THE ROOSEVELT GROUP

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# New Annales 

## Issue IV <br> Winter 2023

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## New Annales is the semesterly journal of the Roosevelt Group.

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## FOREWARD

Our fourth issue of New Annales exemplifies the Roosevelt Group's ethos of internationalism and inquiry. The Roosevelt Group's publication is named after the Annales School founded during the interwar period by two French academics, Lucien Febvre and Marc Bloch, who explored the intersections of social, technological, and environmental histories.

When I initially joined the Roosevelt Group at the peak of the COVID-19 pandemic, I gave no thought to the name New Annales. Little did I know I would come to embrace the holistic approach to history that Roosevelt Group members apply to current events and their hypotheses about the future.

The Annales School would flourish for decades, but Bloch, a Jewish man, did not live to see the long-term impact of his work. During World War II, he became an instrumental figure in the French resistance. The Nazis captured Bloch and tortured him before his execution on June 16th, 1944 - ten days after the Allied invasion of Normandy.

With the resurgence of antisemitism and many other prejudices, I am proud to lead the Roosevelt Group as one of the many organisations which aim to eliminate that contempt through education and awareness. I hope that together, and with this selection of pieces, we can spread our values: curiosity, empathy, and humanity.

The Roosevelt Group is a community I cherish and hope to see thrive.
I owe a great deal of thanks to our Members, Committee, Executive Committee, and alumni who have worked diligently to further the Roosevelt Group's goals and helped us reach this milestone of our first printed work.

With that, I invite you to delve into our fourth issue of New Annales.

## DEDICATION

I would like to dedicate this issue of New Annales not to a special individual or group, but rather to an ideal: the freedom to share our thoughts with the world, unafraid and unencumbered.

Attending university in St Andrews, it is easy to forget how exceptional it is to share freely with others what you have experienced, learned, and come to believe.

I studied in Hong Kong this past autumn, where the laws were vague. People were afraid to speak their minds, and I became afraid to speak mine. I looked forward to the time when, returning to St Andrews, I could share the uncensored story.

It is a gift to create a book with nearly 100 pages dedicated to staking claims you care about and convincing readers why they matter. Many of these Dialogues and On the Ground pieces are action-based. None are without passion. We have compiled them to celebrate the privilege of communicating our views and the zeal of coming under fire for them. I eagerly await debating the arguments made on these pages with fellow readers.

I would implore this journal's contributors to see its print release as a success, regardless of how many eyes score its pages. To express your opinions is a gift taken for granted in this town and country. Words and opinions cheapen when they cost nothing to give.

That is not to say that this publication is wanting of potency. I have watched members turn personal experience and academic inquiry into avid calls for action, and I know their words will inspire. Let this publication be a testament to the glory of free voice.

## ON MORES

'Mores' was selected to represent this issue of New Annales as it encapsulates the principles and protocols examined by our writers. 'Mores' means more than simply 'customs' or 'conventions'; in the original Latin, 'mos' ('mores' being the plural) conveys the ingrained characteristics that have come to define a behaviour or tradition in both a personal or communal capacity.

For individuals, 'mos'represents dually the interior and the exterior: disposition, nature, and conduct. While the mores of a collective can represent their recorded precepts, laws, or rules, it more acutely reflects the deeply ingrained customs perpetuated across generations. A most comprehensive translation would likely be 'the way'.

The fourth issue of New Annales addresses ingrained attitudes, beliefs, and practices across the world and challenges reflexive acceptance of the way things are. From Tanzania to Paris, electric cars to medical leadership, cultural norms and codified legislation can weaken societal good and prove more restrictive than guiding.

Our authors use personal experience to reflect upon the transformation of mores in On the Ground reflections of time spent in a new locale, while writers dissect institutionally and societally imposed conventions in their Dialogues.

I encourage you to reflect upon established customs and behaviours with a freshly critical gaze that stretches beyond the bounds of accepted mores.

Eugenie M. K. Glover<br>Head of New Annales

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## ABOUT ROOSEVELT



Our world is facing pressing issues, to which orthodox approaches have yielded only unfruitful answers - we must surpass this shortcoming. Our work brings together varied students at the University of St Andrews, uniting them in synergistic written reflection, discussions, and through the organisation of our lecture events; our aim is to produce bold, innovative, and pragmatic thinking on the challenges of the modern era and develop useful skills and relationships.

Never before has such singular progress been made toward a better world. We live in a world of constant improvement-to industry, to technology, to all the mechanisms that drive our society ever forward. The knowledge that we have amassed over
the course of millennia is now readily available to anyone with access to an internet connection; and this knowledge is growing exponentially, stretching well beyond the limits of human understanding. We have reached heights of expertise and capability completely unimaginable mere decades in the past; we are able to grow back limbs, cure diseases that years ago would have decimated us; we have set foot on the Moon; observed and recorded hundreds of millions of galaxies, each containing celestial objects billions of times larger than our Earth.

And yet never before has there been such radical and widespread inequality; never before have we been closer to scarcity. The bees that
pollinate our crops are dying, our seemingly endless reserves of natural spring water are being depleted, our livestock is diseased and kept alive almost miraculously by a cocktail of medicines. Never before have we been closer to man-made environmental catastrophe; never before have we been threatened by such destructive weaponry.

This is the world we live in: a world of constant dichotomy, constant uncertainty and constant peril. This is why weare at a unique moment in history. Now, and only now, do we exist in this balance: we have achieved so much, just enough to become aware that there remains so much to be achieved. And we must achieve it.

We must overcome political squabbles in the face of the issues that are severe enough to break us. We must eliminate poverty and homelessness. We must extend human rights to those in lack of them. We must protect our environment while developing our industry to the needs of a new economy.

This task is undoubtedly a daunting one, but it comes down to us. This is the task of our generation: to overcome the failures of our predecessors, and to secure our progress toward a better world. It is larger than life, but it can be accomplished: the power that each
of us holds is inconceivable, and its underestimation is what limits us; but it is there, latent, ready to be exercised. Now is when we hold this power, and now is when we must exercise it.

This is what we believe in, and this is what we are working toward. We want to gather those who are passionate about these issues, passionate about enacting change, and push the limits of what these individuals can achieve.

We want to voice our concerns about the picture we paint of the world and o"er, in its place, alternative, solutionoriented ideas on how we can tackle the most pressing issues of our time.

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## The Case Against Electric Vehicles

## Jack Light

Over the past summer, the European Union's 27 environmental ministers agreed to a plan passed by the E.U. parliament to ban the sale of nonelectric vehicles from 2035 (Abnett). 'This is the sort of ambition we've been waiting to see from the E.U., where it's been lacking in recent years,' said Helen Clarkson, C.E.O. of the N.G.O. Climate Group (Carey and Steitz). Bank Australia followed the E.U.'s lead and announced the following month that they will stop offering loans for non-electric vehicles in 2025 (Morton). Correspondingly, Australian politician Mehreen Faruqi declared that, 'we need policies to push out old, dirty and obsolete vehicles and policies to bring in clean, better, more efficient electric vehicles.' This sentiment has been mirrored in California (and the 17 other states whose vehicle standards are tied to California's) (Karnowski) and in rhetoric by Joe Biden's administration (Catenacci). This global push towards electric cars is a movement with teeth, and one that is vocally very concerned with the planet's health. However, it is also a failed movement in terms of practicality and method.

There is something bizarre and undemocratic about an issue so central to modern society and life, one's access to a combustion engine, being upended rapidly and without any meaningful public referendum. For perspective, electric vehicles (EVs) account for only $2 \%$ of American auto sales, so the scale of change required to meet these new environmental goals cannot be overstated (United Auto Workers). However, there is another equally noteworthy problem: because there has been no widespread discussion on the benefits and drawbacks of electric cars, we are circling the drain on a drastic change to modern life. There is much evidence to suggest that electric cars are ruinous to the environment and that they give leverage to countries that do not share the same ethical standards as the West.

The best way to approach this issue is by addressing obvious questions. Where do the materials for electric cars come from? Are these materials acquired and processed cleanly and ethically? Are they any better for the environment? Not a single one of these questions has an answer that
would please someone genuinely concerned about the planet's health.

While the science behind electric vehicle batteries is fascinating, lithiumion batteries require vast amounts of rare raw materials and ore. A midsize electric vehicle's battery weighs at least 1,000 pounds ( 30 pounds of lithium, 60 pounds of cobalt, 130 pounds of nickel, 90 pounds of copper, 190 pounds of graphite, and 500 pounds of steel, aluminium, and other materials) but to get to the usable mineral, up to 50 tons of ore must be mined and processed for just one battery (McGrath). Multiply this by 123 million (the number of families in the United States (USCB)), then add the families in Europe, and continue on from there to quantify the batteries' impacts. The amount of precious materials needed quickly spirals out of control. Furthermore, these materials do not just appear - they are mined. Mineral mining is not only incredibly hazardous to people (the average tin miner in Bolivia lives 25 fewer years than an average Bolivian citizen), but it is also a massive consumer of fossil fuels and is responsible for $40 \%$ of the world's industrial energy use (The World Counts). This is due to the energyintensive nature of the work itself, which largely occurs in incredibly remote locations where electrical generators and heavy equipment
depend on diesel fuel. EVs currently account for a tiny percent of the world's auto sales and, therefore, 'if mineral demands accelerate, miners will necessarily chase ever lower grade ores and increasingly in more remote locations. The I.E.A. sees, for example, a $300 \%$ to $600 \%$ increase in emissions to produce each pound of lithium and nickel respectively,' (Mill). Secondly, current government mandates would require that the infrastructure to achieve such an escalation in mining be implemented over just thirteen years, a ludicrous timeline.

Mineral mining, besides being very costly up front, has a grim downwind effect that is most effectively conveyed through anecdotes. In 2013, dead fish, cows, and yaks were found in the waters of the Liqi River in central China. They were poisoned by toxic chemicals leaking from the Ganzizhou Rongda Lithium mine. It was the second such incident in four years, resulting in a temporary closure of the mine. Three years later the mine reopened and locals reported that hundreds of yaks and virtually all of the river's fish had died. Local protests were met with force from the Chinese military (Denyer).

A similar situation took place in Chile, where most of the world's lithium is mined. Mining lithium involves pumping groundwater into brine reserves. The water breaks brine up and then evaporates, taking virtually everything with it except the lithium. The issue stems from using 400,000 liters of water to get just one ton of lithium in the dry Chilean deserts. It shrinks the few lakes there are, makes them saltier, and kills animals along the food chain from brine shrimp to algae and flamingoes (Jones).

Shift focus to Nevada, where plans to open a lithium mine spawned protests from the Shoshone-Paiute tribe, ranchers, and environmental groups because it was 'expected to use billions of gallons of precious ground water, potentially contaminating some of it for 300 years, while leaving behind a giant mound of waste,' (Penn and Lipton).


Figure 1: Lithium brine pools operated by Figure 1: Lithium brine pools operated by
Albemarle, one of the largest mining companies in the world.
As one demonstrator camped on the site put it, 'blowing up a mountain isn't green, no matter how much
marketing spin people put on it.' Penn and Lipton, of the New York Times, concede that, 'production of raw materials like lithium, cobalt and nickel that are essential to these [EV] technologies are often ruinous to land, water, wildlife and people.'

At the end of this process that is uniquely destructive to nature, we have been promised a 'zero-emission vehicle.' This is a transparent lie. The battery of an electric car must be charged using some other power source, and given that roughly $63 \%$ of electricity comes from fossil fuels, saying that electric vehicles cause no emissions is like saying that a detonator did not cause an explosion because it was across the street (Ritchie and Roser). Additionally, when you combine these indirect emissions with the environmental cost of battery production, electric vehicles can be worse for the environment over the course of their life than comparable combustion vehicles. This was confirmed by a 2019 Ifo Institute study and corroborated by three researchers who wrote in Atmosphere that, 'regional disparity of carbon emissions from vehicles is caused by the difference in electricity generation mix, thermal power generation technology, and electricity transmission efficiency,' (Tang, Xu, and Wang).


Although the environmental problems with electric vehicles are bad enough, the situation must be placed in the context of the current global supply chain landscape. There exists a growing imbalance by which those countries plagued by unethical production standards supply the world's daily necessities. Being able to produce things that are necessary for daily life is not considered a necessity for a country, but it certainly should be. The United States, for example, makes virtually none of its own medicine or medical equipment. China is America's main supplier in the medical industry. As a consequence, when China implemented its stringent lockdown policy and shut down major segments of its economy to contain COVID-19 in early 2020, it produced sudden and extreme shortages in medical equipment in the United States. If a country cannot produce its own necessary goods, then it is in trouble.

