the democracy issue
COLUMBIA PUBLIC POLICY REVIEW
...and justice for all

SCHOOL OF INTERNATIONAL AND PUBLIC AFFAIRS COLUMBIA UNIVERSITY

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Dear reader,

When we began to scope this edition in early 2020, the Editorial Board had a plan for what this print journal might hold. The year then unfolded in incalculable and unpredicted ways, and like the best laid plans, our vision was thrown into flux. While the world has changed, the importance of policy remains. From the COVID-19 pandemic to the Black Lives Matter movement to a contentious Presidential election in the US and the rise of right-wing populism in countries around the world, this year’s events have forced policy leaders and thinkers to reevaluate the ways in which government serves the people. Like never before, public policy is at the forefront of critical conversations around equitability, democracy, and representation.

This year’s journal, The Democracy Issue: ...And Justice for All, showcases a thoughtful selection of nine pieces that touch on the current role of public policy in shaping democracy, justice, and the interaction between the two. Authors explore topics ranging from the unequal policy implications of the CARES Act, sedition laws in India, and NATO’s inaction around climate change to the potential pitfalls of facial recognition technology, artificial intelligence, and the gig economy. All of these pieces illustrate the need to think more critically about the inequitable effect of public policy on various communities or subgroups, and how to create a more just society going forward.

Thank you for picking up the fifth edition of the Columbia Public Policy Review’s annual journal, a student-run publication dedicated to advancing critical, evidence-based analysis on today’s most pressing global and domestic policy challenges. We aim to be an inclusive platform to further intellectual debate and foster dialogue, knowledge sharing, and learning for policy enthusiasts. We hope you will enjoy reading these exemplary works as much as we did.

Sincerely,

THE 2020 EDITORIAL BOARD
COLUMBIA PUBLIC POLICY REVIEW

Founded in 2015, the Columbia Public Policy Review (CPPR) is the Columbia University School of International and Public Affairs’ (SIPA) nonpartisan student publication that features critical and evidence-based policy analysis on today’s most pressing global and domestic policy challenges.

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As cities, states, and countries lock down to slow the spread of the COVID-19 pandemic, deep-seeded inequalities and vulnerabilities in the US have been exposed for the rest of the world to see. The treatment of undocumented immigrants is one such example. Immigrants left out of the congressional CARES (Coronavirus Aid, Relief, and Economic Security) stimulus package are ineligible to receive unemployment benefits and do not qualify for public health insurance, although many continue to work and pay taxes.

The Brookings Institution estimates that in 2017 the number of undocumented people living in the US was between 10.5 and 12 million. [1] According to the Internal Revenue Services (IRS), in 2015, 4.35 million tax returns were filed with Individual Taxpayer Identification Numbers (ITINs). Most experts “believe the vast majority of tax returns filed with ITINs today are filed by undocumented immigrants,” according to the Bipartisan Policy Center. In 2014, the Institute on Taxation and Economic Policy estimated that undocumented workers paid a total of $11.7 billion in taxes, including $7 billion in sales and excise taxes, $1.1 billion in state income taxes, and $3.6 billion in property taxes. [2] Although they are not recipients of public programs, many undocumented immigrants continue to pay taxes in the hopes that it will bolster their case for legal residency. [3]

The ITIN is a tax processing number created by the IRS to ensure that undocumented immigrants pay taxes, and is available to documented and undocumented immigrants who do not qualify for social security numbers; the IRS does not share applicants’ personal information with immigration enforcement authorities. [4]

According to the Pew Research Center, undocumented workers make up about nine percent of the workforce in Texas and California and ten percent of the workforce in Nevada. [5] They also represent five percent of the total workforce in America: they constitute 53 percent of farm workers, 24 percent of domestic workers, 15 percent of construction workers, nine percent of the production workforce, nine percent of the service sector, and six percent of transportation workers. [6] The League of United Latin American Citizens estimates that 80 percent of the total meat processing workforce—currently facing a devastating COVID-19 outbreak—is made up of undocumented workers or refugees. [7] All of these industries have been declared essential to varying degrees in some or all states. [8] In mid-March, essential workers around the country were given letters stating their labor was deemed critical by the Department of Homeland Security. [9] Though the notices communicated the significance of their labor to the US economy, they offered no assurances that ICE (Immigrations and Customs Enforcement) would abstain from detaining and deporting undocumented workers. [10] To exacerbate the issue, President Trump suggested that he would request “sanctuary-city adjustments” in exchange for additional financial relief to states—a political move that plays on the lives of those who live in states with sanctuary cities, both undocumented and documented. [11] The only state to pass its own stimulus package for undocumented immigrants is California. Under the governorship of Gavin Newsom (D), the state will provide $500 per undocumented adult, with a cap of $1,000 per household. [12] The fund combines $75 million in state donations with $50
million in private donations. [13] Private donors to this fund include the Emerson Collective, the Chan Zuckerberg Initiative, James Irvine Foundation, California Endowment, and the Blue Shield Foundation, and 150,000 people are expected to benefit from it. [14] Immediately following bill's passage, the Center for American Liberty and the Dhillon Law Group filed a lawsuit against the state of California and claimed that the package breaks state and federal law because undocumented immigrants are ineligible for unemployment benefits. [15]

Despite the ongoing pandemic, ICE agents continue to conduct raids on communities around the country with the intention of deporting undocumented immigrants. [16] Detention presents a significant danger to public health, as the likelihood of the virus spreading increases in cramped holding centers and jails; on March 24, ICE reported the first instance of a positive case in custody. [17] ICE maintains that they will focus detainments on “public safety risks,” but who they qualify as a “risk” is unclear, and the risk posed to detainees and staff in detention centers is dangerously high. [18]

It is unlikely that the US will successfully overcome the pandemic if the public health of significant portions of its population is neglected. The pandemic has proven that the health of a single person can impact that of the entire world, and policy that blatantly endangers a part of the population endangers all of it. The following policy changes should be considered as we move through, and forward from, this pandemic.

Halt ICE raids in perpetuity
Despite assertions to the contrary, the raids do not target only those that pose “public safety risks.” Under the Trump administration, ICE was ordered to target all undocumented immigrants, regardless of criminal record, and in 2018, 36.5 percent of those detained had no criminal record. [19] ICE agents have arrested families in their homes, and parents in front of their children. The raids are degrading and destructive, and reflect a deep hypocrisy.

Ensure hospitals are sanctuaries
The fear of going to a hospital for care and subsequently being reported to ICE runs deep in immigrant communities and poses an individual and societal risk. [20] Preventive care to address diabetes, asthma, heart conditions, and other conditions, is fundamental to both the long-term health of a person and their family and their ability to fight off viruses such as COVID-19. The government must ensure that hospitals and health centers, both public and private, are permanently barred from providing personal information on undocumented immigrants to ICE, and that ICE is not permitted under any circumstances to enter these spaces, enabling all people to safely receive necessary care.

Assurances of protected Census information
The United States Census counts every person living in the US, regardless of immigration status, and provides population statistics that allow for data-driven political advocacy. The results of the Census also determine the distribution of federal money to states and the the distribution of federal
money to states and the allotment of representatives within the House of Representatives. [21] Though not eligible for public programs like Medicaid, Medicare, and unemployment, undocumented immigrants still constitute a significant part of the population in schools, hospitals, and other public spaces. And, although non-citizens are ineligible to vote, representatives within the House vote on policies that affect their communities, and should be apportioned in accordance with the truest count of the population. However, concern over the use of personal information collected on the Census may prevent many people (undocumented and not) from responding to it. [22] Though Title XIII of the Census protects the privacy of census data and a question about citizenship was removed from the 2020 Census, these fears still remain. [23] The Census Bureau recently spent millions of dollars on advertisements combating worries about the citizenship question, but the federal agency must guarantee that under no circumstances will personal information be shared. [24] Undocumented immigrants should be eligible for some stimulus benefits Although undocumented immigrants do not receive unemployment benefits under normal circumstances, COVID-19 aid packages are not standard unemployment programs and the CARES act was passed to respond to a specific issue: the COVID-19 pandemic and how to stimulate the US economy while supporting workers. The stimulus packages do not require that citizen recipients be unemployed to receive the stimulus checks. [25] Taxpaying noncitizens should be given the same opportunities. Aid could be distributed using the state of California’s method, through direct payments, as guaranteed paid sick leave, provision of Personal Protective Equipment by the employers, assistance with healthcare costs, childcare, assurances of paid sick leave, amongst other options. Given the resistance such a bill could face in Congress, such programs would likely be provided through states, rather than through the federal government.

It is imperative that the US government pass comprehensive immigration reform that makes it easier and cheaper to live a documented life in this county. In the meantime, we must recognize the contributions made every day by those that have not been able to immigrate through authorized processes, and allow them a path to residency in the future. The US federal and state governments should be prepared to support the workers that have contributed to the growth and success of their economy. ■
On June 14, 2019, Mangalal Agarwal from the Rajnandgaon district of Chhattisgarh, India, was arrested by state police forces and charged under Section 124-A of Indian Penal Code (IPC), infamously known as India’s sedition law. [1] His crime: a Facebook post alleging a conspicuous nexus between the State Electricity Board and a local inverter manufacturer resulting in frequent power cuts and increased inverter sales.

