaps may have never been made through both the real and digital world. Moreover, as the weekly claps for the NHS exhibit, a greater appreciation for our key workers is evident. The world has also acquired a greater appreciation of everything day to day life has to offer without having to haul on long flights and go to picturesque destinations abroad. Consequently, I would argue that due to the COVID-19 pandemic, the human race might become more grateful, aware and appreciative.

Having said all this, research from previous global disasters shows that positive change generally diminishes over time. Ultimately, we prioritise the restoration of societal functions rather than pro-environmental and behavioural actions. Maintaining any change in behaviour is difficult and depends on many factors including motivations, routines, resources, self-determination and social influences.

NETFLIX'S 'UNORTHODOX' – A REVIEW

Dilly

Netflix has arguably become a bigger platform than ever during this lockdown period, releasing increasingly addictive TV shows and big blockbuster movies that keep its subscriptions on the rise. However, one show that has utterly astounded me in its meticulous detail, striking star performance and raw truthfulness is the miniseries, *Unorthodox* directed by Maria Schrader.

Based on true events documented by Deborah Feldman in her autobiography *Unorthodox: The Scandalous rejection of my Hasidic Roots*, the storyline follows a nineteen-year-old woman named Esty as she escapes her ultra-Orthodox community and arranged marriage in Williamsburg, New York, to Berlin where she learns to navigate a secular life. The unique show is in both Yiddish and English, a first for Netflix, and addresses a number of relevant social issues and taboos from the conflict of the modern society with religion to women's rights.

The orthodox Jewish community in Williamsburg is unique in that it was founded by Holocaust survivors. Therefore, making it different to other Hasidic communities since it was started after the second world war with an ingrained determination to build back the Jewish population and retain extremely strict religious practices. Esty's life in Williamsburg leading up to her escape is told through flashbacks as the narrative segues between the two perfectly juxtaposed worlds. Contrastingly, Esty's experience in Berlin is filled with diversity, modernity but most of all her new-found sense of freedom. Brigid Delaney, a journalist for the Guardian, noted the 'binary' of Williamsburg and Berlin of 'freedom versus restriction, hedonism versus conservatism, transience versus permanence'. One of the main purposes of the show is to give the viewer an insight into two opposite sectors of society in a fascinating contrast. Through this, I believe, the show has complete relevance to our general sociological understanding of closed religious communities and their place in the modern world.

Another remarkable aspect of the show is the talented performance of Israeli actress, Shira Haas, as Esty. Feminism seems to run through the heart of this show as the viewer connects with Esty's incredible journey through the utterly compelling and emotive facial expressions of Haas. I feel that in the character of Esty, the show portrays the human desire for freedom and self-expression which is relatable to anyone and everyone as we watch her completely reject the Satmar societal expectations of femininity. The show was also written, directed and produced by women and through this I think it allows for a significant representation of feminism in the modern day. Not only is the viewer reminded of the importance of having equality and the freedom of opportunity, but all too often the TV industry continues to be dominated by men and *Unorthodox* is a break away from this.

In an article for the Jewish Telegraphic Agency, Lior Zaltsman commented on how the show reminds us that 'life is a constant search, that happiness is not always the end goal'. In this way I believe this show, which gives a raw and relatable representation of human emotion, is exactly the type of reminder we need during this time of hardship. However, its success also arises through its striking

but truthful portrayal of inner workings of two opposite but currently operating societies in the modern day.



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