Vehicles are a necessity, and not only are the materials required for electric vehicles relatively scarce, but the West has hardly a role in their mining and refinement. The majority of the world's lithium is in Australia, China, and Chile (Garside). The world's cobalt comes almost exclusively from the Congo - the Congo produces more than 15 times more cobalt than its nearest competitor (Pistilli). Chinese companies control roughly $70 \%$ of Congolese cobalt mining and similarly dominate the refinement and transformation of cobalt into batteries (Pattisson and Firdaus). Amit Katwala summarises nicely: 'Six of the 10 biggest EV battery producers are based in China... That dominance extends through the supply chain. Chinese companies have signed preferential deals with lithium-rich nations and benefited from huge government investment in the complex steps between mining and manufacturing,' (Katwala). As a result, China controls $80 \%$ of the world's EV battery production capacity (Bhutada) and builds the
equivalent of one battery megafactory every week while one is built every four months in the U.S. New technology may allow nickel to replace cobalt in EV batteries, but China has that market cornered as well, in contrast to the United States, which has just one functional nickel mine (Pattisson and Firdaus).

China's dominance is a problem from a practical standpoint - if the U.S. has neither the raw materials nor the refinement capacities to produce a necessary good, then it must yield to those who do, but is also problematic from a moral point of view. Of the 255,000 Congolese cobalt miners, 40,000 of them are children as young as six years old (Lawson). Researchers at Northwestern University found that cobalt mining, 'was associated with increases in violence, substance abuse, food and water insecurity, and physical and mental health challenges. Community members reported losing communal land, farmland and homes, which miners literally dug up in order to extract cobalt' (Dunn and Young). China allegedly uses its interned Uyghurs to mine battery metals ( Ng ), and four workers at a Chinese car factory attempted suicide by jumping off the roof of their staff dormitories in a single week (Feng). Additionally, as previously mentioned, the global mining industry is dependent on fossil fuels to power its activities, and it is
undeniable that places like the Congo and China will be among the last countries on the planet to transition away from these fuel sources (Freedman).

There is absolutely no justification for a mandated global transition to electric cars. The absolute bestcase scenario is that each EV saves a fraction of the lifetime carbon dioxide compared to combustion engines. However, these nominal savings come at the unavoidable cost of ripping precious and scarce metals out of the ground, destroying local ecosystems, harming workers (among them children and slaves), and moving an invaluable supply chain almost entirely to China and countries with subpar labour and environmental regulations. This is an unacceptable bargain on environmental, economic, and political terms, and it stems from a lack of acknowledgement by EV's proponents that we cannot yet make an environmentally friendly vehicle. The strength of their argument depends on ignorance of or concealing the fact that metals in EV batteries must be recklessly and dangerously mined and that the cars must then be charged using traditional power sources. We mustn't avoid thinking critically about the dangers of mandated EV production simply because we idolise a sleek vehicle with no tailpipe emissions.

## Quantum Architecture

## Optimising Classical Computational <br> Performance Using Quantum <br> Mechanical Algorithms

## Paul Kelso

The human lifeform exists within an architectural dimension of the metaphysical universe and is brought into being by the laws of mathematics and the robust rhetoric of logic and natural reasoning. This has enabled an origin of life to be defined. Adhering to the Big Bang Theory, the origin of life in the universe stems from a temporally contingent singularity positioned within a domain of consciousness that has undergone rapid volumetric expansion and has sculpted a unified field of energy and matter across the geometry of spacetime. Planet Earth exists as an object of matter within spacetime and is a natural system that coexists externally to human life. Simultaneously, Earth structures the algorithmic architecture which creates the system of energy that enables human existence, but exists independently of Earth. The human species has been able to utilise the conservation of energy both materially (natural resources, chemical matter, etc.) and immaterially (philosophical
linguistics, knowledge, etc.) as a result of our inherent awareness of the entanglement between random states (entropic dimensions) and their energy properties.

Conceptualisation of the scientific fundamentals that mechanically operate and leverage the translation of energy and matter has led to the mathematical mapping of logic trees. Logic trees enable the natural deduction (or induction) of its nodes to be linearly transformed to optimise progression towards a set point. Using graph theory within mathematics, a genealogical tree of human knowledge - which exists within the universal field of natural truth - has been drawn out since the origin of life on Earth. Branches of this tree represent divergent trajectories of the same historical genealogy and all delineate to a single origin. These branches may be represented by biology, anthropology, economics, geography, physics, or philosophy which convey an epistemological
genealogy of knowledge and display a linear timeline of human nature. The importance of these is, by the laws of energy conservation, equivalent to any fields or discourses which have been created by the human species. The underlying linear root of these objective epistemologies can historically delineate a timeline as in the former example. However, they can also be executed as an inverse extrapolation to produce an ontological genealogy of non-natural objects along a synchronised plane.

The greater the number of nodes in a mathematical tree, the exponentially greater the number of path combinations it would take to reach the same point. When calculating an optimised route to a set objective within a tree inherent to large numbers of data nodes, the computational processing procedure is extremely strenuous and time-consuming. This is a result of a category of calculation called combinatorics. These calculations involve finding an arrangement of items that optimises some goal. As the number of items grows, the number of possible arrangements grows exponentially (Bova, et al., 2021). As such, in order to delineate an optimised route to an objective in a cost-effective and timeefficient fashion, existing computing algorithms require the implementation of quantum mechanics to maximise
performance, optimise execution of a set instructed task, and circumvent computational constraints as well as algorithmic failures. If done correctly, quantum mechanics has the potential to solve extraordinarily complex and stochastic problems throughout the natural, human, and environmental domains.

The opening of this paper provided a detailed analytical account of the universal energy systems within natural philosophy (or metaphysics) on an astronomical scale and presented the notion of material and immaterial bodies of conscious energy within a quantised entropic field of relative order.


Quantum physics in its foundational form seeks to generate a model of elementary particles which comprise the entire universe and hence is the binary opposition with regard to the scale of astrophysics or the spatial thermal entropic geometric theory. Quantum mechanics is the set of cognitive natural laws inherent in subatomic particles and the unfathomably tiny spaces where
they exist, accounting for the failures of classical mechanics in scenarios where the laws of motion break down. When quantum algorithms are applied to any existing algorithms within any knowledge and power field or discourse (inherent of a translational duality), the "properties of the quantum world allow for computations that would take billions of years on classical machines," (NASA Ames, 2022) to exist rather on the smallest imaginable timescale. Furthermore, the traditional onedimensional "bit" in the classical world (represented by objects of knowledge or power and coded binarily as 1 OR 0 ) is replaced with the quantum 'qubit', and as 'a qubit can be 0 and 1 at the same time... quantum computers... simultaneously explore different solutions to a given problem before collapsing to the optimum one when measured,' (Tangpanitanon, 2021). This allows for objects of knowledge/power to be positioned within an architecturally structured quantum computer designed to explain 'the nature and behaviour of energy and matter on the quantum [at] an atomic and subatomic level,' (Sakar, 2018). Doing so can maximise goals of agencies, institutions, governments, corporations, and networks, supposing ethical clearance has been granted.

To close, here are a few brief examples. Examine biochemical engineering entities or pharmaceutical companies whose technological advances exist in a subatomic world; ethically aware energy distribution entities, both renewable and organic-matter based whose grid structures need to be secure or whose pipelined stream needs to be environmentally optimised; or intelligence agencies and cybersecurity cryptographers who require the ability to store and protect classified or encrypted data.

The integration of quantum hardware into architecturally designed quantised planar computational processing units applies quantum error correction during the process by use of superimposed qubit logic gates; drastically reduces the temporal element of the path length; generates a quantum tunnelled pathway for information characterised by a robust, patterned sequence of wormholes (quantum leaps); and enables input information and data to execute a set of instructions along the most optimised, performative, vertically linear route. These possibilities can prove useful for existing fields and society can benefit from further investigation into the quantum hardware implementation.

## Tik Tok - It's Time to Protect Our Data

Brett Borthwick

The social media platform TikTok requires little introduction given it has more than 1 billion international users (Iqbal 2022). Yet the well-known app has the most turbulent track record amongst competitors such as FaceBook, Instagram, and Snapchat. International security, in the context of cybersecurity, is concerned with data. Data is property, and therefore, threats to data are threats to international cybersecurity. Data is relevant to TikTok in three primary ways: in collection, for censorship, and in its sharing. Data collection and data censorship on TikTok are instances in which social media threatens international security, while data sharing presents a possible counterexample highlighting the potential benefits of TikTok use. In terms of TikTok's data collection, Chinese National Intelligence law remains highly relevant and its censorship capabilities are exemplified by coverage of the Hong Kong Protests, Tibetan independence, and the Dalai Lama on TikTok. While censorship is more difficult to measure, let alone prove, given algorithmic secrecy, a noteworthy trend of receiving fewer results using specific search terms has
arisen. In contrast to the censorship of sensitive topics such as those listed above, TikTok has also demonstrated a potentially positive influence, such as in the war in Ukraine. Though the past decade has evidenced increasing coalescence of social media, politics, and security risks, TikTok goes beyond being a social media and instead presents a grave threat through both its data collection and censorship given the sophistication of its algorithmic artificial intelligence (AI) properties.

> History and Algorithm

The parent company behind TikTok, ByteDance, was formed in 2012 as a news application designed to present an endless feed to readers. In 2016, Douyin, the Chinese platform, and Tiktok, its international equivalent, were jointly launched. In the past six years, the application has exploded in popularity, with over 693 million downloads in 2019 and 850 million in 2020 (Iqbal 2022). In the third quarter of 2022, it reached 1.53 billion and is expected to hit 1.8 by the end of the year (Iqbal 2022). Snowballing growth aside, the app
has faced controversy and was successfully banned in India over data privacy concerns. Talk of bans has hit the media once again in the United States, with Federal Communications Commissioner Brendan Carr urging the Council on Foreign Investment to proceed. Carr proclaimed there is not ' $a$ world in which you could come up with sufficient protection on the data that you could have sufficient confidence that it's not finding its way back into the hands of the [Chinese Communist Party]' (AllenEbrahimian 2022). International governments, namely the United States and India, view TikTok's Chinese ownership as problematic given the intelligence laws in place that might force the company to succumb to governmental pressure and hand over foreign users' data.

To contextualise data collection, censorship, and sharing, TikTok's unique algorithm must be understood. Beyond the user interface with a constant stream of videos short enough to keep the watcher engaged, the content itself is also addictive. While its core algorithm has never been released to the public, it is understood by technologists to have three primary dimensions: a recommendation algorithm, a content-n-classification algorithm, and a user-profiling algorithm (Gray 2021). The AI recommendation
system ‘learns' in real time what a given user enjoys based on a correlation between content and behaviour or interaction. This is propelled by the 'Information Flow Funnel,' where videos start with initial traffic of 200300 users, and are then conveyed to larger or smaller audiences based on user response (Wang 2020). The content classification algorithm utilises meta tags derived from meta classifiers of the root data to classify data and redirect it to like-minded users (Wang 2020). Lastly, users are profiled by weighing their personal content as well as engagement. Higher-weighted profile users will get more exposure, and lowerweighted ones will be downgraded. This data is generally measured by machine learning rather than manual reviews, which typically only occur in instances where content is flagged as suspicious. The combination of these three algorithms contributes to TikTok's rapid proliferation of market and addictive capability. Its artificial intelligence algorithmic capacities contribute to the growing unease in regard to security.

## Data Collection

TikTok's data collection methods and practices will first be examined as a threat to international security. The application collects user-sensitive data such as device model, mobile carrier,

browsing history, keystroke patterns, clipboard data, and geographic locations, often without the user's knowledge (Center for Internet Security). Clipboard data collection is problematic as it is the primary vessel for complex passwords and payment-method storage. Moreover, the TikTok privacy policy states, 'We may collect biometric identifiers and biometric information... such as faceprints and voiceprints' (TikTok 2021). It is noteworthy this clause is excluded from the E.U./U.K. terms and conditions; the security implications of this are that U.S data is more exposed than that of European or United Kingdom TikTok users. This is deeply concerning in terms of security, as biometric data is permanent and thus, of high intelligence value. TikTok also monitors all device contacts, any active subscriptions, all accounts on the device, and the calendar (Perkins
2022). This data collection is beyond excessive; it is a privacy violation and a threat to the user in the incorrect hands. The mobile security firm Zimperium found that TikTok not only "implement[s] pin-point location functionality that Apple only allows in navigation apps,' but also is 'actively monitoring and retrieving data from the iOS Pasteboard' (Sengelmann 2020). This data is then utilised to direct content in accordance with interests, furthering the cycle of addiction as it knows exactly what to show the user to keep them engaged.