After widespread criticism leading to direct intervention by Chhattisgarh’s Chief Minister, Bhupesh Baghel, the sedition charges on Mangalal were withdrawn. [2] Nonetheless, the events on June 14 shed light on an archaic colonial era law that is often applied arbitrarily by law enforcement agencies to suppress the voices of political dissenters, human rights defenders, and citizens generally. [3]

A social media post landing the original poster in jail and labeling him as an “enemy of the state who conspired to overthrow the government,” is typical of dictatorial regimes. However, one does not expect such events in a democracy, and certainly not one that projects itself as the postcolonial poster child. [4]

This law is a clear affront to the constitutional guarantee of the rights to freedom of speech and expression (Article 19)—the very rights constitutional framers deemed vital for sustaining a democracy. To understand why the sedition law still exists, it is essential to understand the history and anatomy of IPC-124A.

Anatomy of IPC-124A
Indian Penal Code (IPC) Section 124-A forms part of Chapter VI of the Code, which deals with offenses against the state and details the punishment for sedition. This sedition law section was initially drafted by Thomas Babington Macaulay in 1837 and was eventually added to the IPC 150 years ago in 1870. IPC-124A decrees:

“Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government established by law in India, shall be punished with imprisonment for life, to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine.” [5]

Initially, the section only used the term “disaffection,” which was interpreted by colonial judges to refer to acts or speeches that encouraged civil disobedience. The words “hatred” and ”contempt” were later added to IPC-124A in 1898. [6] This allowed governments to persecute journalists and politicians for committing “thought crimes.”

The British Raj primarily used IPC-124A to suppress the Indian independence movement; notably, in 1922, Mahatma Gandhi was found guilty and imprisoned under IPC-124A. During trial, Gandhi defended his fellow countrymen’s right to a non-violent, non-cooperation movement against an
unjust government and criticized IPC-124A for abridging the right to free speech. He argued:

“Section 124-A under which I am happily charged is perhaps the prince among the political sections of the IPC designed to suppress the liberty of the citizen. Affection cannot be manufactured or regulated by the law. If one has no affection for a person, one should be free to give the fullest expression to his disaffection, so long as he does not contemplate, promote or incite to violence. But the section under which Mr. Banker and I are charged is one under which mere promotion of disaffection is a crime”. [7]

The post-independence Constituent Assembly, while drafting the Indian Constitution, realized that IPC-124A was inconsistent with Article 19, which guarantees rights to freedom of speech and expression. [8] Moreover, Article 19(2), which specified limits to free speech, didn't include "sedition."

However, lack of political will and legislative inaction meant that IPC-124A wasn’t repealed; instead, the task of annulling it was left to the courts. In 1950, the Punjab-Haryana High Court ruled Section 124-A to be unconstitutional in Tara Singh Gopi Chand v. The State. [9] In 1958, the Allahabad High Court held that Section 124A of the Indian Penal Code is ultra vires the Constitution in Ram Nandan v. State. [10] However, in 1962, the Supreme Court of India upheld the validity of IPC-124A in Kedar Nath Singh v. State of Bihar. [10] The Supreme Court stated that speeches against the government or political parties were not illegal, but they shouldn't "incite people to violence" or create "public disorder." Notwithstanding the specific applicability of IPC-124A, successive governments have used it to suppress political dissent and even to punish political jokes. Some recent examples include:

In the 2012-2013 protest against Kudankulam Nuclear Power Plant in Tamil Nadu, approximately 8,856 people were indicted with sedition charges. [11] In September 2012, Aseem Trivedi was charged with sedition over political cartoons that highlighted corruption amongst India’s political elites. [12] In August 2016, Amnesty International India was booked for sedition by Bengaluru police, citing “pro-Pakistan” slogans at their event. [13] In 2019, more than 11,200 Adivasis, tribal/indigenous people, in Jharkhand were charged with sedition for protesting amendments to land tenancy laws. [14] And the list goes on.

Ruling party’s position in defense of IPC-124A
In 2019, the Ministry of Home Affairs (MHA), confirmed the Indian Central Government’s Centre’s stance to retain the sedition law. In a written reply to the Rajya Sabha Minister of State Home Affairs, Nityanand Rai stated, "[t]here is no proposal to scrap the provision under the IPC dealing with the offense [sic] of sedition. There is a need to retain the provision to effectively combat anti-national, secessionist, and terrorist elements.” [15]

During the 2019 Indian general election, the Indian National Congress (INC), the main opposition party, included a proposal to abolish Section 124-A in their manifesto. However, while the party was in power for 10 years (2004–2014), IPC-124A remained on the books and was also used against numerous citizens.

Proponents of the sedition law have argued that freedom of speech is not absolute, that the sedition law is essential to maintain state integrity and peace, and that only three percent of sedition cases have resulted in convictions. [16] However, this line of argument misses the point that while Article 19 guarantees “rights to freedom of speech and expression,” it is not an unbridled license to work against the state. Clause (2) of Article 19 outlines “reasonable restrictions” to ensure public order and security of state. Moreover, the Prevention of Damage to Public Property Act of 1984 already exists to prevent violent protests from damaging public property. Given these legal restrictions already in place, the sedition law is merely a tool to repress political dissent, control thought, and stifle public discourse about the government’s policies. Additionally, it is fiendishly difficult for a person accused of sedition to get bail. This makes the process itself a punishment irrespective of conviction, producing a chilling effect on the diverse voices in the Indian “democracy.”

Why is there a need to protect dissenting political speech?
Dissenting political speech is essential to hold elected officials accountable and seek redress of grievances. Government can never truly be “by the people and for the people” without protection for dissenting political speech. Hence, freedom to non-violently express disagreement with government policies, without fear of retribution...
From the government, is a prerequisite for any functioning democratic political system.

In the context of rising nationalist rhetoric, holding a dissenting political opinion is an act of courage and the only functions that the sedition law serves are to intimidate these citizens and stifle diverse opinions.

In a democratic system, protecting dissenting political speech is not an outrageous idea; in fact, advanced Western democracies champion the idea. For example, in the US political speech is given a "preferred position" in the constitutional hierarchy. In *Brandenburg v. Ohio*, the US Supreme Court introduced an "imminent lawless action" test for judging what may constitute "seditious speech." The *per curiam* majority opinion held that:

> "Constitutional guarantees of free speech and free press do not permit a State to forbid or proscribe advocacy of the use of force or of law violation except where such advocacy is directed to inciting or producing imminent lawless action and is likely to incite or produce such action." [17]

Although unlike India, Australia doesn’t have an explicit article protecting freedom of speech in its Constitution, it still protects political speech. In 1992, the High Court of Australia held that political speech is protected from criminal prosecution in *Australian Capital Television Pty Ltd v. Commonwealth*. [18]

In India, citizens have knocked at the door of the judiciary to protect dissenting political speech. However, the judiciary only considers material placed before them and may not go into the current or historical context. Hence, affirmative legislative action is required to protect dissenting political speech.

Repeated use of IPC-124A by law enforcement agencies has garnered domestic media attention and created a public fear of legal repercussions. This has produced a cascading impact that has deterred people from exercising any dissenting opinion. It is inevitable that the self-censorship induced by the chilling effect will gradually undermine the Indian democratic project.

The United Kingdom’s sedition laws, which laid the premise of IPC-124A in India, were scrapped in 2009—with lawmakers affirming that “freedom of speech is now seen as the touchstone of democracy.” [19] In its 150 years of tortuous reign, IPC-124A was used as a tool to torment freedom fighters during the independence struggle and continues being used by police officers and political leaders to terrorize and bully dissenting citizens.

The Preamble for the Constitution of India underscores "liberty of thought and expression." This is duly upheld by Article 19(1)(a), which guarantees its citizens a right to criticize the government without it tantamounting to sedition. However, while IPC-124A exists, the values and guarantees of thought, expression, and speech are impossible. Hence, it is now time to repeal IPC-124A and allow India to fulfill its constitutional decree.

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As the Anthropocene era accelerates, humanity will be thrust into a world of profoundly inhospitable conditions that will threaten the basic tenets of democracy and human rights. Even if the world meets the best-case scenario outlined in the Paris Climate Accord, the future will likely be riddled with mass migration, resource scarcity, and regressive shifts in both geopolitics and domestic social policies. [1]

Yet, despite global calls for planetary salvation, political and private sector leaders have failed to meet the demands of scientists and public will. On a national scale, more than half of the world’s domestic emissions are produced by four nations: China, the United States, India and Russia. [2] A 2017 report indicated that just 100 companies are responsible for nearly three quarters of all global emissions. [3]

In this sense, the climate crisis is one of the most profoundly anti-democratic phenomena in human history. It is an era defined by the avarice of a select few deciding the fate of every living organism on the planet. There was no consensus, dialogue, or democratic process – just massive allocation of corporate profits invested in disinformation, regulatory capture, and the continuation of environmentally destructive practices.

The following explores the strained intersection of democracy and the Anthropocene. Historical context illustrates how Western oil corporations hid the dire implications of scientific consensus from public knowledge, preventing an informed populous. At present, early onset planetary warming has already ensued massively anti-democratic implications for constituents across the globe. Lastly, as a warmer future will exacerbate trends of migration, ethno-nationalism, and geopolitical instability, new outlooks for human rights, justice, and democracy must be envisioned.

**Historical Context: Big Oil vs The World**

While the effects of fossil fuel combustion on planetary warming have only recently become mainstream knowledge, they have been known for over a century. In 1896, Swedish scientist Svante Arrhenius published a report detailing how doubling CO2 combustion would catalyze a level of warming in surface temperature that today’s models have subsequently confirmed as accurate. [4] However, such findings lay dormant as industrial growth, and its relentless demand for petroleum, became the essence of 20th century modernization. [5]

By 1977, American oil major Exxon (now ExxonMobil) had obtained conclusive evidence from its internal scientists that oil combustion would catalyze drastic shifts in planetary warming. In fact, in 1982, the firm’s scientific reports
estimated that by 2060, levels of atmospheric CO2 content would double, reaching an unfathomable 560 parts per million and accelerating planetary warming between 1.3 and 3.1 degrees Celsius. [6] For context, homo sapiens have never experienced a world with more than 350 parts per million of atmospheric CO2.

Such findings were echoed, if not reinforced as more severe, by the Dutch oil major, Shell. In 1988, a report was internally published detailing how carbon concentrations would double, not by 2060, but by 2030. Furthermore, the findings suggest that such shifts in atmospheric CO2 would cause extreme weather events and drastic disturbances to fresh water resources. In a dismally prophetic note, the report concludes that:

*The changes may be the greatest in recorded history. They could alter the environment in such a way that habitability would become more suitable in the one area and less suitable in the other area. Adaptation, migration and replacement could be called for. All of these actions will be costly and uncertain, but could be made acceptable.* [7]

The same year that Shell’s apocalyptic report was published internally, NASA scientist Jim Hansen testified to the US Senate about the urgency of planetary warming. Speaking with an equal sense of moral and scientific clarity, Hansen told the Senate that “the evidence is pretty strong that the greenhouse effect is here,” and implored that drastic cuts in fossil fuel combustion were needed to avert the type of catastrophe also predicted by Exxon and Shell. [8] And yet, despite this horrifying news being published on the front page of the New York Times, global carbon emissions continued to skyrocket year after year.

There is much debate as to why so little action was taken to address such a cataclysmic threat. Some argue that meeting scientific demands would have been antithetical to the new paradigm of deregulated political economy set forth in the neoliberal era. [9] Others have argued that addressing long term threats were simply out of the capacity of human nature and that failure was inevitable. [10] Hansen’s news had been delivered only a year after nations addressed, and temporarily solved, the threat that chlorofluorocarbons (CFCs) had posed to a dwindling ozone layer, [11] perhaps giving the illusion that the “climate problem” had been sufficiently wrangled.

Illusions aside, it is evident that the public was not privy to the internal findings of the oil majors at the time of their discovery. In fact, the aforementioned reports from Exxon and Shell were not released until a slew of leaks in 2015 made them public. Instead of forwarding their internal reports to the governments that had subsidized their growth, oil majors set course to enthrall the public with disinformation campaigns that lay the foundations for widespread science denialism degrading society today. [12]

As of 2015, Americans lead the world in climate change denial [13] and, until 2016 less than half of the American populous believed that anthropogenic climate change was “scientific consensus” according to the Yale Program on Climate Change Communication. [14] Thomas Jefferson notoriously wrote that “whenever the people are well informed they can be trusted with their own government”. [15]

With this in mind, it is apparent that the American people are not able to adequately and effectively participate in a democratic decision around what type of climate future they, let alone their fellow planetary citizens, desire. No democracy can function when the fundamental fabric of the natural world is so widely and baselessly repudiated.

Thus, the historical context of the climate crisis is inherently constructed around an unjust and anti-democratic power dynamic. The climate disruption that marks the Anthropocene was initiated with the knowledge that the effects would cause irreparable harm to so many around the globe. It is difficult to find a parallel historical analog to the devastation that was set into motion by Western oil majors. While past acts of genocide and crimes against humanity were unforgivably deplorable, the scale of destruction set forth by such willful negligence “may be the greatest in human history” to use Shell’s own words. [16]

The Injustices of the Climate Crisis

Today, the climate crisis predicted by Western oil majors has very much come into fruition. Hurricanes are forming at greater speeds and strengths, devastating parts of the Caribbean and Americas. [17] Floods of biblical proportion have swept through China, India, Bangladesh, and neighboring Asian nations. [18] Forest fires have ravaged entire communities at record scale – Australia, for example, recently experienced fires nearly the size of the nation of Great Britain. [19] Heatwaves have broken records across the Middle
East as Baghdad saw temperatures rise to 125 degrees Fahrenheit (51.6 degrees Celsius). Above all, drought has threatened access to food and water across Sub-Saharan Africa, catalyzing migration and creating yawning vacuums for conflict.

None of the constituents affected by such unprecedented catastrophe were privy to the decisions made by wealthy nations and their petroleum monoliths. According to Oxfam, climate change is most destructive to societies’ poorest and that “the people least responsible for causing climate change bear the brunt of its impacts”. Such claims were recently substantiated by the 2019 report Hunger Strike: The Climate & Food Vulnerability Index, which illustrates how the nations with the highest food insecurity rates have had the least historical CO2 emissions.

But the injustice of the Anthropocene is not merely limited to society’s most impoverished. There is the undeniable issue of race as the white Western nations responsible for propagating the global petroleum economy are not expected to be as adversely affected as multi-ethnic regions of the global south. Within those frontlines communities the most marginalized are expected to face the greatest challenges. The UN has reported that women will struggle disproportionately to men as they have less access to resources such as land, credit, agricultural inputs, decision-making structures, technology, training and extension services that would enhance their capacity to adapt to climate change. Additionally, global LGBTIQ communities are four times more likely to be homeless than cis and heteronormative citizens – for context, nearly half of the US youth homeless population is estimated to be LGBTIQ. Without adequate housing and support systems, these communities face the immediate threat of violent climate disruption like storms and heatwaves.

The devastation of the Anthropocene is one of the great injustices of modernity. Western nations promised fossil fuel-driven growth and a better quality of life to their citizens, while leaving the most vulnerable to suffer the consequences. And while democracy today is widely regarded as a domestic process required in the election of leaders, its definition is in dire need of an update: Democracy should resemble the universal right to self-determination and a life of basic decency.

Such injustices have not gone unnoticed. The past several years have marked a profound shift in public engagement with the climate emergency. Youth movements have risen across the world, demanding immediate political and private sector action to address the scale and scope of the crisis. Some of these young advocates are not merely protesting the early effects of the Anthropocene today, but the horrors that future decades will likely bring.
will be displaced as a direct cause of climate change. [31] In some regions, these trends are already in full force. Both Honduras and Syria experienced unprecedented droughts, destabilizing rural economies, and creating ample pretext to violence and mass migration. These refugee crises have surged at the borders of the US and the EU. Such an influx of early climate migration has not caused Western powers to embrace egalitarian border policies, lest alone accept responsibility in contributing to global emissions.

In both the EU and US, refugees have been used to bolster ethno-nationalist regimes with authoritarian tendencies. Hungary's Viktor Orbán, France's Marine Le Pen, Holland's Geert Wilders, Britain's Nigel Farage, and the US's Donald Trump have all used migration as a means to invoke medieval border policies. Such shifts towards ultra-nationalist, isolationist governance should be regarded as a pre-emptive climate policy in the age of mass migration. As the scale of climate Refugees intensifies, it is imperative to question how democracies will be affected. Far-right nationalists have demonstrated little patience for liberal values and escalating climate migration could intensify these political shifts, further threatening the democratic gains made in the 20th century.

As climate refugees today do not yet have legal recognition for asylum, political strides to combat the climate crisis must set the narrative for an egalitarian agenda of human rights and porous borders. While democracy has been strained and threatened by the Anthropocene, it is also critical to ensuring planetary recovery. As Rebecca Willis writes in The Conversation, "the more we include people in genuine debate and deliberation, the more likely we are to find a way through the climate crisis". [32] In this regard, genuine climate justice cannot be attained without a democratic approach that recognizes the voices of the most vulnerable and works collectively for a more equitable vision of the Anthropocene era. ■


[34] M.B Glaser, "1982 Memo to Exxon Management about CO2 Greenhouse Effect;"
As facial recognition technology (FRT) achieves a healthy state of use in society, there are rising concerns over individual privacy as companies and government agencies collect, store, and use this data. Awareness of this technology is widespread; a 2019 Pew Research poll states 86 percent of Americans are at least a little aware of FRT. [1] Most of the adults surveyed also believe the technology is at least somewhat effective at determining race, gender, and ultimately identifying individuals.