The international security implications of this data collection primarily stem from Chinese National Intelligence law. Implemented in 2017, the law requires Chinese organisations and businesses to cooperate with intelligence institutions, whether their users reside in China or not. Specifically, it declares, 'any
organisation or citizen shall support, assist and cooperate with the state intelligence work in accordance with the law' (Chinese National People's Congress Network 2017). Beyond giving the Chinese government access to foreign data if requested, this law requires overseas citizens employed by TikTok to also comply with Chinese state intelligence. It is this policy that prompted the Trump administration to treat the app as 'a Chinese asset... that could be leveraged to enhance Chinese state power in relation to the US' (Gray 2021). It is pertinent to reiterate that no security analysis found clear evidence that TikTok is directly relaying foreign nationals' data to the Chinese government; the official conclusion is rather if the data were requested, they would hand it over. However, collection is still a grave threat to security because protecting American citizens' data, especially biometric and permanent intelligence, is of the utmost importance to national security interests.

Beyond collecting data that extends beyond necessity for the app's functionality, a security analysis found that the iOS version has a 'server connection to mainland China’ (Perkins 2022). Moreover, it is still widely unknown where data is specifically stored. Both the known and the unknown in regard to data collection present grave threats to
international security in the cyber sphere. Even more concerning, a recent Forbes article found via LinkedIn profiles that 300 current employees at either ByteDance or TikTok previously worked for Chinese Communist Party propaganda outlets (Baker-White 2022). TikTok's seemingly intrinsic linkage to China cannot be ignored. Data collection of this excessive nature directly threatens international cybersecurity via foreign TikTok users.

## Data Censoring

Data censorship presents itself as the second area of interest where TikTok threatens international security. The concern here is China would begin to enforce its domestic censorship on the international cyber sphere and foreign nationals. It is difficult to measure censorship because it could be present as (1) videos being 'shadow banned,' in which they receive little to no views, or (2) entirely removed. In either scenario, this is hard to measure unless you are the creator involved or the platform responsible. The most conclusive security review of TikTok to date conducted by CitizenLab found evidence to be insufficient in physically proving Tiktok employs political censorship (Pallaeon Lin 2021). However, as seen in discussion of the algorithm, TikTok's AIenhanced recommendation system
inherently promotes and demotes some content on bases outside the scope of observation.

A rapid censorship test can be conducted by searching political terms Beijing would likely disapprove of on TikTok. Popular hashtags utilised on Twitter and Facebook by Hong Kong protestors include \#hkpolicebrutality, \#hongkongprotest, \#chinazi, and \#antielab; these tags can be explored on TikTok in comparison to other social media platforms to observe potential censorship. \#Hkpolicebrutality yielded only four results with 186 views (compared to 17,715 posts on Instagram), \#chinazi had total of 34.8 k views, and \#antielab had 50.8k views (Appendix I, A-C).
\#Hongkongprotest had 6.2 million views and while this might seem to refute censorship claims, it is not actually a viral quantity of views on Tiktok (\#HouseoftheDragon has 8.1B total views). While this data can't be used to directly form a causeeffect correlation between the use of terms the Chinese government would not approve of and with lack of views on TikTok, it is a relevant pattern in the context of TikTok's political influence. Furthermore, when the Dalai Lama is searched on TikTok, the immediate search results include 'Dalai Lama evil', 'Dalai Lama joke',
and 'Dalai Lama bad' (Appendix 1, F). A TikTok-owned news application known as Newes Republic also came under fire in 2020 for removing mentions of Tibet, the Dalai Lama, and freedom of the press. Alarmingly, it was downloaded by approximately 5 million people in the U.S. and U.K. (The Tibetan Review 2020). This is of concern for international security because the framing of global events affects citizens' political views; if an individual consistently reads about the Dalai Lama as bad, evil, or as a joke, this will gradually permeate the way they view Tibetan independence and the Chinese attitude toward the region. As such, TikTok once again overextends beyond dancing videos and comedic relief, utilising AI algorithms to promote certain political ideologies and withhold or taint others.

## Data Sharing

To comprehensively analyse TikTok's impact on international security, it is necessary to compare data collection and censorship to an area it has arguably had positive influences: data sharing. As seen through its algorithmic genius, anyone can 'blow up' on TikTok and foster an audience. It was for this reason in September 2022, when President Biden celebrated the passage of the

Inflation Reduction Act, he invited twenty TikTok-based influencers to the event (Sprunt 2022). Increasingly, the younger demographics read their news on TikTok and other social media platforms, so it was a logical public relations move to include younger people in domestic policy.

A 2022 study by the Pew Research Center found that a staggering $53 \%$ of Americans get their news from their digital devices, with only $5 \%$ consulting printed publications (Forman-Katz and Matsa 2022). Moreover, $33 \%$ use TikTok as their news source while almost every other social media platform saw declines in 2022 (Perez 2022). Following the event, the influencers received a briefing from the President, National Economic Council, and the climate policy office. Before these individuals took to TikTok to post about their experiences, the platform already gained an increased influence in international politics because it is the reason for their inclusion. Data sharing presents itself here as a distinctly positive area within TikTok's sphere of influence, but this does not outweigh the potential dangers of data collection and censorship. This example is beneficial to the public in that it aims to educate and spread awareness in places young people are actively present and listening. TikTok influencers also received a presidential
briefing regarding the outbreak of war in Ukraine in February of 2022, which will next be considered.

Data sharing on TikTok during the outbreak of war in Ukraine can be examined as a case study of social media as a positive influence on international security. Two sources of data sharing in particular captured the attention of the internet during the start of the war: civilians and soldiers. Politicians, specifically Ukraine's President Zelensky, were also very active on social media, but this instance pertains to Twitter more than TikTok so will not be explored in the scope of this analysis. Civilian activism on TikTok is the first source. Because of the application's user interface and ease of use, it presents itself as the ideal form of video journalism for young people in Ukraine and Russia. Teenagers posted videos depicting a typical 'day in the life' living in bomb shelters, drinking discoloured tap water, walking around their streets alongside demolished buildings, and distributing humanitarian aid (Appendix 2, A). Because TikTok uses geolocation in its algorithm, it is possible these videos would be shown to Russians who had been told by their President the invasion was simply training exercises. These videos resonate with viewers more intensely because, 'On TikTok, Ukrainians appear to viewers less as distant
victims than as fellow Web denizens who know the same references, listen to the same music, and use the same social networks as they do' (Chayka 2022). Data sharing here could be viewed as having a positive influence on international security; while not a direct correlation, these videos could have influenced donations and increased refugee allotments in European countries. However, these potential positives do not diminish the dangers. A study conducted by NewsGuard found TikTok is sharing 'false and misleading content about the war in Ukraine to users within 40 minutes of their signing up to the app, regardless of whether they run any searches' (Cadier, et. al 2022). As such, while data sharing appears on the surface level to have a positive influence, it can still produce deeply threatening international security consequences such as the belief 'Ukraine is led by a neo-Nazi junta' permeating mainstream media (Cadier, et. al 2022).

The second source of data sharing comes from soldiers, both Russian and Ukrainian, taking to TikTok to document the reality of the invasion. Because photos and images contain geolocation data, posting them during an active conflict is a security threat for militaries. In May 2020, Putin banned active soldiers from carrying mobile devices to counter this security
threat (Decree of the President of the Russian Federation 2020). Putin's policy impacts international security because 'Cyberspace is an environment in which adversaries seek out information about one another,' constantly (Kostyuk and Gartzke 2022).
 no, to TikTok.
However, this policy is inherently difficult to enforce when soldiers are sent to the battlefield, and in 2020, TikTok feeds were flooded with videos of both Ukrainian and Russian soldiers documenting the conflict firsthand. Consequently, the Russian government began disseminating propaganda posters encouraging soldiers against posting.

Once again, data sharing could be viewed as having a positive influence, for the purposes of

Ukrainian tracking, but this could go both ways. The Russian case study falls in line with Kostyuk's 'Theory of Indirect Substitution,' in that cyberwarfare would likely be deployed independently of conventional warfare. While making TikToks on the battlefield is hardly an act of cyberwar, the example still supports her analysis that cyber acts during military conflicts will exist unattached to traditional warfare. Data sharing occasionally has some positive effects on civilian activism but even then, one must constantly parse truth from mis/disinformation. As such, the intermittent benefits of data sharing do not outweigh the dangers posed by collection and censorship to international security.

## Conclusion

What began in 2016 as an app displaying comedy and dancing videos has rapidly permeated the cybersecurity sphere. In 2023, TikTok presents itself as a grave threat to international security in the three areas explored: data collection, data censorship, and data sharing. Because data is considered property in the realm of cyber, data collection is intelligence and its covert collection is threatening. TikTok's excessive collection of data and the international security implications due to China's

National Intelligence Law threaten the integrity of any user's data security. Data censorship has clear international security implications, given the tendency of TikTok users to read their news via the 'For You' page rather than newspapers. While TikTok's data censorship might be difficult to prove with data accessible publicly, this security analysis has unequivocally argued that the application overstepped by limiting mentions of Hong Kong protests and other popular hashtags the Chinese government would not support. Data sharing, the third area of interest, was examined in reference to the outbreak of war in Ukraine. While one could argue that videos of the conflict are primary source material and benefit public awareness, the algorithm cannot be trusted to boost true information and limit disinformation. Moreover, the use of TikTok by soldiers was also problematic given the geolocation data attached to the videos. In all three areas of data usage, TikTok overextends itself beyond the traditional goals of a social media platform. Its algorithmic artificial intelligence properties are weaponized against users, whether inadvertently or not. The time has come for swift action against draconian data harvesting by TikTok.

## Forget ‘Fairtrade’: How Child Labour Fuels the Cocoa Industry

## Stella Mortarotti

Cote D'Ivoire and Ghana account for around $60 \%$ of global cocoa production today (Africa In News 2022). This industry expanded during the 1960s, facilitated by the use of paid migrant labour from Burkina Faso and Mali during a period of increasing world prices. Today, the movement of labour bound for cocoa plantations remains the same; however, it is often children that are now traded across the border. An estimated 1.56 million children work in cocoa plantations in Cote D'Ivoire and Ghana alone, of which 1.43 million are involved in hazardous forms of child labour (NORC 2020). Some of these children have been trafficked and are effectively slaves: filmmaker Miki Mistrati found that a child can be easily purchased for €230. Occasionally the children migrated with their parents from surrounding countries and are subsequently abandoned, ending up alone on plantations where they are used as forced labour. When questioned, plantation owners often claim that children are nieces and nephews of their employees, or ${ }_{18}$

The deadline was moved from 2005 to 2020; in that time, rates of child labour were found to have increased. The target has still not been met today, in 2022. None of the biggest chocolate brands and distributors even claim to deny the presence of child labour in their supply chains. Despite that, their products boast labels guaranteeing ethical and sustainable practices: Mondelez with Cocoa Life, Nestlé with Cocoa Plan, Callebaut with Cocoa Horizons.

The solution to this problem may seem the responsibility of these large corporations. The relative oligopoly of chocolate manufacturers means that they can massively manipulate market prices of cocoa, which has led to a historic trend of falling cocoa prices. Only around $10 \%$ of the profit made off a chocolate bar returns to the farming cooperative, which must be split between workers, and cover cultivation costs and local taxes (Channel 4 2022).


Child working on a plantation in West Africa.
A conscious consumer who reads up on these companies' supply chains could be excused for believing that their chocolate was sourced ethically - or worse, that their 'informed decision' to purchase was helping to improve communities in West Africa.

There have been attempts to tackle the issue through the legal system. A case presented to the U.S. Supreme Court in 2018, carefully constructed through on-the-ground research for over fifteen years by lawyers Paul Hoffman and Terrence Collingsworth, accused Nestle USA and Cargill of aiding and abetting slavery in their supply chains. In 2021, Justice Clarence Thomas
temporarily there from neighbouring farms. This makes it difficult to obtain accurate estimates on the actual rate of trafficking and child labour, despite the use of children in such hazardous working conditions being obvious upon auditing individual plantations.


The Harkin-Engel Protocol, signed in 2001, acted as an international declaration for the eradication of child labour. Through it, major confectionery companies (Nestlé, Cargill, Mars, etc.) pledged to merely reduce 'the Worst Forms of Child Labor' by 70\% (Chocolate Manufacturers Association 2001).
declared in an 8-1 ruling that they reversed the right for the plaintiffs to sue, as the conduct occurred outside the U.S., despite the obvious economic leverage that both firms had over the plantations (Mangan 2021). Defendant lawyers for these large corporations profit massively from prolonged cases: Neal Katyal argued against this aforementioned case of Nestle USA, Inc. v. Doe, at the rate of $\$ 2,462$ an hour (Collingsworth 2022). Independent lawyers, swamped by paperwork and going against entire law firms, have so far not been successful in setting any kind of precedent to address child labour used in the industry.

Fairtrade is now a widely recognised certification and is generally believed to be a solution to this issue. Products marked with the familiar logo are given the ethical stamp of approval, and consumers assume that their purchase of commodities at a higher price is beneficial. In essence, Fairtrade functions by allocating a price floor to the commodities it covers - for example, as of October 2022, cocoa must be traded at a minimum of $2.40 \mathrm{USD} / \mathrm{kg}$ with a Fairtrade premium of $20 \phi / \mathrm{kg}$, compared to the market trading value of $2.24 \mathrm{USD} / \mathrm{kg}$ (Fairtrade International 2022). The premium paid by manufacturers for this coffee is supposedly invested into community
projects back at the plantations; for example, the cooperative can decide to use this premium to build schools, invest in farm technology, or hire more workers. It should be noted that Mondelez, Nestlé, etc., no longer source their cocoa under Fairtrade (Liboureau 2020).

Briefly using basic economics principles quickly reveals one of the fundamental shortcomings of Fairtrade. As with most price floors, supply tends to exceed demand, leading to a surplus of beans that were grown under strict social and ecological conditions, often incurring high costs to the producer. As a result of the surplus, producers may be forced to negotiate the sale of these beans without the Fairtrade certification and at far lower prices. In some years, this creates an operating loss, which is accentuated by the cost of membership to the Fairtrade certification. The inability to pay workers because of such a loss has been shown to cause higher rates of slavery and child labour in some Fairtrade-certified cooperatives (Sylla 2014). Additionally, the Fairtrade certification leads consumers to believe that child labour and other unfair trading practices have been addressed, thus public response is practically non-existent. This issue is especially of interest to the University of St Andrews, which won the Scottish Fair Trade and Sustainability Award 2021.

An alternative is decentralising the certification process, allowing for more intimate relationships between the chocolate manufacturer and cocoa producer. It is the cumulative yield of many small plantations, often hundreds in one single cooperative, that produce the large volume of beans then purchased through further levels of middlemen by Big Cocoa. This decreases the traceability of beans and thus the accountability of Nestlé, Cargill and the like. The bean-to-bar movement advocates for the exact opposite. It has sought to resolve the issue of pricing and infrastructure by working more closely with producers. By sourcing cocoa from a few select plantations, it is easier to audit farms for ethical practices and increase the traceability of cocoa. The costs of production incurred by such practices are then passed onto the consumer, turning cocoa into a far more premium product - perhaps it should be, considering the additional ecological cost of manufacture. The website www.slavefreechocolate.org, created by activist Ayn Riggs, provides one tangible solution to consumers. It lists the few companies that source their beans directly from producers, thus allowing them to closely monitor the working conditions on the farms. Consumers can see that companies like Tony's Chocolonely, despite their branding being centred around being 'slave-free chocolate', do not feature
on the website due to their association with larger firms like Barry Callebaut, who source their cocoa beans from plantations that use child labour.


Currently, consumers should seek to support 'bean-to-bar' independent chocolate makers, usually identified as the ones that list specific provenance (both country and region) of cocoa on the packaging. Failing this, looking for the Fairtrade logo on chocolate demonstrates growing concern for ethical production to supermarkets and manufacturers. The new generation of lawyers and journalists should consider advocating for the movement, as it is often their work that acts as the catalyst both for public pressure and ultimately political and corporate changes. To paraphrase the words of Guatemalan activist Fernando Morales: it is the indifferent good that allows such corruption to exist.

## When Identifying Illness Does More Harm Than Good

## Luis Gil

From 1993 to 2011, the reported rate of thyroid cancer in the Republic of Korea multiplied fifteen times over. In the same period, mortality remained virtually the same (Ahn, Kim, and Welch 2014). It was not that in such a short span of time, cancer treatments had evolved to adequately deal with their increasing burden on the healthcare system in Korea, but rather a result of widespread screening programs. The same trend is being replicated all over the developed world in an overdiagnosis pandemic. Though earlier detection of disease leads to better outcomes overall, national healthcare systems such as the United Kingdom's NHS should be wary, like Icarus, of being overzealous and flying too close to the sun.

Overdiagnosis can simply be defined as diagnoses that cause more harm than good through the over-detection and over-definition of disease. (Brodersen et al. 2018). Overdetection refers to identifying diseases that were never going to cause any harm during a patient's lifetime, whilst over-definition involves broadening the criteria for a patient
to be diagnosed. Often, definitions for a disease are broadened due to big pharma lobbying. This increases the number of patients who believe they should have access to medicine. In reality, however, such prescriptions will rarely help the patients and only puts pressure on the scarce resources of national health services. Recent studies have shown that this tactic has been at the forefront of pharmaceutical campaigns. A prominent example is the overprescribing of ADHD medicine (Sharpe 2014).

Physicians may overdiagnose in fear of the deontological and legal repercussions that could follow from failing to diagnose a sick patient. For example, there is a routine screening test for prostate cancer known as the prostate-specific antigen (PSA) test, which is subject to great controversy in the international medical community. Contrary to what the name leads you to believe, these antigens can develop not only from prostate cancer but also from many other confounding factors ranging from a urinary tract infection to riding a bike or having sexual activity before the test. Thus, a raised


PSA score is not a great indicator of high-grade prostate cancer. In fact, autopsy studies have reported an overdiagnosis rate of $18.5-38.5 \%$ for prostate cancer (Loeb et al. 2014). A population-stratified PSA screening program is still conducted in the UK, despite data proving the same mortality rates between GPs who request a lot of PSA tests and those who request none. Overdiagnosis presents both a large financial burden on the NHS and a significant mentalhealth burden on patients falsely diagnosed with cancer. Healthcare professionals should be motivated to relieve suffering, not cause it; the anxiety created by a cancer diagnosis without real health significance goes against the principles of medicine entirely.

This is not an issue that concerns malpractice, but it opens the door to debating tighter control over what symptoms pharmaceuticals can list
and greater emphasis on scientific precision when testing. For us all to reap the benefits of screening, inevitably, some overdiagnosis will persist - "chaque qualité a ses défauts". This is the trade-off that we face: implementing screening programs is as much an economic challenge as a healthcare-related one, and the opportunity costs are large. One possible solution I contend is the personalisation of screening programs: rolling out tests on a more selective invite-only basis and taking risk factors such as family history into account. With research being conducted into current UK screening programs, such as the NIHR report on breast cancer, the NHS is moving in the right direction. Still, more awareness needs to be raised about the disbenefits of disease overdiagnosis to make progress in tackling its farranging financial, systemic, and psychological impacts.

## Why you should follow Vogue China

## Louisa Lindsley

It's visionary, influential, unrestrained; it's Vogue China. Founded in 2005, the high fashion magazine 'turned China from Karl Marx to Karl Lagerfeld' in less than a decade, according to ex-Editor-in-Chief Angelica Cheung. With its massive readership, economic might, and mission to recentre the high fashion industry, Vogue China punches way above its weight. Followers of fashion and soft politics


From the onset, this crown jewel of Condé Nast's luxury magazine pipeline has struck a deeper chord than any other Vogue edition. In contrast to the slow growth of its 26 cousins, Vogue China amassed the same amount of print subscribers in the 17 years since its inception as the US edition attained in over a century. China joined the World Trade Organization in 2001, instigating the country's 'miraculous' economic growth and skyrocketing tens of millions of people to middle- and upper-class income brackets. Ex-Editor-in-Chief Angelica Cheung noticed that although an unprecedented number of Chinese consumers had begun spending their money on luxury goods, they were largely unfamiliar with brands beyond Louis Vuitton and Gucci. Vogue China adopted the role of a posh older sister who just returned from her studies in Paris, guiding consumers on a variety of fashion topics such as 'what is the infamous Little Black Dress?' or 'why should you opt for cashmere in the winter?'. Chinese shoppers paid attention. With unrivaled quality and

$16,500,000$ unique monthly digital readers - ten times more than the American edition - Vogue China has become the country's fashion Bible.

China is the world's fastest-growing market of luxury goods. Bain \& Co. calculated that the country's share of the global luxury goods market struck around $32 \%$ in 2020 and that the number of Chinese households earning upper-middle-class incomes is expected to grow by $68 \%$ between 2020 and 2030. Having gained the trust of hundreds of millions of consumers, whatever Vogue China endorses often sells out overnight. This has huge economic implications for the luxury market, especially given China's unique advertising landscape. It is well known that the Chinese government maintains a strict Internet firewall which restricts international companies' ability to access and influence the lucrative Chinese market digitally. As such,
the biggest players often rely on Vogue China for access to customers the same way the global supply chain relies on Egypt for admittance through the Suez Canal. Ad pages cost more in Vogue China than in any other fashion editorial, making Vogue China the most valuable magazine worldwide.

Perhaps the most significant - and noticeable - feature that sets Vogue China apart from its competitors is its clear commitment to Chinese aesthetics and ambitions. Take a cursory glance at the Instagram pages of 26 of the 27 international Vogue editions, and you see the West regurgitated: what Kate Middleton wore to Wimbledon, whom Timothée Chalamet is dating, or who styled Naomi Biden's wedding. Vogue China would never. Unlike any other Vogue edition, the magazine's 'Made in China' section has always consumed a considerable amount of the

editorial and features up-and-coming Chinese fashion creatives. Likewise, the magazine reserves lucrative ad space to feature lesser-known AsianAmerican or Mainland Chinese designers. Partnerships between Vogue, the Chinese Communist Party, and top fashion schools fund the early careers and top-tier fashion education of preeminent new designers.

At 27 years old, Margaret Zhang is the youngest Vogue Editor-in-Chief ever. Since starting in 2019, one of her greatest priorities has been to increase domestic and global demand for Chinese luxury designers. Significantly, she is among the first generation of citizens entering leadership roles that have undergone a lifelong Patriotic Education.

Since 1994, China has mandated a patriotic national curriculum, which has sparked concerns in the past over its potential for fostering nationalist sentiment. In her most recent Editor's Note, Zhang spoke on 'breaking the shackles' holding back Chinese designers and urged readers to 'walk into the future fashion world with us.' Indeed, as the next generation of Chinese consumers develop stronger pride in their country and move beyond craving the European giants, the world should pay attention.

The Editor-in-Chief has expressed a clear desire for the West to recognize Shanghai as a global fashion capital within the coming years. If any publication can make that happen, it's Vogue China.

## Considering Consciousness

## Brett Borthwick

Human beings have a unique capacity to be 'conscious'. We as a species separate ourselves from animals and plants through this ability yet to be scientifically explained. Consciousness, something beyond awareness but less intense than a transcendental feature of the mind, seems to be exclusive to human beings. This quality combines empathy, awareness, locality, and spatiotemporal grounding through a feeling of centeredness and presence.

In the past hundred years, consciousness has gained traction as a field of investigation within the scientific realm. David Chalmers, an Australian philosopher and neurologist, best summarised the need to address what he coined as 'The Hard Problem': ‘Consciousness poses the most baffling problems in the science of the mind. There is nothing we know more intimately than conscious experience but there is nothing harder to explain' (Chalmers 2010). In the past century, due to advancements in neurological and quantum technology, scientists have made waves in the study of consciousness. Consciousness emerges as a necessity in quantum physics and researchers postulate
that it could be used to explain other bizarre phenomena such as neardeath experiences, memories of past lives, and synchronisation within the mind and across nature. Recently, consciousness emerged as a scientific field of inquiry through its provable surfacing in quantum physics.