Alongside federal databases, private sector entities have developed their own facial recognition repositories. The most infamous is Clearview, which amassed over 3 billion public social media photos and sold access to the information to law enforcement agencies and whomever else could afford it. The breadth of data held by Clearview increased privacy concerns after the New York Times reported on the company. [2] There have been calls from privacy advocates to ban federal agencies from using this technology, specifically out of fear of eroding First and Fourth Amendment Rights.

Some states and cities have banned their agencies from purchasing or using FRT, [3] while others are trying to convince the federal government to suspend its use of the technology. While citizens’ privacy rights must be upheld, banning the federal government from using technology presents difficult challenges that must be addressed.
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<th>ENTITY</th>
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<td>Berkley, CA</td>
<td>Notwithstanding any other provision of this Chapter, it shall be a violation of this Ordinance for the City Manager or any person acting on the City Manager’s behalf to obtain, retain, request, access, or use: i) any Face Recognition Technology; or ii) any information obtained from Face Recognition Technology, except for personal communication devices as defined by Section 2.99.020 or section 2.99.030(4).</td>
<td>Evidence received to the investigation of a specific crime that may have been generated from Face Recognition Technology but was not intentionally solicited shall not be a violation of this Ordinance.</td>
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<td>Brookline, MA</td>
<td>It shall be unlawful for Brookline or any Brookline official to: a. obtain, possess, access, or use (i)any face surveillance system, or (ii)information derived from a face surveillance system; b. enter into a contract or other agreement with any third party for the purpose of obtaining, possessing, accessing, or using, by or on behalf of Brookline or any Brookline official, (i)any face surveillance system, or (ii)data derived from a face surveillance system; or c. issue any permit or enter into a contract or other agreement that authorizes any third party to obtain, possess, access, or use (i)any face surveillance system, or (ii)information derived from a face surveillance system.</td>
<td>No exceptions explicitly stated.</td>
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<td>Cambridge, MA</td>
<td>Notwithstanding any other provision of this Chapter 2.128, it shall be unlawful for the City or any City staff to obtain, retain, request, access, or use: 1) Face Recognition Technology; or 2) Information obtained from Face Recognition Technology.</td>
<td>City staff’s inadvertent or unintentional receipt, access of, or use of any information obtained from Face Recognition Technology shall not be a violation of this Section 2.128.075 provided that: 1) City staff did not request or solicit the receipt, access of, or use of such information; and 2) City staff logs such receipt, access, or use in its Annual Surveillance Report as referenced by Section 2.128.075. Such report shall not include any personally identifiable information or other information the release of which is prohibited by law.</td>
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<td>Northampton, MA</td>
<td>It shall be unlawful for any city official to expend any city resources to obtain, retain, access, or use any face surveillance system.</td>
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<td>Oakland, CA</td>
<td>Notwithstanding any other provision of this Chapter (9.64) it shall be unlawful for the City or any City staff to obtain, retain, request, access, or use: 1. Face Recognition Technology, or 2. Information obtained from Face Recognition Technology.</td>
<td>City staff’s inadvertent or unintentional receipt, access of, or use of any information obtained from Face Recognition Technology shall not be a violation of this Section 9.64.045 provided that: 1. City staff did not request or solicit the receipt, access of, or use of such information; and 2. City staff logs such receipt, access, or use in its Annual Surveillance Report as referenced by Section 9.64.040. Such report shall not include any personally identifiable information or other information the release of which is prohibited by law.</td>
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<td>San Francisco, CA</td>
<td>(d) Notwithstanding the provisions of this Chapter 19B, it shall be unlawful for any Department to obtain, retain, access, or use: 1) any Face Recognition Technology; or 2) any information obtained from Face Recognition Technology.</td>
<td>A Department’s inadvertent or unintentional receipt, retention access to, or use of any information obtained from Face Recognition Technology shall not be a violation of this subsection provided that: (1) The Department does not request or solicit its receipt, access to, or use of such information; and (2) The Department logs such receipt, access to, or use in its Annual Surveillance Report.</td>
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| Somerville, MA  | SECTION 2. Ban on Government Use of Face Surveillance.  
(A) It shall be unlawful for Somerville or any Somerville official to obtain, retain, access, or use: (1) Any face surveillance system; or (2) Any information obtained from a face surveillance system. | N/A |
Current Bans

City-Wide Bans on Use by Local Government Agencies
Surveying all seven city-wide bans on government agency uses of facial recognition technology in the US reveals several similar traits across cities, as can be seen in Table 1. After analyzing the text, it was determined each bill includes FRT in the definition of surveillance technology, contains a ban on agencies from obtaining, retaining, requesting, accessing, or using FRT or information derived from the technology, and ensures inadvertent or unintentional receipt of information derived from FRT would not be a violation of city ordinances. However, the Northampton and Somerville bans do not include the third characteristic. Instead, these cities have a small loophole, when explicitly stated, which allows outside entities to send city agencies information unsolicited, but only if the agencies report its receipt and use.

These government agency bans are ineffective in their shared goal of protecting citizens’ rights. While other laws address some privacy issues related to data, including biometric identifying information, the bans do not discuss personal or private sector collection, storage, and use. Barring local government agencies does not prevent state or federal authorities from conducting the surveillance in association with crimes conducted in the local city.

Moratoriums
In line with the local bans seen in numerous cities in California, in October 2019, the state passed “AB-1215 Law enforcement: facial recognition and other biometric surveillance” banning the use of “any biometric surveillance system” used with a body camera, which includes FRT. [11] The rigid wording of this ban narrows its scope to include any law enforcement agency under the purview of the State of California or California municipalities. Private security is not included in this ban, allowing companies still to conduct this type of surveillance on their property. Furthermore, the ban does not preclude law enforcement from conducting the surveillance in association with crimes conducted in the local city.

Use by the Department of Justice
The Department of Justice (DOJ) is the most prominent government user of facial recognition technology. The Federal Bureau of Investigation’s (FBI) system, known as the Interstate Photo System (IPS), is a searchable database of 30 million criminal and civil photos. [14] As of 2016, the FBI still has access to separate databases, including the Department of Defense’s biometric I.D. system, Department of State’s Consular Consolidated Database of Visa Applications, and 16 state driver technology. No punishment for violating this moratorium was specified.
license databases totaling 412 million photographs. Law enforcement use of these databases is permitted without requiring a warrant or the consent of the individual.

The FBI also leverages facial recognition services provided by vendors, despite having its own database. The service providers were listed in a New York Times report as a client of Clearview A.I., alongside the Department of Homeland Security. [15] As the report indicates, the extent of the FBI’s use of Clearview data is vaguely understood to be for child trafficking and similar cases. No other public information about the FBI’s contract with Clearview A.I. is available.

Internal procedures dictate how the FBI’s system can be accessed and what data is stored. Alongside photos, the database includes other personally identifying information, such as date of birth, address, and name, to narrow the search. [16] This system has similar privacy risks as private-sector databases.

Current Legislation and Legal Considerations

Proposed Ban on Federal Use

H.R. 3875 is the only bill introduced to ban the federal use of facial recognition technology. [17] It states that no federal funds may be used for the purchase or use of FRT, which presents several challenges. The legislation, as written, would make it difficult for the federal government to develop future standards for commercial use or track the utilization of facial recognition technology in the US.

An end to federal funding for the purchase or use of FRT would not solve privacy problems. State and local law enforcement would still be legally able to track individuals, conduct surveillance, and voluntarily provide that information to federal agencies. Without funding, the FBI would need to request the data and analysis from commercial vendors or other non-federal law enforcement agencies, which are simply extra steps to obtaining the data. Overall, privacy rights are still impacted by technology from commercial interests.

Other Proposed Legislation

Certain bills attempt to regulate technology more effectively. S.2878, which only made it to Committee, requires a warrant to use FRT for ongoing surveillance. [18] The bill puts limitations on federal agency use that fall in line with maintaining the privacy of individuals in their daily lives. [19] It does not limit the current usage of any government database by requiring warrants.

A house bill similar to S.2878 is H.R. 4021 would require a warrant to apply facial recognition technology to photos owned by a state or the federal government, or to any photograph that is possessed by either. [20] It would also bar the sharing of information with anyone that does not have permission via a court order.

Court Precedence

There is one current court case regarding the use of facial recognition technology by federal law enforcement. The ACLU is challenging the Drug Enforcement Agency (DEA), FBI, and DOJ in court to comply with a request — under the Freedom of Information Act — to disclose their use of FRT. [21] The result of the case could mean that more information will be released to determine the extent of the technology’s use by these federal law enforcement agencies. This case is not challenging the use of FRT; therefore, there are no current cases from which the constitutionality of the technology could be determined by the Supreme Court.

The Supreme Court has no precedence barring technology from law enforcement use. However, there is precedence for requiring warrants to use technology or to gather specific data. The Supreme Court ruling for Kyllo v. United States, questioning the warrant requirement of thermal imagers to detect heat in a house, found that the technology’s use requires a court order. [22] The Court’s concern over warrantless use of thermal imaging stemmed from the government’s increasing ability to surveil individuals in their homes as sense-enhancing technology continues to advance.