## SYNC: From Quantum Synchronicities to Hyperscanning

Isaac Newton, the father of modern calculus and one of the most influential scientists of all time, wrote in 1704, 'God in the beginning formed Matter in solid, massy, hard, impenetrable, moveable Particles...so very hard, as never to wear or break in pieces' (Newton 1730). From this point onwards, Western science became exclusively materialistic; in other words, 'anything that wasn't matter didn't matter' (Valadas Ponte and Schäfer 2013). As consciousness arose and gained traction in the ideologically shifting scientific realm, empiricists were forced to confront the fact that the physical world is simply 'an emanation out of a cosmic realm of potentiality' (Valadas Ponte and Schäfer 2013). This less physical world may be where actual reality and meaning take shape.

Synchronicity refers to the simultaneous occurrence of connected events. One event does not cause the other, and yet, the compounded occurrence increases the significance of both events. The existence of synchronicities challenges the very nature and stability of human life as we know it. The most basic example of sync is that of fireflies flashing in rhythm, in a constant tempo with one another. This sync implies that insects have a methodical and reliable internal clock; however, given the current understanding of insect morphology, no such mechanism exists (Strogatz 2004). In fact, when fireflies first join up, they flash incoherently. As they assimilate to the group they find, their tempo changes and within minutes they have matched that of the group. This almost instantaneous sync implies that even the simpler organisms in our ecosystem are able to adjust their tempo to align with others (Strogatz 2004). Fireflies have some means of synchronisation which has yet to be located within their minuscule exoskeleton or understood by scientists.

The term synchronicity was originally coined by analytical psychologist Carl Jung in 1952. He described a synchronised occurrence to be 'a meaningful coincidence of two or more events, where something other than the probability of chance is involved'
(Jung and Hull 2011).Jung's analytical psychology 'leads us to the view that there is a part of the world that we can't see, a realm of reality that doesn't consist of material things but of nonmaterial forms' (Jung and Hull 2011). Synchronicities were the evidence for this theory; Jung proposed events connected in substance might in fact be connected in meaning (Jung and Hull 2011). Jung's archetypes and his theory of the unconscious mind are in perfect alignment with the properties of quantum theory; both revolutionary theories beg the individual to consider that the basis of material life may exist in an unmaterial form.

Synchronicity is currently a young neurological field of study, given that so little is known about neural processes occurring during social interactions and learning. In this neural context, synchronicity (sync) is defined as the "adjustment of rhythms of oscillating objects due to mutual interactions' (Ernest Montbio 2016). In the late 1950s, Norbert Wiener of MIT, a pioneer in the field of sync and the first to point out its pervasiveness, utilised this technology in a proposition that Electroencephalography (EEG) could detect the synchronised oscillation of brain waves (Strogatz 2004).

In a 2017 study, The Brainwaves group at NYU underwent a series of classroom experiments in which students wore EEG headsets to analyse synchrony occurring within the brain in correlation with learning and peer-to-peer social interactions. It was found that this synchronisation was driven by a combination of individual preference for learning style and the properties of the stimulus (teaching style) (Dikker, Wan, Davidesco, Kaggen, Oostrik, Mcclintock, Rowland, et al. 2017). The joint neural entrainment of oscillation between participants increases as calculated synchrony increases. Synchrony between multiple brains creates an alignment of sorts between the two individuals, the feeling that they understand each other. Though brain-to-brain synchrony has yet to be connected to consciousness, results such as that of the Brainwaves group shed light on unexplainable processes in ways those investigating consciousness also try to accomplish (Dikker, Wan, Davidesco, Kaggen, Oostrik, Mcclintock, Rowland, et al. 2017).

It is occurrences such as these that stump pragmatists and sway openminded intellectuals to reconsider the assumptions made by empirical science. Peat argued, 'while the conventional laws of physics do not heed human desires or the
need for meaning - apples fall whether we will them to or not synchronicities act as mirrors to the inner processes of mind and take the form of outer manifestations of interior transformations' (Dikker, Wan, Davidesco, Kaggen, Oostrik, Mcclintock, Rowland, et al. 2017). Synchronisation, whether brain-tobrain, occuring in firefly populations, or of knowledge and universes, ultimately begs the question: By what means is everything connected? It is undeniable that thesesynchronizations are beyond random coincidence (Van Gulick 2014). In actuality, these instances of synchronisation may be begging mankind to reconsider our current empirical and materialistic view of life, consciousness, and cosmic awareness.

## Consciousness Outside the

## Mind: Near Death Experiences

 and Children Who Remember Past LivesNotoriously ignored and overlooked by scientists and academics, neardeath experiences come in a myriad of forms; from seeing bright lights to encountering spirits or physically leaving the body, these brushes with death present themselves as invaluable opportunities to study consciousness. When consciousness behaves in ways out of the ordinary, perplexing even tenured scientists,
academics are forced to pay closer attention. This heightened interest in the study of consciousness is also apparent in cases of children who remember past lives. Most commonly, these children who report details of previous embodiments and deaths are between two and five years of age and many parents and doctors immediately suspect mental illness. Given current research, these cases are not believed to be determined by the child's environment; parents who believe in reincarnation are just as likely to birth a child who recalls a past life as parents who strictly believe in heaven and hell (Tucker).

With this being said, the cases are dependent on individuals' culture in the same way the specific attributes of near-death experiences can be affected by the person's upbringing. It is not uncommon for the child and the person identified as the past life host to share many characteristics including geographic and ethnic backgrounds. In some cases, these children even have birthmarks in the same spot as the fatal injuries they recall (Stevenson 1993). These children have been found in every part of the world, though they are most easily identified in South Asia (Stevenson 1993). Hinduism and Buddhism are two of the primary religions in this region, both of which accept reincarnation as a fact
of life. This correlation may be due to an overall cultural acceptance of past lives, whereas western countries often find these cases absurd and may dismiss children's reports.


James Leininger was born on April 10, 1998, in Dallas, Texas to Bruce and Andrea Leininger. At age two, the young boy began having violent nightmares of a plane crash, recounting the story of an American pilot shot down by the Japanese to his concerned parents (Tucker 2016). In his nightmares, he would scream the same words, followed by, 'Little man can't get out,' while thrashing in bed. When his parents confronted him about the dreams, he responded by saying they were memories of when his plane, a military Corsair, crashed and burned (Tucker 2016).

The firstmajorincidentoccurredwhen his father took him to a flight museum outside Dallas, where the World War II exhibit particularly fascinated

James. In the months that followed, he began repeating, 'Airplane crash on fire,' while aggressively slamming toy aeroplanes into the table. When asked about who the little man was, he responded 'James' or 'me' (Tucker 2016). Since then, the statements he made have been consistent with the life and death of James Hurston, a pilot who was killed nearly 50 years before James Leininger was born. The notion that a World War II pilot had reincarnated as their son was astounding to Bruce (a devout Christian) and Andrea Leininger.

Remarkably, some children can also remember the superposition between the phases of their incarnation. Children who can recall past lives with immense detail lead researchers to hypothesise that these individuals, and potentially the greater humanity, possess 'multidimensional and multiexistential consciousness' (Abreu 2015).

Though widely regarded as controversial, the story of neurosurgeon Dr. Eben Alexander illustrates a drastic change in perspective with regard to consciousness. Prior to his near-death experience, he believed consciousness to be solely a function of the brain, created entirely by the mind, within the cerebrum. With more than twenty years of academic neurosurgery
under his belt, Alexander thought he knew all there was to know about the brain. On November 10, 2008, he woke at 04:30 with violent waves of pain pulsating through his spine (Alexander 2012). The pain worsened and Dr. Alexander was hospitalised, entering a coma hours later. His doctors diagnosed him with bacterial meningitis, specifically the E.coli bacteria, which entered his brain and damaged his neocortex. In his coma, Eben entered what he referred to as a 'primordial' state, where 'language, emotion, logic were all gone... as the primitive bacteria... had taken over [his] brain and shut it down' (Alexander 2012). He was clinically brain dead and conscious of this fact, while his inward sensory awareness was elsewhere having an elaborate experience. Then, a bright white light rescued him from this realm, and he entered a Garden of Eden of sorts, with vibrant plant life and mystical choirs (this bright, white light is a recurring image in near-death experiences; see Long 2014). In his out-of-body, near-death experience, Eben Alexanderwas forced to confront everything he thought he knew about consciousness and its place within the brain (Alexander 2012). He came to the conclusion that the brain does not produce human consciousness, but rather, blocks our access to these higher worlds (Alexander 2012).

Individual experiences such as these challenge the nature of everything, but scientists are quick to dismiss them because of their otherworldly variety. Though Alexander could not shape this understanding into words, he became one of many scientists to finally address the gap in science: consciousness. However, the study of near-death experiences is a slippery slope; scientists are wary of investigation and analysis, given that the only data they have worked with is that which participants can remember. At best, Alexander's experience is a call to modern neuroscience to address the problem of consciousness and how it manifests during near-death phenomena.

Studies by Dr. Christopher Timmermann of Imperial College London involving psychedelic drugs were another means of investigating near-death phenomena. Psychedelic research groups have hypothesised that N-Dimethyltryptamine (D.M.T.), the hallucinogenic drug, could be released in the brain during neardeath experiences, contributing to the instances of transcendental phenomena. Endogenous D.M.T. is a neurotransmitter that exists in small amounts within all human beings, but the potential neurological release is still up for debate. D.M.T. affects the functions of the periphery and central nervous system, and
its repercussions have been used to study the nature of near-death experiences (Borthwick 2019). In Dr. Timmermann's recent study, D.M.T.induced near-death experiences were compared to actual experiences (Timmermann, Roseman, Williams, Erritzoe, Nutt, and Carhart-Harris 2018). This research resulted in the uncovering of a strong overlap across all 'phenomenological features' when these numbers were compared between the D.M.T.-induced experiences and a matched group of 'actual [near-death] experiencers' (Timmermann, Roseman, Williams, Erritzoe, Nutt, and Carhart-Harris 2018). The correlation sheds light on the neurological understanding of death and near-death experiences (N.D.E.) as a whole. The scientific measurability of an N.D.E. increases if researchers are able to recreate it in a controlled environment, unlike the case of Eben Alexander.

Consciousness takes form through seemingly impossible experiences and case studies like those of Eben Alexander and James Leininger. These are only three of the thousands of cases in which individuals encounter our multidimensional and multiexistential consciousness in great detail while their brains are either not functioning or are no longer in the body in which the memory occurred. Children who recall previous lives
force scientists and society to consider the possibility of reincarnation as a reality, while near-death experiences serve as the only measurable evidence of consciousness in regard to death. The ever-growing body of case studies reporting similar transcendental experiences makes the existence of a consciousness separate from the mind a difficult hypothesis to ignore. Ironically, scientists are finally among near-death experiencers, and these converts are finally pulling consciousness into the scientific realm, where it can be measured and explored.

## Quantum Physics and the Enigma of Consciousness

Quantum physics is the prevailing scientific theory for the nature of the universe. It generally explains and governs the behaviour of physical systems from the microscopic to planetary scale. One-third of our economy relies on quantum technology and products that utilise these properties (Rosenblum and Kuttner 2011). From lasers and transistors to charge-coupled devices and MRI, these everyday implements all rely upon quantum mechanics. Quantum theory encompasses classical physics and is the most battle-tested scientific theory in existence. After eight decades of testing, quantum theory has never
been proved wrong but in order to accept it in its full robustness, scientists are forced to confront a non-trivial problem (Rosenblum and Kuttner 2011). The irony of quantum theory is that the most accepted theory still cannot explain consciousness, while at the same time, it is known to require consciousness as a necessary ingredient (Atmanspacher 2004).


The quantum definition of consciousness is essentially just the capacity of awareness. The theory was brought to light through the renowned two-slit experiment, in which particles began unexpectedly behaving like waves. When a particle is sent through a two-slit diaphragm the logical hypothesis based on Newtonian physics was the appearance of two lines on the other side of the diaphragm. This formation alludes to the fact and understanding that each particle stayed in alignment with the slit
entered. However, instead, quantum weirdness occurs. Interference occurring in one quantum system affects the observed outcome in another system. The immediate and unexpected implication that arose from this experiment is the proposition that particles can behave like waves. The waviness refers to the probability of finding a particle in a location, however, In collapsing one wave function, 'observation not only creates a present reality but also creates a past appropriate to that reality' (Rosenblum and Kuttner 2011).
 performed with electrons.
This is the problem of observation, and it gives way to the reality principle of quantum theory. Researchers have hypothesised that this principle, in conjunction with the multiverse theory, may mean that for each collapse of a wave function, a separate reality is created where the opposite wave function collapsed. Observation is intrinsically random, however, since observation creates
reality in the quantum world, this theory presents another problem in that simply looking for a particle in one location collapses its waviness of being in the other location (Stanciu, Pape, Udmark, Balasubrahmanyam, Mitchelson, et al 2019).

The second principle of quantum theory is connectedness, which can actually be observed on the human scale. Connectedness revolves around what Einstein called "spooky action at a distance' (Stanciu, Pape, Udmark, Balasubrahmanyam, Mitchelson, et al 2019). Essentially, these actions occur when two particles become entangled. This can appear in two manners: either they simultaneously occupy both locations and act together, indistinguishable from one another or the two particles share conditions though they may be light years separated (Popkin et al. 2018). Einstein denied the existence of entanglement altogether because he couldn't explain why it was possible nor why everything that has ever been connected is forever entangled (through the second possibility). By this property, the conscious observation of one particle instantaneously changes the properties of its entangled counterpart. The implications are profound: 'without consciousness, 'matter' dwells in an undetermined state of probability. Any universe that could have preceded consciousness
only existed in a probability state’ (Lanza 2010). Consciousness is the grounds for human existence and advancement, and yet, scientists reject it on the basis it still cannot be completely quantified. Therefore, the physical world and by extension, the structure of the universe, exists in an indefinite state of superposition between potentials without a present observer.

For centuries, scientific models of the nature of anything and everything avoided consciousness and left its interpretation to philosophers and religion. The quantum addition of consciousness presents itself as the first instance of science admitting the existence of something beyond elementary particles, forces, and waves; something physicists consciously avoided for hundreds of years, despite evidence at every turn. The current scientific method begs for reproducibility: a 'one size fits all' hypothesis that explains the nature of the universe. The flaws in this method came to life in the emergence and undeniability of consciousness in quantum physics.

## Conclusion

Consciousness arose as a scientific field after centuries of scientists and academics denying its existence entirely. Its provable surfacing in
quantum physics lead to an enigma in which scientists could no longer dance around the reality of consciousness. Synchronicities are pointers toward the most widely accepted hypothesis. The scientific method revolves around the premise that the most infallible theory is right, until proven wrong. Quantum physics initiates the emergence of consciousness within the science of the mind while neardeath experiences, children who remember past lives, and collective consciousness each cement its purpose. The study of free will is further exiled from scientific realism than even consciousness, though this emergence provides a potential for future free will investigations. Consciousness emerging within science is thus a pivotal occurrence given it is the only field of science that provides direct insight into the unified science of the mind, spirit, body, soul, and universe. This emergence is a synchronicity in that it is occurring across neuroscience, physics, biology, philosophy and more. The existence of consciousness will thus achieve what science has never been able to accomplish; fulfilling the role of religion by connecting the human being to human experience and, by extension, the experience of the universe.

## ON THE GROUND

"I have never felt that any thing really mattered but the satisfaction of knowing that you stood for the things in which you believed and had done the very best you could:"

- Eleanor Roosevelt
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## Student in a Silenced City

Louisa Lindsley

Identifying information has been altered to protect the safety of the author's colleagues. The author writes in a personal capacity and their views do not reflect that of any organisations the author may belong to.

In the middle of campus at the University of Hong Kong sits the Democracy Wall. For more than a year, the large bulletin board has been devoid of any notices or flyers, encircled by caution tape, and guarded by two large orb-like security cameras. When I first arrived, it struck me as ominous, like a mouse trap gathering dust. The students acted like it didn't exist.


For the past 25 years, Hong Kong has been free to manage its own affairs under a 'One Country, Two Systems' policy, in which China had agreed to preserve Hong Kong's liberal, capitalist system until 2047. Hong Kongers have been vying for democratic reform - especially for the right to elect their own government representatives - since the end of British rule in 1997. However, in recent years, Beijing has cracked down on dissent and made increasingly brazen encroachments on the people of Hong Kong's freedoms of speech, press, and association. In 2020, several years of protests and clashes between civilians and police culminated in the passing of the National Security Law, resulting in the arrest of thousands of pro-democracy activists, journalists, and lawyers, with thousands more fleeing the city (Maizland 2022). Bookstores selling anti-Chinese Communist Party (CCP) titles were forced to close and liberal newspapers were shut down. Apple Daily, owned by Hong Kong businessman and politician Jimmy Lai, was a popular pro-democracy newspaper targeted by the CCP. Lai is currently facing a closed trial in which the court seeks to restrict Lai's legal representatives to attorneys from mainland China.

Under the National Security Law, defendants such as Lai are guilty until proven innocent, subject to potential life imprisonment on the mainland, and seldom granted bail.


Under the National Security Law, radical anti-Beijing sentiment is criminalised. The new law adopted extremely broad definitions for crimes such as terrorism, subversion, secession, and collusion with foreign powers. It also allowed Beijing to fill Hong Kong courts with a curated selection of mainland judges to hear national security cases. Today, the silence of millions of Hong Kongers stems from a mix of policing and heavy self-censorship. The opacity of these new laws breeds apprehension regarding the legality of seemingly mundane actions. My classmates warned me that checking out books on 'politically controversial' topics from the university library
would automatically ping 'security'. Though I found that claim hard to believe, I discovered I would rather unquestioningly accept the assertion than test it and suffer the consequences; I suspected that most political science students opted to do the same. Tutors in my modules suggested we submit 'sensitive' essays with an alias. Widespread fear that China monitors personal phone data, such as private conversations and location tracking, has pervaded public belief. Many speculate that China's Great Firewall will be extended to Hong Kong in the coming months or years. The Chinese flag now flies atop every university building and elementary school. Hong Kong has never been further from democracy.

My classmate, Lily, recounted how her family has lived in Hong Kong for seven generations. 'Everyone in my family is mixed.



Historically, being Eurasian in Hong Kong was both a blessing and a curse, but my ancestors were able to liaise between European and Chinese merchants, and they found great success in that. This city is everything to me. It's the best city in the world. Hong Kong is the only city where people like me belong, and it's dying. It breaks my heart.'

Lily continued, explaining that although governance during the colonial era wasn't perfect, it was always better than rule under the People's Republic of China. Throughout the history of the city, the basic needs of its inhabitants were always met. For most people, that was good enough. Hong Kong was
fearlessness stood in stark contrast to the other professors whose classes I took on Chinese politics. Where others constantly touted themselves as apolitical, impartial, China-loving scholars, this Hong Kong politics professor regaled us with a history of police brutality, protest, and the CCP meddling in local politics. He painted a picture of Hong Kong in the grip of authoritarianism, and outlined all that the city's ardent constituents had done to try to keep Beijing at bay. My classmates and I often joked that we would come to class one day and discover he had disappeared. Indeed, on the last day of class, he revealed he would be leaving the university at the end of the semester. This was the last module of its kind taught in Hong Kong.

At lunch one day, I asked my classmate Matt, who choreographs dance performances in the HKU arts society and recently put on queer exhibition showcase, if he would ever create a similar piece alluding to the political climate. I envisioned that an Alvin Ailey-esque piece could speak volumes on popular sentiment while strategically avoiding censors. 'We wouldn't go there,' he said. 'It's not worth the risk. Besides, the university has to approve all of our events, and they would never greenlight anything like that. During he club fair in September, for example,
we hung little flags on our booth to showcase how international our membership was. Two security guards approached us and told us to take down the Taiwanese flags. The girls from Taiwan might have been frustrated, but it wasn't like they could say anything.'

This wariness pervades the university, but only if you pay close attention. A friend told me that the statue at the student canteen memorialising the 1989 Tiananmen Square Massacre was dismantled during the night a few months before I arrived. In its place there are now benches and nicely arranged plants where students sit and eat their lunch. When protests broke out in China in November, scarcely any people on campus broached the subject, with the notable exception of two students who publicly advocated for tenants of a mainland housing complex that had been engulfed in flames and contention. They were questioned by security and allegedly faced expulsion.

All the while, the Democracy Wall gathers dust. I noticed that students avert their eyes when they pass by. If it's illegal to speak up about political transgressions, to fight against them, or to choreograph an interpretive dance about them, what more can you do than just look down and keep walking?

## Paris: Beacon in the Night

## Mauricio Garcia

In autumn of 2022, I briefly called Paris home as I attended the Paris Institute of Political Studies (Sciences Po). Not only is Paris the 'city of light', it is also a city of resilience, innovation, and great style. Parisians possess an uncanny resolve to withstand any challenge, whether a strike on the metro or a global inflation crisis spurred by a war of aggression, all while looking à la mode. Though the lights of the Eiffel Tower went dark in response to the war in Ukraine, other aspects of the city have shone. This is Paris as we know it: the city of the up-and-coming G3, the city of the Franco-German partnership, the city of Macron. Yet above all else, the resilience and fraternity of its people burn on in times of crisis, filling the city with light.

## The City of Light

Despite the Ukrainian flags flying on public buildings, the war in Eastern Europe seemed distant when I arrived in August. During my first days, I explored my neighborhood in search of one of Western Europe's most elusive luxuries: air conditioning. As businesses began to open after the rentrée, street signs were lit at night and boulevards overrun by Parisians still
sporting smiles from their summer holidays. The city began illuminating its streets in the 17 th century, first with tallow candles, then oil lamps, and finally the electric streetlights of the present. Since the reign of the Sun King, these lights have flickered against monuments and reflected off the Seine to make the entire city glow, earning Paris the epithet 'the City of Light.' That is the magic of Paris: even on a rainy night, it glows.


At the beginning of the autumn, the chief concern amongst my new acquaintances was not the looming winter or the seemingly-distant war, but a cost-of-living crisis. The price of household goods, groceries, and travel had increased considerably in the months leading up to my
arrival. Although many retailers and governments claimed to have collaborated to freeze prices, I noticed that the price of goods such as a carton of milk had gone up nearly $80 \%$ within the span of a single semester.

With the reality of the cost-of-living and energy crises setting in, summer smiles soon faded. The French government started to plan for the crisis and introduced an 'Energy Sobriety' plan to reduce electricity consumption. On September 23rd, the local Parisian government joined the effort by shutting off the lights of public buildings and asking households and private companies to do the same. Inspired citizens became part of the action; a notorious movement of rogue parkour athletes began shutting off the lit business signs at night (Méheut 2022). Though the City of Light was snuffed in the final months of 2022, students and civilians felt its energy in other ways.

## The City of the G3

One of the new buzzy terms in Parisian political and academic life is the 'G3'. This term encapsulates the new French vision for global power management. The G3 delineates the United States, China, and the European Union as the three main geopolitical superpowers. The term
has not yet been institutionalised but it is reverberating around Rue St. Guillaume. Professor Stephanie Balme, Dean of College of Sciences at Sciences Po, coined the term and teaches a class under the same name: 'The G3: Navigating E.U.-U.S.-China Relations'. Balme first heard a variant of the term when she conducted academic research in China. Her peers, however, described an upcoming G20 summit as the "G2+0", with G2 being the U.S. and China, and everyone else being zero. There is a significant case to be made for the inclusion of the European Union as one of the main powers of the international arena.

China, the United States, and the European Union have complex 'bilateral' relations with one another; there is still no solid institutional model for trilateral relations. Nevertheless, Balme argues that the three constantly engage in climate change, trade, human rights, and security issues together. The two main challenges to this term are the differing relations the E.U. and the U.S. each have with China, and the implications of the inclusion of the E.U. as the third global superpower.

China and the U.S. have a long history of mutual understanding and respect and lack thereof. Nevertheless, their relationship is fundamentally
different from that between China and E.U.rope. Even though some scholars in China have a vision of a united xī fang, or West, and sometimes see the E.U. as a puppet of the U.S, the U.S. and E.U.'s past histories with China and their visions of China are profoundly different. Now, as China's biggest trading partner, Europe seems increasingly drawn to its market. Germany in particular saw robust economic growth as it met China's monumental demand for industrial hardware during its boom in the 2000s.

The first question to consider when hoping to normalise G3 scholarship is: Why not include other traditional powers such as Russia and the U.K., or large economic powers such as India and Brazil? The second is the question of statehood - the E.U. is not even a state, which is a crucial requirement for the realist IR idea of a superpower.