Riley v. California challenged the legality of searching a cellphone under the Chimel Rule, which allows police to conduct a warrantless search of a person and the area in their immediate reach after a lawful arrest. [23] The Supreme Court ruled the data on a cellphone is not subject to a warrantless search because of the immense amount of personal data on the device, which would not have been on their person in hard-copy form in the pre-digital era. In this case, the courts determined that police had to obtain a warrant to access this wealth of data.

A new precedent was set in Carpenter v. United States when the court declared that obtaining specific location information records from wireless carriers is classified as a search and thus protected by the Fourth Amendment. [24] The Court therefore upheld society’s expectation of privacy
regarding physical movement, this expectation itself being rooted in an assumption that law enforcement cannot monitor a person’s every move.

“A person does not surrender all Fourth Amendment protection by venturing into the public sphere.”

Should There Be a Ban?
Based on established precedent in Carpenter, “A person does not surrender all Fourth Amendment protection by venturing into the public sphere.” [25] This applies to facial recognition technology. By utilizing surveillance cameras, law enforcement can track a person’s movements by matching their facial data to a plethora of pictures available from any available database or commercial vendor. Unlike cell phone location records or thermal imagery, it is currently legal for them to use the information without a warrant.

However, the federal government has no reason to pass legislation to bar itself from using technologies that could improve its ability to conduct criminal investigations, or combat fraud, if it does not violate citizens’ rights. If such legislation is successful at a federal level, state governments would still have the power to collect, store, and use facial recognition data in their investigations without requiring warrants. Local law enforcement and private security firms could do the same. Preventing federal agencies from using FRT would leave them in a lower position of power over the information, giving agencies, even at the local level and commercial entities, more ability to track a person than their federal counterparts.

Another avenue the federal government could consider is a national moratorium, which has been proposed in the Senate. [26] This method of ending use of facial recognition technology would be limiting, but also temporary. However, this moratorium still provides law enforcement agencies with the ability to use the technology if they obtained a court warrant. After 18 months, the bill sunsets if Congress does not pass legislation following the moratorium.

Despite some political support, banning federal agencies from using FRT would not be feasible for the US Government to pursue as a policy. Based on court precedence, and the thousands of non-federal agencies that could still use the technology, the federal government would be able to find a workaround of the ban in some fashion that could satisfy court challenges. Absent Congress passing a new law, the DOJ should require warrants for facial data use in ongoing surveillance and in searching for potential identities in their database. Warrants are a step towards controlling the use of facial recognition technology and protecting the rights of Americans from improper surveillance. It is a limit law enforcement is used to operating under, and one the public will accept. With the widespread use of facial recognition, warrants will ensure the trust of the people in their law enforcement to use it properly remains well into the future. ■

CASTE-BASED DISCRIMINATION IN THE US: IS THERE A NEED FOR PROTECTIVE LEGISLATION?

By Aniket Chaudhary and Abhishek Kumar

On June 30, California regulators sued Cisco Systems Inc. for discriminating against an Indian American employee. [1] The employee, belonging to a lower Indian caste, was harassed by two Indian American managers. This is not the first instance of caste discrimination in the US. According to a survey conducted by Equality Labs, a South Asian American human rights organization, 26 percent of respondents of South Asian descent claimed that they had suffered from physical assault because of their caste in the US, while 60 percent reported that caste-based derogatory jokes or remarks had been directed at them. More than half said they were afraid of being “outed” as Dalit. [2]

A coalition of American Ambedkarite organizations, consisting of Indian American and Canadian Dalits combatting caste-based discrimination, expressed solidarity with the Cisco employee: “With an increasing number of South Asian people occupying ‘strategic positions in the American corporate bastion’, fears that caste will play a role in all walks of life are coming true.” [3] The organizations further stated that “caste discrimination is the antithesis of the American values of freedom, democracy, and justice.”

Caste in America, a Pulitzer Center series, along with WGBH News, also finds that caste discrimination in the US hampers job, marriage, and economic prospects for Dalits. [4] Currently, the US does not consider caste bias a form of discrimination. Caste has been addressed in US courts, but only on matters related to immigration.

In the 1923 case of United States v. Bhagat Singh Thind, an Indian Sikh identified himself as a “high caste Aryan, of full Indian blood” and asked to be declared white to obtain US citizenship. [5] This is one such case where “caste” is mentioned for immigration purposes. Thus, there is no legal precedent that could make caste a judicial issue. The US follows a common law system, meaning that some laws which do not have sources in the Constitution or statutes are evolved through cases in courts. These courts set out legal precedents which are a rule or principle established in a case which is either binding or have persuasive value while deciding other cases having similar facts or issues. Thus, the issue of caste not having a judicial precedent as it had not been earlier taken up as an judicial issue in any case would mean that there is no certain procedure established to deal with such cases concerning caste discrimination. There will be no remedy as such in these cases and even to recognise caste as a legal precedent would take up effort and time and would depend upon a certain interpretation provided by the court.

Thus, the lack of judicial precedent in the US has real consequences for Dalits in America. In 2017, the New York Human State Division of Human Rights denied a case in which a Dalit waiter accused his upper-caste managers and staff of caste discrimination after they continuously referred to him as an “untouchable.” [6]

In the absence of federal and state law, Brandeis University, a private American university, paved
the way in becoming the first American university to ban caste-based discrimination on its campus, outlined in its anti-discrimination policy in January of this year. [7] The policy specifically prohibits “discrimination and harassment on the basis of race; color; ancestry; religious creed; gender identity and expression; national or ethnic origin; sex; sexual orientation; pregnancy; age; genetic information; disability; military or veteran status; or any other category protected by law.” To include caste in its policy, the University released a statement of interpretation which clarified that “Following the guidance of the US Department of Justice, Civil Rights Division’s interpretation of Title VI of the Civil Rights Act to include a prohibition against religious discrimination, Brandeis University shall similarly construe caste identity to be included within the university’s current bans on discrimination and harassment based on race, color, ancestry, religious creed, and national or ethnic origin.” [8]

Caste-based discrimination is predominantly practiced in Korea, Japan, and the Indian subcontinent. [9] [10] Hindus traditionally grouped people into four major castes based on ancestry, with Dalits at the bottom of the hierarchical system. Dalits in India still struggle with access to education and jobs as Untouchability continues to be practiced in some parts of the country, although 65 years have passed since the Indian government banned caste-based discrimination. [11]

The issue of caste-based discrimination has been made even more apparent in India as a result of the COVID-19 pandemic. Dalits had been denied food rations at Abhishek Nagar of district Saharanpur in the state of Uttar Pradesh by certain local administration after lockdown measures were put in place. [12] [13] Dalits had been denied cremation grounds and in one case, were forced to remove a dead body from a funeral pyre after objections by members of upper castes. [14] [15] A survey conducted by IndiaSpend, a policy research foundation, had found that many Dalit workers had not received cash transfers from the government and have been instead receiving rations from public distribution shops. [16] IndiaSpend also found that Dalits were required to work more, but they received less compensation than people belonging to other castes.

Article 15 of the Indian Constitution prohibits discrimination on the basis of caste. [17] Untouchability is a criminal act under Article 17. [18] Furthermore, Indian Parliament formulated special laws, such as the Scheduled Castes And the Scheduled Tribes (Prevention of Atrocities) Act of 1989 that prevents the Dalit community from caste violence and discrimination. [19] The act ensures that the offender is punishable with imprisonment for a term which shall not be less than six months but may extend to life imprisonment depending upon the varying degree of offense. The Protection of Civil Rights Act of 1955 prescribes punishment for preaching and practicing Untouchability and provides protection from any disability arising from this type of discrimination. [20]

Caste-based discrimination is also prevalent in the United Kingdom. A study conducted by Hilary Metcalf and Heather Rolfe of the National Institute of Economic and Social Research found evidence suggesting caste discrimination, harassment, and bullying in employment, education, and the
Caste-based discrimination, which was once more limited to Indian society, has now reached other countries as well. Civil rights activists and author of the Indian constitution, Dr. B.R. Ambedkar had once said that, “if Hindus migrate to other regions on earth, Caste would become a world problem.” Dr. Ambedkar’s fear about caste discrimination spreading to other countries around the world has certainly become more apparent.

Recently, the US Supreme Court barred discrimination in employment faced by the Lesbian, Gay, Bisexual, and Transgender community. [26] As the US makes progress in combating discrimination, cases of caste bias experienced by Indian Americans hinders America from attaining the desired goal of a discrimination-free society. It is time for “caste” to become a legislative matter and for the US government to take necessary measures to penalize caste-based discrimination and further protect all of its citizens.