To answer both questions, a Parisian view of international relations is required. For the first question, it is clear that there is a big drop in all realist expressions of power after naming the G3. Russia and the U.K. only become important actors when they are 'annoying'. That is to say, they shape the world order only when they go out of their way to do so and at great expense. (Clearly, both are
dealing with that reality in different ways.) Other economic 'powers' like India and Brazil still have not finished rounding off their attributes to become superpowers.

To answer the second question, the E.U. is a state in the making, and by the same Parisian logic, its 27 members are assembling into a superpower. The E.U. still does not have a common foreign policy, which is a matter jealously guarded by states. Compared to other E.U., Germany has a much closer relationship with China, marked by Chancellor Olaf Scholz's recent visit. Other E.U. member states are not as drawn to China's economic 'low hanging fruit' and instead challenge its human rights record. While the internal differences of the E.U. remain one of its greatest weaknesses, there is a consensus in Paris that the E.U. will become an ever closer union. As it does, the case for the G3 will only strengthen.

## The City of the FrancoGerman Partnership

As a true European and International institution, many German students proudly call Sciences Po their alma mater. Conversations overheard at the famous peniche bench in the lobby of Sciences Po's main building are equal parts English, French, and German. After some months of observing this
amalgam across campus, I was startled to hear a different sentiment from the Parisians: "the Franco-German partnership is dead." This remark arose when a friend, who had just taken a job at the French Ministry of Defence, rebuked my congratulations at the prospect of becoming a part of the European project. He said, "Germany has recently announced that they will buy American and Israeli weapons - but none from France!" Later, my professor of maritime security explained the strife resulting from the recent Euronaval convention in Paris: "The Germans do not want to be a part of France's new aircraft carrier." Across multitudinous areas of collaboration, France and Germany keep butting heads. Germany announced that Chancellor Scholz would visit China alone after French President Emmanuel Macron refused to accompany his German counterpart. As one of my French classmates lamented, "It really shows division at a time when we most need to show unity."

I have often wondered whether the cracks in this relationship are simply a matter of perception or a real problem. Some lecturers persuaded visiting students that the E.U. is uniting and ready for 'superpower status', but France and Germany still have much progress to be made in modelling European unity. Indeed,

Germany has not prioritised France in several of its defence and energy decisions, especially lately. Many of my French friends, especially those in its defence community, feel betrayed. Last year the French were snubbed out of a deal between Australia, the U.K., and the U.S. (AUKUS) to provide submarines to Australia. To a country so determined to make its partnerships work, so committed to its multilateral goals, and with so much to offer to its allies, Germany's similar actions have unleashed a wave of resentment by the French.

I am certain, however, that I am not writing an obituary but rather an analysis of a complex marriage. Germany's internal politics have revealed that a 'Germany First' attitude remains deeply embedded within the country. This is something that the French were fully aware of when they joined the partnership. The French have also benefited from the partnership when Germany's economy boosted the Eurozone and when its energy infrastructure projects helped lower prices across the continent. Looking back to the incident when my friend was angry with the Germans for spurning French weapons, at the other side of the table sat another friend who was about to start their Ph.D. in Germany. In fact, everyone at that soirée had partaken in some kind of partnership between
nations, whether formal or informal. It seems that the real problem in the partnership arises from its 'polysemy,' or the fact that there exist many contrasting beliefs about its meaning and significance. The Germans I met at Sciences Po have a vision much closer to that of many prominent Parisian decision-makers. Still, the current generation of German leadership is mostly committed to the economic bloc and that alone. There are limits to the 'general' German vision for integration, and you will likewise hear different iterations of an ideal Franco-German partnership depending on which Frenchman you consult. For now, perhaps the partnership is operating at its best.

## The City of Macron

Widely respected and admired in the European Union, the Global South, and on the world stage, Emmanuel Macron is a lukewarm figure in France. Only one of my French friends has expressed semi-enthusiastic support, and it is simply because Macron is not a polarising figure. Many students at Sciences Po wanted to see a France led by the socialists and the extreme left. Others seemed to be drawn by the calls of the traditional republican party and the extreme forces to its right. It is not only a matter of policy but also of character. One of my friends quipped, 'He says what
everyone wants to hear, and then he does none of it.' Other friends made fun of the way he is always followed by an entourage of sycophants.

The magic of the Macron administration seems to be its enlightened centrism. While it may be nearly impossible to find a Parisian that would describe Macron as their first choice for leader, it is equally hard to find one that would describe him as their last choice. Every political group seems certain that it will clinch the presidency in 2027, but most of them seem to be ' $o k$ ' with Macron for the moment. That is his greatest strength. Most of my friends appreciate that Macron has not dismantled the welfare state or left the E.U., and focuses on addressing the cost-ofliving crisis as well as improving the business environment. This climate causes me to consider the question: Is it better to have a president that will do exactly what the people want or to have a president that will build consensus? Paris today has shown me the virtues of having a leader that everyone is sort-of-ok with.

## The City in Darkness

As the City of Light went dark, the resilience of the people of Paris and their quest for a closer Europe became an even more powerful symbol. I saw my peers at Sciences Po double down
on their efforts for political activism and charity. Widespread support for Ukrainians blossomed as many found refuge and support in Paris. Some of my peers at Sciences Po were Ukrainians who benefited from the schemes to support students displaced by the war.

For those non-American and nonChinese students like myself, who find themselves lumped in with the 'rest' rather than the West, a class touting the rise of a balanced tripolar 'G3' system was very reassuring. The European Union's non-partisanship, multilateralism, and inclusivity towards countries of the Global South strengthen its commitment to peace, equality, and international law. Paris is a city where the 'rest' is not dismissed, stigmatised, or forgotten, but rather one where those 'unpopular' views are expressed proudly. It is a city that is catching up with the times and trailblazing a new era for the E.U.

As for the Franco-German partnership, there is still a long way to go and neither side should take the countries' historic bond for granted. Going forward, the two countries must ensure that they hold corresponding visions as they re-engage in dialogue and policy-making in Paris.

In the face of increasingly polarised politics in other democracies, Macron's France shows the strength of its two-round election system and its ability to secure a competent, middle-of-the-road leader. Perhaps sometime in the middle of the next decade, once Macron's tenure has lapsed, Parisians will wonder where the city of Macron went.


Above all, a dark Eiffel Tower became the symbol of this crisis. When I first arrived in Paris, my nights ended by watching its lights reflect on the Seine as I crossed from Place de la Concorde back to St. Germain. As the semester went on, the lights began to shut off much earlier. It was not unusual for the Eiffel Tower to camouflage into the night sky, with the Seine absorbed into its darkness. Though the tower no longer shines as before, it is still beautiful as ever, standing strong in the darkness.

## Alleviating Period Poverty

## Makenna Hartwich

A healthy and safe menstrual cycle is an essential human right. Period poverty is not only a public health issue but also a barrier to achieving true gender equality. Period poverty refers to 'a lack of access to menstrual products, sanitary facilities, and adequate education,' (Cardoso et al.). Roughly 500 million women worldwide experience period poverty, and it harms impoverished women living in high-income countries just as it does those in low- and mediumincome countries (Cardoso et. al). Social stigmas and lack of supplies interfere with the lives of millions of girls who drop out of school after menarche, their first menses (AckatiaArmah et al.). Divine Drops, a US nonprofit founded by health workers in 2020, aims to end period poverty by 2040. It has started programs in Uganda and Tanzania, the latter of which I had the opportunity to travel to help launch the program. Just as no period is the same, there is no universal solution to making period care safe, easy, and accessible for all women; Divine Drops adapts to these dissimilarities.

Though each culture has its own traditions and practices surrounding menstruation, most girls follow the
for abnormal cycles and symptoms. Unsafe practices surrounding menstruation are perpetuated by the lack of discussion on the topic.

Inadequate access to sanitary supplies is a global challenge. In 2021, Scotland passed legislation making period products free to those who cannot afford them. This was a step in the right direction and highlighted the ongoing issue of global period poverty (Sullivan). A survey of lowincome women in the US found that nearly half the survey subjects had to choose between affording food or menstrual hygiene products at some point during the year. Participants reported using 'cloth, rags, tissues, toilet paper, and sometimes even diapers or paper towels were taken from public bathrooms,' (Carroll). In Tanzania, many women turn to similar materials as disposable pads are difficult to find in many rural areas and prohibitively expensive (Sommer 524). These alternative methods are prone to leaks and greatly increase the risk of infection.

A U.N. study found nearly $17 \%$ of menstruating students in Tanzania miss school during their menses citing reasons including lack of supplies, sub-par washroom facilities, and fear of embarrassment (Unicef 4). Menstrual derision is a significant problem in Tanzania. One study found
$87 \%$ of girls fear teasing attributed to menstrual odour and $80 \%$ fear teasing due to leaks (Benshaul-Tolonen et al. 6). Such fears lead to decreased concentration and class participation, as many Tanzanian schools require pupils to stand when speaking. These findings demonstrate that reducing gender gaps in education requires reducing harassment from adolescent boys in addition to providing facilities and sanitary supplies. The best way to reduce stigma and harassment is by educating boys on menstrual health and creating a more open dialogue.


Solutions to ensure access to easy, safe, and painless period care are not one-size-fits-all. Many programs across the world have sought to tackle this issue by providing extra supplies; however, this is a temporary fix at best because it fails to address underlying systemic factors. One sustainable solution growing in popularity is menstrual
cups. They offer the advantage of being a low-cost, low-waste, and long-lifespan product. Insertable period products such as menstrual cups and tampons, though, are not acceptable for most in the region due to many cultural and religious beliefs (Hennegan et al). Providing supplies of disposable pads is not a long-term solution. The region lacks central waste management systems, making sanitary disposal of sanitary pads challenging (Ntakamulenga 8). Given finite supplies and the high cost of pads, many families cannot afford to buy more. Families that can afford to purchase such products will commonly try to make the package last for as long as possible. Experts advise that disposable pads be changed at least every four to eight hours (American College of Obstetricians and Gynecologists). However, when Divine Drops asked a room full of secondary school girls in Zanzibar how many receive just one pad to last them the entire day, nearly every hand went up. The materials and chemicals in disposable pads can cause irritation and micro-tears when worn for too long, opening the possibility for bacterial infections an issue far less common when using cloth materials.

Mikaela Ingram, founder of Divine Drops and a U.S. travel nurse, worked with other healthcare workers to
design a reusable pad to overcome several of these challenges. The reusable pads are extra absorbent to prevent leaks and, while it is not ideal, they can be safely worn all day if there are no facilities or opportunities for the girls to change them. They can be made from locally available materials and sewn with a simple pattern. Once rinsed, laying them in the sun to dry is sufficient to kill the remaining bacteria. To distribute these reusable pads and to provide women and girls with information on menstrual and reproductive health requires developing programs and forging long-term partnerships in various regions. Divine Drops is working to create community-focused approaches which cater to the specific requirements of each location and to gain the support of local leaders and activists to ensure the longevity of their programs.


When I joined Mikaela in Zanzibar as part of the photography team capturing the Tanzanian program launch, she had already been in Africa for two months. She split her time between Uganda and Tanzania, working on the ground to learn how her nonprofit could make the most meaningful impact. I had the chance to meet with representatives from the Tanzanian Ministry of Health, with whom Divine Drops is partnering to create youth health clubs around the country. Ten "Afya Yangu" or "My Health" clubs are launching in secondary schools in Zanzibar and mainland Tanzania this year, with plans to expand to more schools in upcoming years. These clubs will educate girls on how to have healthy cycles, combat misinformation and unsafe practices, and provide a supply of reusable period pads for every girl. They will also provide the supplies to make more pads that girls can sell in their community, helping more women access them while also developing key business and entrepreneurial skills.

I also had the chance to meet with a remarkable young activist and nursing student, Shufaa Nassor, who calls herself Madame Hedhi Salama (Madame Menstrual Health in Swahili). When she first started advocating for safe periods and teaching about menstrual health, she
was dismissed by many and ridiculed by others, including some of her own family members. Driven by her goal to eliminate the stigma surrounding menstruation, she persevered. She is an invaluable educational partner for developing the Divine Drops programs in Zanzibar. Their enthusiasm for and participation in the learning activities grew throughout our time with them despite their initial shyness and hesitation. The pilot programs in schools are trending towards success and I found it extremely rewarding seeing the girls excited to receive their own supply of reusable pads as well as extras to give to their family members.

There is still much work to be done worldwide to give everyone who menstruates the supplies, resources, and support they need. We must eliminate the harmful social stigmas surrounding a natural part of life for half of the population.

If you would like to follow the development of the Tanzanian programs or donate to help expand programming to more schools, please visit www.divinedrops.org.


## The Velvet Revolution Revitalized:

## A Small Czech Town's Reaction to Russian Aggression

## Memorial and Cradle

${ }^{`} \mathcal{N a}$ Zdravi' is the traditional Czech toast wishing good health, fortune, and circumstance. In 2022, August 1st marked a prosperous occasion at the Prazan Drevozad Sawmill. Situated in the beautiful outdoor common area, traditional špekáček was roasted and Polickan-brewed pivo was flowing. It was the 30th anniversary of the Russian Communists' relinquishing of the Drevozad Sawmill to the original family owners; the Prazans. Having spent most of my summer with the Prazans, this was an especially poignant occasion to witness. The Drevozad Sawmill and Prazan clan are located in the small village of Polička, whose founding dates to 1265. The town looks to be straight out of a Bohemian fairytale: a town of 9,000 inhabitants, with a picturesque town hall encircled by medieval-era walls and exuberant baroque buildings that withstood the violent Russian invasion of 1968. Evidence of the invasion is found in both the abundant Sovietera brutalist architecture just outside the walls and the frugal population

## Bethell Seese

within, hardened by its former Soviet oppressors. Little remains of the town's rich Czech history, but there is a fight to preserve, protect, and dignify these Czech roots, specifically in the unique architecture which showcases a blend of Austro-Hungarian and Czechoslovakian influence. Polička continues to be both a memorial and cradle for such sacred history, including the role the town played in assisting Ukrainian refugees affected by the latest chapter of Russian militancy. The town's response to the influx of refugees has prompted significant political concerns in recent municipal elections. The response has been mixed - some have claimed no resources are available to aid, and others, especially the Prazans, responded by establishing a temporary daycare and supporting a new opposing party in the municipal elections.

## Take it to the Town Hall

A Velvet Revolutionary and the Prazan family patriarch, Petr Prazan recounted his involvement with
the peaceful and effective Gentle Revolution, a transition of power that split Czechoslovakia into the Czech Republic and Slovakia in 1989 and effectively ended 40 years of communist rule. 500,000 people had gathered in the remarkable Wenceslas square, jingling their keys as a sign of liberation. Petr said, 'it was the most amazing sound I ever heard.' Having lived amongst Czechs, I could see the residual effects of Soviet rule in the Poličkans' economic stances and distrust of outsiders. With more than 100,000 fleeing Ukrainians arriving, many local Poličkans argued against housing, feeding, and providing jobs for Ukrainians. My host, a remarkable mother of two, Hanka Prazanova, assured me this attitude was nothing new. Polička is frozen in the Soviet era - communist blocks still house most of the population and frugality is practised in food consumption, household chores, and transportation. Understandably, it is a society traumatised. Their wariness is furthermore apparent in their elected representatives,mandates,andpolicies.


Currently, Polička is represented by the Civic Democratic PartyANO 2011 coalition (ODS-ANO); the ODS-ANO coalition holds 14 of 21 mandates and has recently won the municipal elections. The party is Christian-affiliated and fiercely Polička-first. When voicing the logistics of the daycare for the refugees and her concerns on their eventual enrollment in Czech schools, Mrs. Prazanova was met with pushback and economically anxious responses from the ODS party. The coalition is steadfast in tradition and fiscally conservative. This is, of course, a reactive response after recovering from years of Soviet rule.

Theiropposing party, in contrast, holds space for different priorities. Otevřená Polička, directed in part by Mrs. Prazanova, boasts a council in which almost every member is involved in the Ukrainian daycare. The council's concern for progressing economically and socially does not overshadow the value it holds for Czech culture and history; for both Ukrainians and Czechs, the ultimate winning strategy against the Russians for establishing sovereignty is preserving culture and bolstering together. The council's agenda is considerate of both larger global and regional issues as well as the betterment of Polička. If elected into the town hall, Otevřená Polička would emphasise teaching English in
their schools to become more global, invest in architects that would preserve historical architecture, and set policies to aid Ukrainians within Polička. The brilliantly composed name literally translates to 'Open Policka' - to the market, refugees, and Europe. The name pays homage to 'Otvírání studánek,' meaning, "The Opening of the Wells," an instrumental piece composed by Polička-born composer, Bohuslav Martinů.

The blend of progression and sacred history in Czech politics is a topic of debate within the Czech Republic. Ultimately, fiscal conservatism, resistance via the preservation of culture, and supporting refugees are thematic elements of the two vastly different approaches, within Polička, to past and modern-day Russian aggression.

## Ubaby: Adaptacní Skupina

During Russia's initial invasion of Ukraine in February 2022, Mrs. Prazanova just 'knew [she] had to do something more.' The heart and dedication she put into the daycare was nothing short of admirable. With open arms and hearts, the attempt to integrate Ukrainian children into Czech society was incredible. The daycare, called 'Ubaby,' was warm and inviting. Teachers read both Ukrainian and Czech books aloud
throughout the day and children sang both Ukrainian and Czech songs. The women working the daycare made three meals a day for the children, all traditional Ukrainian dishes like pohanka and borscht. In Polička's country setting, nature walks and berrypicking were weekly occurrences. The daycare offered supervision five days a week, and Mrs. Prazanova, head of the daycare, personally took it upon herself to hire Ukrainian parents or help them find jobs elsewhere. Having spent my whole time at her side, I witnessed Mrs. Prazanova's commitment and compassion as she offered to watch the kids past daycare hours, invited Ukrainian mothers to her home for tea, and pressured the town council to watch out for the wellbeing of these families. We worked on several fundraising opportunities involving hands-on activities with the kids, partnered with the local library and museum to host events, and continued to push for the enrollment of Ukrainian children in schools.

The Prazans' devotion to liberty against Russian oppression is as apparent in their harrowing fight for the family sawmill 30 years ago as it is in their current involvement in the community and local politics. The events in Polička today reflect a not-so-distant past, parallel to current Russian aggression. Polička's responses today, to a topic so close to home, are representative

> Effective Leadership from a Trainee's Perspective: What Can We Learn From Doctors?

## Sarah Mackel

Due to the confidential legal nature of this work, EU regulations, and to respect colleagues' and patients' anonymity, identifying information such as locations, dates, and names has been altered. The author writes in a personal capacity and their vieews do not reflect that of any organisations the author may belong to.

It is crucial for healthcare providers to be able to make tough decisions fast, with full consideration of their consequences. In the hospital ward where I worked, the most striking sight was not the man reciting poetry during his brain operation or the pairs of disembodied beating lungs, but rather the way the leadership within my assigned ward made immediate decisions in an environment without room for error.

My externship wasn't my first experience working in a hospital. However, it was my only working experience relating to the pandemic and the first time that $I$, an eighteen-year-old, had been consistently referred to as 'my colleague' by
attending doctors, well into their forties, in front of patients. This was quite a departure from what I had experienced at fifteen as an intern orderly at my local hospital, where I was given a pair of poorly fitting adult-sized scrubs, a nametag, a handful of barked instructions, and a cart of instruments I had to learn to use on the fly. This hospital's patients came from all corners of the world with translators at their side, hoping for answers to questions no other institution had been able to provide. In one particularly memorable case, while presenting information about a non-Francophone patient to the Head of the department, I stumbled through a clinical interview and completed a neurological exam relying entirely on Google Translate's text-to-speech capability. Ironically, the patient, a former healthcare worker, kept instructing me on how to better perform my own clinical exam.

I began to think about what makes an effective medical leader. I first noticed that good leadership is not

based on a heavy-handed, top-down method. Instead, it is practised through a research-supported approach that emphasises thoughtful communication, which is shown to correlate with patient and team satisfaction (de Vries, et al.). Contrary to popular perception, the dominant communication style shown in medical TV dramas is correlated to malpractice claims and patient dissatisfaction (Ambady etal.;Burgoon et al.). There are two components to the practical application of this definition of effective leadership: leadership itself, and management. Whereas leadership centres around change and continuously exploring possibilities for improvement, management is a more continuous process revolving around supporting, resourcing, and facilitating day-to-day work (Limb). Other papers on the subject add followership, or 'the ability to ...resist, support, or
negotiate a leader's wishes or actions,' as one of the key constituents of effective leadership (Till \& McKimm). Day-to-day leadership in a hospital ward is a combination of all three of these traits. Between mountains of paperwork, dissatisfied patients, and unpredictable emergency admissions, members of the entire team must function individually as both competent leaders and followers.

Formal leaders remain important sources of authority and expertise in healthcare settings. Medical establishments, however, are shifting away from investing positions of leadership in key individuals, emphasising instead the increased relevance of a collective approach across teams. Flattened medical hierarchies have encouraged leadership development at all levels, which has ultimately resulted in higher-quality healthcare (Till \&

McKimm, Hirpara \& Taylor). Such hierarchies operate on the team's shared sense of purpose and place value on each team member's insights and potential. In the ward where I worked, a strict sense of hierarchy still existed. With that being said, eighteen-year-old externs scrubbing in for the first time were emphatically encouraged by department heads to question senior surgeons' decisions and suggest novel perspectives for clinical cases. Many of the surgeons were often asked 'What would you do here?? Would you do anything differently? Why?', challenging the principle that only senior staff members could make meaningful contributions.

The COVID-19 pandemic upended healthcare services worldwide and threw health workers into a maelstrom of constant high alert, long hours, and makeshift emergency leadership teams. This newfound environment underscored the value and importance of the flattened hierarchical structure. These highstress situations accentuated the importance of leadership skills and emotional intelligence (Hirpara \& Taylor). The shadow of the most extreme periods of the pandemic still lingered over the ward this past summer as I worked at one of the last hospitals in the region that still required masks (though the mask requirement was in part due to the
hospital's work in transplantation). Over coffee breaks, interns traded stories from their deployments into emergency care or their volunteering experiences. Some recalled patients that they had lost.

The more senior doctors shared stories with new hires comparing operating under the stress and uncertainty of the COVID pandemic to working in the early days of the HIV/AIDS epidemics, when little was known about the retrovirus. These discussions highlighted the continued need for well-trained and emotionally intelligent leaders as well as research, policy, and advocacy in healthcare - all more important than ever given the increased rates of physician burnout, depression, and decreased performance following the pandemic (Alrawashdeh, et al.).

Imagine being a conductor in an orchestra, in which a wrong note from any musician could mean someone's death. In musical performances, a conductor is required not only to do their work in leading the ensemble, but also to know what any given member of the orchestra is meant to be doing at any given time, correcting them if necessary. Constant attention to minute detail is essential to competency. Swap out the white tie and baton for a blue gown and scalpel, musical knowledge for
medical knowledge (and applause for lawsuits), and you have the average surgeon. In an operating room, on top of their own responsibilities, a surgeon is constantly aware of what every OR team member should be doing.

For example, another procedure I observed was the removal of a lesion in the brain - entirely through the patient's nose. The surgeon operated using a camera and tools inserted through the nose into the brain (I'll forgo the rest of the details). This required extreme focus and concentration as a single tremor in the wrong direction during this hours-long surgery could potentially kill the patient. Like a conductor in an incredibly high-stakes orchestral performance, the operating surgeon knew every move that every other team member was supposed to make. The surgeon checked regularly on how the nurses and anesthesiologists were progressing, making adjustments to medications and giving advice. While simultaneously operating and observing the room, the surgeon would quiz us on the patient's pathology and management strategy, and give brief lessons if we missed questions. Even with the high stakes of this operation, and the dire consequences should the surgeon get distracted, we interns were encouraged to stand closer and observe the technical aspects of the procedure.

During my time at the hospital, I watched neurosurgeons running on less than an hour of sleep calm patients' panicked families or perform hours-long surgeries and stand for entire days without food or water. Despite consistently facing the extremes of human fear, frustration, powerlessness, and sometimes stupidity, the surgeons, with more than a lifetime's worth of university training between them, never once snapped at a colleague or patient (medical students occasionally exempt), misspoke, or let their mask of consummate professionalism slip.

New models of leadership and emotional intelligence are necessary for healthcare providers to make tough decisions quickly, calmly, and with full consideration for their consequences; to offer the most sensitive care possible to patients; and to adapt thinking in a matter of seconds. While leaders in all fields need to develop such essential skills and keep current with new leadership ideas and training, for medical workers, it's a matter of life and death.



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