After months of intense political deliberation, lobbying, injunctions, and media attention, California Governor Gavin Newsom finally signed California Assembly Bill 5 (AB5) into law in September 2019, with the bill going into effect on January 1, 2020. AB5 requires companies to reclassify independent contractors as employees — helping them enjoy job stability and decent wages — and codifies the ruling of Dynamex Operations West, Inc. v. Superior Court of Los Angeles into California law. [1] Under the bill’s “ABC” test, workers can only remain independent contractors if the business is able to prove that they are free from the control and direction of the company and are not doing work that is central to the business of the hiring organization. Under this bill, rideshare companies like Uber would be forced to reclassify their drivers as employees, meaning that drivers would be entitled to unemployment insurance, workers’ compensation, overtime, employee benefits, and social security contributions. [2] AB5 would also guarantee drivers the legal right to unionize and engage in collective bargaining. The new bill would have significant implications for the gig economy at large, and particularly, for electronically mediated work platforms such as Uber and Lyft.

Over the months leading up to the November 2020 US election, the heated legal battle between online gig platforms and the California legislature continued to make national headlines with Uber and Lyft threatening to suspend operations in California, only to gain reprieve from a California appellate judge who blocked the state from forcing Uber and Lyft to reclassify their drivers as employees. [3] Uber and Lyft, warning that AB5 could potentially destroy their businesses, pledged a combined $60 million back in August 2019 to fund a ballot initiative, known as Proposition 22, to exempt app-based drivers from being classified as employees under AB5. [4] [5] Since then, electronically mediated companies like Uber, Lyft, and DoorDash have spent over $200 million dollars on ads and public relations campaigns leading up to the November election, making Proposition 22 the most expensive initiative in California history. [6] Finally, on November 4th, the deciding battle in this saga came to a close as election results declared that Proposition 22 had passed with overwhelming support, granting Uber and Lyft a massive victory that allows them to continue treating their drivers as contractors. [7] Now, under Proposition 22, gig workers will be exempted from the requirements of AB5 and companies will be allowed to forgo classifying independent contractors as employees. This piece will seek to evaluate the possible economic effects of AB5 if Proposition 22 had failed and Uber, Lyft, and other online rideshare platforms were instead forced to comply. This paper will also discuss the impact AB5 would have had on consumers, drivers, and other stakeholders.
Measuring the Gig Economy
There is significant variation within the current literature across key definitions and measurements of the gig economy. The Bureau of Labor Statistics (BLS) conducts the Contingent Worker Supplement (CWS) survey monthly to collect information from households about the kind of work that household members perform. [8] Notably, the BLS CWS does not have a formal definition of what is included in the gig economy. Gig work is generally understood as “income-earning activities outside of traditional, long-term employer-employee” relationships, marked instead by temporary arrangements, scheduling flexibility, and “lack of direct oversight”. [9] Between 2005 and 2017, survey results indicate that the number of workers in alternative arrangements fell slightly from 10.7 percent of employed workers to 10.1 percent of employed workers. However, the BLS survey may underestimate the true number of electronically mediated workers because the questions about contingent and alternative work arrangements are asked only about a person’s main job. [10] The Federal Reserve also fields its own online survey of 11,316 respondents, designed to assess the number of independent workers in the economy. They define gig work as informal, infrequent paid activities such as service activities or renting, and include both online and offline activities. The Fed survey found that in 2018, three in ten adults engaged in at least one of the gig activities listed, with 15 percent engaging specifically in a service activity. [11] The Fed survey is also a comparatively better estimator of the true proportion of Americans involved in gig work because it asks about informal work done outside one’s main job, distinguishing it from the BLS. The BLS report, the Fed report, and other official measurements such as IRS tax filings paint contrasting pictures on the growth and trajectory of the gig economy. [12] Ultimately, there is still much debate surrounding how to officially measure the true size of alternative work arrangements and the gig economy in general.

Measuring the Online Platform Economy
Within the study of the gig economy, new research has been developed to study the size of the online platform gig economy specifically in order to capture the extent of individuals working as contractors for companies like Uber, Lyft, or Handy. The online gig economy is defined by the use of an Internet-based app to match customers to workers. The BLS CWS survey reported that 1.0 percent of workers used online apps to arrange work. [13] Using an alternative methodology, Harris and Krueger (2015) reviewed 26 intermediaries in the online gig economy and used Google Trends to track the relative frequency of searches for the name of a particular intermediary. Using the scale of Uber to estimate the size of the gig economy, and assuming that the number of workers using an intermediary is proportional to the number of Google searches for the company, they estimate that 0.4 percent of total U.S. employment — 600,000 workers — are engaged in the online gig economy, with two-thirds of these workers using Uber. [14]

The JPMorgan Chase Institute has also offered novel ways of measuring the size of the online gig economy. [15] Utilizing Chase’s internal checking account data of over 260,000 sampled individuals who had provided goods or services over three years on one of 30 intermediary platforms, researchers at the Institute found that 1.6 percent of families using Chase checking accounts had received income from an online platform at the start of 2018. Distinguishing between platform types within the online gig economy, they found that 1.0 percent of families received income from the transportation sector, with transportation now comprising 56 percent of the online gig economy, eclipsing non-transport work by total participants and transaction volume. By looking at checking account flows that directly show payments to a driver linked to an online intermediary account, JPMorgan Chase data can be considered more reliable and better at estimating the number of workers in the online gig economy than comparable data. That said, the existence of other payment methods such as the online platforms’ exclusive payment arrangements — notably Uber’s “Instant Pay” — may cause the Chase data to understate the true share of households with online income to some extent. In conclusion, while the literature includes a wide array of different data and measurement tools, the research points to an online platform economy that is still quite small, with only around 1.0 percent of the labor force or less actively involved in the gig economy.

Who is the Uber Driver?
Uber has grown exponentially since it first launched in 2010. The majority of Uber drivers use Uber as a secondary, part-time activity in order to supplement income, and value the flexibility to set their own hours. Utilizing Uber’s proprietary administrative data, Hall and Krueger (2018) observed driving history, schedules, and earnings of its drivers, and conducted a survey of 632 drivers in 2015. They found that most of those driving with Uber have a full-time job (52 percent) as opposed to a part-time job (14 percent), and only 33 percent
had no job. Prior to driving for Uber, only eight percent of drivers in 2014 and ten percent in 2015 came from nonemployment, being incentivized by income exceeding the reservation wage and flexibility to begin driving for Uber. [16] With respect to the proportion of drivers with health benefits, drivers are considered independent contractors by Uber and are thus not eligible for employer-provided health insurance, minimum wage, workers' compensation, or other benefits. The BLS CWS found that independent contractors are less likely to have health insurance than traditional employees. [17] A study of Uber drivers finds that “38 percent of Uber’s driver-partners received employer provided health care” from either their primary job or from spouse or another family member’s employer”. [18] With respect to future growth implications of Uber, many believe that growth of freelance transportation work is plateauing; people are not quitting their day jobs to work for Uber. Data points to depressed wages for participants as new entrants have increased the supply of drivers, and while driving remains an important way for financially vulnerable families to smooth income volatility, very high turnover remains among drivers as participants only drive when they need to. Indeed, one study concludes that “more than half of participants drop out within 12 months”. [19]

Uber and the Transportation Sector
The introduction of Uber into the transportation sector has had sizable effects on the traditional taxi industry, consumer welfare, and labor supply of drivers. Using a triple difference-in-difference model, Berger, Chen, and Frey (2018) [20] looked at the systematic impact of Uber before and after its introduction in 50 of the largest metropolitan areas in the US, and uses American Community Survey samples to estimate its disruption effect on employment and earnings of taxi drivers. The results find that after Uber’s introduction, taxi drivers faced a relative earnings decline of ten percent. Uber — employing independent contractors — offers a cheaper alternative to taxis, depressing the demand for conventional taxi rides, and effectively acting as a low-cost substitute for taxis, with all other transportation unaffected. That said, while Uber’s entry lowered earnings of taxi drivers, it had no statistically significant effect on the labor supply of taxis nor its composition. In line with this, Cohen et al. (2016) [21] measured consumers’ willingness to pay at any given level of “surge pricing” and found that consumer surplus has increased with the introduction of Uber, generating an estimated $2.9 billion in consumer surplus across four major cities. The research subsequently finds that the consumer surplus from the introduction of Uber has outweighed the relative losses experienced by taxi drivers.

Policy Implications of California AB5 for Uber
California AB5 would have had a wide array of effects on the labor market for Uber, as well as for other sectors which rely on a large volume of independent contractors. First, by making Uber drivers employees, they would have lost their flexibility to choose and customize their work schedule to fit their needs. Chen et al. (2019) [22] used driver data to compare the variation in...
drivers’ reservation wages – the wage needed to make them take a ride – across different hours to determine how much drivers value flexibility. They found that Uber drivers "require almost twice as much pay to accept the inflexibility of the taxi schedule," and that if required to work inflexibly at the prevailing wages, that “they would reduce hours supplied by more than two-thirds.” Depending on the specific configuration of convex preferences of workers for wages and flexibility, by limiting flexibility, the proposed policy could reduce the utility of a majority of current Uber drivers, thus making drivers worse off. [23]

The effect of AB5 requiring Uber to pay workers’ benefits and payroll taxes would also have had an important effect on labor demand. Economic theory would predict that an increase in the cost of labor in the form of minimum wage and benefits will result in higher prices for consumers and decreased demand for labor. The higher prices, in turn, would decrease consumer surplus as rides become more expensive, on average. The policy could be thought to have a similar impact on the labor market as that of a “payroll tax.” By mandating that drivers be reclassified as employees, the marginal cost of labor would increase in the form of employee benefits and compensation. While on the surface this is a positive for drivers, the cost of this may be borne by employees in the form of lower wages and reduced levels of employment. In addition, as labor supply is generally more inelastic than labor demand due to asymmetry in bargaining power, it is likely that the majority of the burden of the taxes will fall on the drivers. [24] Accordingly, requiring employers like Uber or Lyft to provide certain benefits or pay for payroll taxes would mean that the gains to employment for workers “will ultimately be offset in the form of lower net fees” collected by workers. [25] The increase in cost of labor has had demonstrable negative impacts in California after the passage of AB5 for independent contractors in construction, local theater, trucking, freelance journalism, musicians, photographers, and other industries with low-bargaining power workers who were unable to seek exemption from the law, which triggered widespread layoffs as a result. [26] The policy would also have had important effects within the context of health benefits and compensating differentials.

As stated previously, 38 percent of drivers already receive employer healthcare, and a majority use Uber as a secondary source of income. [27] Given the range of compensation packages between wages and health benefits, workers who already have health insurance through their spouse or primary job would not benefit from the healthcare package, and would seek to choose a job that offers a consumption bundle with higher wages and no health insurance, essentially trading benefits for more cash. [28] The policy in question, however, would have an important social benefit in that it would increase the number of people covered by health insurance. When a large proportion of people are uncovered and need urgent medical care, the cost of care is passed on to the state and may lead to rising health insurance premiums. Rather than making the state subsidize driver health care, AB5 would make Uber internalize this cost.

Closing Remarks
In an era in which the collective bargaining power of workers has shrunk and union participation rates have fallen precipitously, California AB5 has become an impassioned battle for workers’ rights, fought by some of the most financially vulnerable segments of the population. During the campaign for Prop 22, Uber’s PR representatives – seeking to rebuke the opposition’s claims that the law would eliminate protections and benefits for workers – reiterated that while the initiative would mean drivers remain as independent contractors, Prop 22 would ensure drivers received a “minimum level of pay and healthcare subsidies” depending on how much they drove. [29] [30] Upon hearing the news of the result, rideshare companies proudly announced their desire to pursue similar legislation at the federal level to replicate the California law and “protect them from similar employment laws in other states”. [31] [32] On the opposition, progressive groups and prominent labor leaders have attacked the election outcome arguing that it will embolden Uber and Lyft to further supplant and remake historic and hard-fought employment laws and protections. [33] Opponents have also argued that Prop 22 will allow companies to continue to skirt their corporate responsibility, highlighting that Uber and Lyft alone saved “more than $400 million from 2014 to 2019 by not paying into California’s unemployment fund”. [34]

Ultimately, determining the policy’s effect on drivers depends on deriving the individual’s utility function for flexibility, wages, and healthcare benefits. For workers with primary jobs who mainly use Uber as a gig to smooth against income volatility, they value flexibility very highly, and so AB5 would actually reduce their utility and willingness to drive at prevailing wages. More financially vulnerable workers without health
insurance, however, stood to benefit considerably from gaining employee status. Proposition 22 purports to strike a balance between the welfare needs of gig workers and the needs of employers in an increasingly technology-driven world. Only time will tell how Prop 22 shapes the future of labor law, and if forthcoming policy can mutually benefit the needs of the larger labor market, the evolving gig economy, consumer stakeholders, and those who are most vulnerable.

12. Ibid 10.
17. Ibid 9.
18. Ibid 16.
Across the digital economy, Europe has been missing. No big tech companies are based in Europe, while European companies themselves often choose to run their businesses on infrastructure from non-European-based companies.

Yet, the European Union (EU) has prioritized the goal of technological sovereignty on the agenda. The EU might not be capable (yet) of technological sovereignty in producing technology, but it can further establish itself as the world leader in regulation, especially regarding data and privacy, seeking the golden mean between regulation and connectivity. Will this pursuit be accompanied by an effort on the part of the EU to nurture its own tech ecosystem? It remains to be seen.

What we can say with certainty, is that the EU has managed to reposition data protection laws from the periphery of legal consciousness to the center of legal and public discourse. And it has done so, primarily, through the enactment of the General Data Protection Regulation Act (GDPR) and its related case law. While such regulation is indeed necessary, we highlight that there is a tendency for EU data protection law to focus on legalistic mechanisms to protect data transfers rather than on protection in practice, and particularly, with regards to the exploitation of data and microtargeting in the commercial and political context.

Regulation of data transfers needs to go beyond formalistic measures and legal fictions, so that the EU adopts a pre-emptive rather than a firefighting role. And, perhaps, we should start thinking of solutions that go beyond the digital ecosystem to tackle the problems within it.

Data protection through legal means
The European Union has celebrated the European Data Protection Day on the 28th of January since 2006. On that very day, in 2014, Viviane Reding, Vice President of the European Commission, responsible for Justice, Fundamental Rights and Citizenship, argued that “data collection by companies and surveillance by governments are connected, not separate”. She went on: “Data should not be kept simply because storage is cheap. Data should not be processed simply because algorithms are refined. Safeguards should apply and citizens should have rights.”

Those statements can be read as a precursor to the GDPR, EU law's regulatory tile in the mosaic of data protection and privacy. The GDPR, as implemented since May 2018, has two unique elements.

Firstly, through the GDPR, the EU enshrines data protection as a fundamental human right (Recital 1). Article 8(1) of the Charter of Fundamental Rights of the European Union and Article 16(1) of the Treaty on the Functioning of the European Union (TFEU) also provide support for the assertion that
everyone has the right to the protection of personal data concerning them.

Secondly, the GDPR also applies to data controllers and processors outside of the European Economic Area (EEA) if they are engaged in the “offering of goods or services” (regardless of whether a payment is required) to data subjects within the EEA, or are monitoring the behaviour of data subjects within the EEA (Article 3(2)) – regardless of where the processing takes place. This has been interpreted as intentionally giving the GDPR extraterritorial jurisdiction for non-EU establishments if they are doing business with people located in the EU.

Data does not run the risk of becoming scarce....The political implications of the infinitely usable nature of data are of great importance and of potentially great value.

The GDPR acknowledges that it would make no sense for the EU to assert fundamental rights for EU nationals, or a particular geographic region, but not for anyone else. Given the open nature of the internet, there had to be one data protection act to rule them all. It was a warning to companies everywhere that they would not evade the reach of European law simply by being located outside the EU. And the extent to which the EU’s vision as global rule maker in the context of data regulation was to be fulfilled is constantly tested judicially in the European public order.

Data-related concerns beyond the ambit of the law: promoting democracy or auctioning democracy off to the highest bidder?

While the European legal order has succeeded in recognizing data protection as a fundamental human right and has indeed established itself as the regulatory leader on the digital sphere, this does not mean that everyone has suddenly grown complacent of digital platforms’ growing interference with data.

There is something unique about data – the simple rule that the higher the consumption of a good, the lower its reserves become, does not hold for them. Data does not run the risk of becoming scarce. Not in the sense that we might have endless data – lack of efficient compression algorithms means that a data shortage could be imminent in the next decade, unless large and costly data centers are erected. But in the sense that one piece of information about someone can be used again and again by different stakeholders, without it losing its value. The political implications of the infinitely usable nature of data are of great importance and of potentially great value. And what is the main threat? Microtargeting, i.e. the platforms’ unique capacity of launching ultra-successful campaigns through direct marketing data mining techniques that involve predictive market segmentation.

I. Multiplying fake news

Modern media have multiplied the possibilities of the (cross-border) dissemination of marginal, uninformed voices, since the great achievement of the democratization of information has abolished the filters that once prevented false information from gaining access to the public sphere. The yellow press and vulgar “reality” shows have always existed. Audiences of these formats were relatively homogeneous, but the multiplicity of interaction and the socialization of the believers, was absent; an unbalanced conspiracy theorist had difficulty meeting interlocutors. The internet solved this problem. It brought together people with marginal views, who created communities and groups of like-minded people, within which the confidence and dynamism of marginal views is multiplied.

AI fact-checking could be a solution, interpreting the comments of the President of the Commission in her State of the Union Address: “We want a set of rules that puts people at the center. Algorithms must not be a black box and there must be clear rules if something goes wrong”. [4]

But even statements that could be debunked in a seemingly straightforward manner – for instance, the now-infamous Brexit campaign claim that the UK would save £350 million per week by leaving the European Union – present a thorny challenge for automated verification. Two risks lurk. On the one hand, there is bias – the regulators’ own stereotypes, prejudices, and partialities that could potentially be projected on fact-checking. On this front, we can only hope for more sophisticated deep learning mechanisms.

On the other hand, there is the dilemma of balancing free speech and access to accurate information. The argument is that unless they cross specific legal red lines – such as those barring
defamation – fake news stories are not illegal, and as such, regulatory bodies have no legitimacy in prohibiting or censoring them. The basis for such an argument is often found in Article 10 of the ECHR (freedom of expression), the First Amendment and international free expression safeguards. Nevertheless, the superficial protection that free speech rhetoric offers to fake news does not nullify the danger it poses for open discourse, freedom of opinion, or democratic governance. The rise of fraudulent news and the related erosion of public trust in mainstream journalism pose a looming crisis for free expression. Usually, free expression advocacy centers on the defense of contested speech from efforts at suppression, but it also demands steps to fortify the open and reasoned debate that underpins the value of free speech in our society and our lives. The championing of free speech must not privilege any immutable notion of the truth to the exclusion of others. But this does not mean that free speech proponents should be indifferent to the quest for truth, or to attempts to deliberately undermine the public’s ability to distinguish fact from falsehood. The European Democracy Action Plan, [5] to be unveiled in late 2020, represents the next step in the EU’s regulatory fight against fake news, in the spirit of countering the aforementioned observations.

II. Polarizing content
If the reproduction of fake news is the first symptom, the second one would be militancy. An internal Facebook study documented that this medium’s algorithms exploit the human brain’s attraction to divisiveness and polarization. In his fascinating book *Thinking, Fast and Slow*, [7] Daniel Kahneman distinguishes two “systems” of mental function: “fast” thinking works automatically, spontaneously, uncritically and impulsively. “Slow” thinking requires effort, rational assessment and strategic reasoning. “Fast thinking” is the function that flourishes on social media, where reaction is decisively influenced by the image, the context, the group dynamics, the echo chamber, the mass. Without filters and balances, “fast thinking” spreads false and divisive speech like dry grass spreads fire. Then social media acts as a weapon for conspiracy theorists and demagogues.

Democracy needs the resistance of “slow thinking”. It requires exhaustive dialogue, negotiation, the seeking of consensus, and compromises. These are the ingredients of liberal democracy, which becomes devoid of meaning when arguments are replaced by lies and insults, and the understanding of the other’s position by mob e-lynching and the “cancelling” of ideological opponents. Liberal pluralism has always been based on an optimistic premise that if you allow all views free to express themselves, to compete, to clash with each other, the truth will emerge and prevail. But as free markets require regulation to work effectively, so does pluralism require rules. When all the flowers are left free to bloom, the parasites grow bigger and smother them.

III. Creating echo-chambers
But a third, and perhaps even more concerning reality that hinders our democracies is neither the magnifying effect that Facebook has on fake news, nor the divisive rhetoric, but rather its contribution to the creation of echo-chambers.

Before the House Financial Services Committee, Alexandria Ocasio-Cortez asked Mark Zuckerberg, “Would she be able to run advertisements on Facebook targeting Republicans in primaries saying that they voted for the Green New Deal?” His answer was, “Yes, in most cases, in a democracy, I believe that people should be able to see for themselves what politicians, that they may or may not vote for, are saying or think so they can judge their character for themselves.”

And herein lies the problem. Politics used to be part of the public sphere. When something is said in public, people may judge by themselves, but they also judge with others. When a piece of information is displayed to the public, we assume that if it is incorrect, illegal, or fake someone with the knowledge or the interest or incentive to debunk it (e.g. the party that is being damaged by it or the authorities if it violates a law) will do so. We rely on public scrutiny and public discourse to counter the asymmetry of information and the asymmetry of power between the broadcaster and the recipients of a message. The public sphere creates an informal system of checks and balances, and thus, of accountability – notions that are lost in the echo chambers of digital platforms. Due to microtargeting, there is no one to jump in to doubt the accuracy of a message, simply because that message would not have been sent to anyone, who would care to react or who would have the knowledge to react. Therefore, microtargeting creates an asymmetry that strongly favors the broadcaster of the message and puts the recipient in disadvantage.

Reform or regulate?
It is true that digital platforms have taken steps to self-regulate. But self-regulation is determined by
a “we know we have more work to do” mentality, an idea that seems to be repeated by platforms once found at fault. For instance, such rhetoric was brought up both after the #StopHateForProfit advertising boycott campaign launched against Facebook. The phrase is both a promise and a deflection. It is a plea for unearned trust – give us time, we are working toward progress. And it cuts off meaningful criticism – yes, we know this isn’t enough, but more is coming.

Platforms frequently use unfathomably vast amounts of content as an excuse for inaction. But this defence is also an admission: they are too big to govern responsibly. There will always be more work to do because Twitter’s or Facebook’s design will always produce more hate than anyone could monitor. How do you reform that? Or an even more pertinent question perhaps – can you reform that or do all signs point to a system beyond reform?

The EU has opted for the path of regulation. And indeed, the EU’s steps towards regulating digital ecosystems are welcome, as it is, indeed, true that we cannot rely on self-regulation for something so powerful and so (potentially) dangerous for the pillars of our democracies.

Tech companies might resist, but negative externalities will always justify such efforts. A recent example of platforms and regulators reaching this equilibrium comes from Facebook’s threats to leave Europe due to proposals for new data-sharing regulations. [8] Complying to those new regulations would be complicated, restrictive, and expensive. But by a complete pull-out, Facebook would lose a lot of money and market share. As such, the most likely scenario would eventually see Facebook forced to establish EU-only data centers.

But at the same time, we have to be aware of the limits of the regulation effort. Perhaps we have to face the reality that no matter how much we regulate, something will be lacking. It will always be the case that another platform will emerge in a different jurisdiction or a new technology will make its appearance, rendering the legal regulatory regimes outdated and redundant. Finding ways to live with those technologies is equally important with finding ways to regulate those technologies. As such, policies that could indirectly strengthen the collective immunity against the negative implications beyond the digital world should be welcome. Investing in public education is a good first step, particularly when it comes to demonstrating the difference between passionate argument and hate speech, heterodox views and public paranoia, good journalism and fake news trash. Admittedly, easier said than done. ■

Scientists and defense experts across the globe are raising alarm over the increasingly destabilizing impact climate change has on society and its potential to increase risk of conflict due to its role as a threat multiplier. [1] However, the North Atlantic Treaty Organization (NATO) has not incorporated climate change into its operational planning in a meaningful way — and currently faces a serious intelligence gap — due to its lack of focus on climate-induced national instability.

In a recent RAND report, NATO’s ability to assess climate risk was found lacking in that “NATO’s early warning system (NIWS) is not presently configured for this type of problem (nor is it clear that an adequate one exists); the screening mechanism (NAC discretion) is based upon subjective judgment (perhaps justifiably)”. [2]

NATO could potentially not be faulted for its current climate intelligence gap, as readily available information published by international groups on the risks of climate change — such as reports published by the Intergovernmental Panel on Climate Change, widely considered the definitive international consensus — are generally broad declarations, justifying the necessity of action and designating susceptible areas. The information is less suited to identifying targeted action that can be taken in specific contexts, a level of detail that is required for NATO to operationalize strategic action. [3] Additionally, specific environmental science data necessary to project the physical impacts of climate change in key operational contexts are currently dispersed over a variety of academic and state institutions in different member states. [4] Regardless, the difficulties in compiling actionable climate intelligence are not excuses for future inaction.

To address this intelligence blind spot and provide actionable recommendations to inform operational decision-making, NATO should develop a climate intelligence headquarters that aggregates the projected and documented physical impacts of climate change in areas of strategic interest to NATO. This could resemble a departmental entity tasked with:

- Identifying which states/geographic areas of strategic interest will likely face disruption and civil unrest from climate pressures;
- Monitoring areas whose stability is designated as a high strategic interest to NATO for preliminary signs of severe societal pressures as projected in climate models, using data from social, economic, and environmental science disciplines; and
- Developing contingency plans and other advice that decision-makers can employ to mitigate social unrest and potential breakdown through pre-emptive action.

Countries are facing increasing risk of instability and subsequent conflict due to climate pressures that will change the security environment of NATO.
areas of interest, member states, and strategic partners, necessitating an informed response. Take NATO partner Pakistan, for example. It derives 90 percent of its agricultural water supply from the Indus River, a water system that at two degrees of warming will face a 38 percent melt of the mountain ice pack from which over half its flow derives. [5] Not only does this create a breeding ground for civil-unrest in a nation where approximately 40 percent of the population is employed through agriculture, [6] and that is home to ten active terrorist groups, [7] but the headwaters of the Indus River are in India and Indian-controlled Jammu/Kashmir. Given the history of hostility between the two countries, NATO should prepare itself to track the added pressure that water shortages may place on the relationship between these two nuclear-armed states. These kinds of proactive measures would give NATO improved intelligence as to when hostilities may flare up and more time to develop response plans to water-driven conflict and civil unrest.

Another example of where climate-centered research could be useful is in the Mediterranean with the aridity line, the rainfall gradient demarking land that receives 200mm of annual rainfall from land that does not. [8] Running through the Middle East and North Africa — and marking the border between the Sahel and the Sahara deserts — this delineation is important as 200mm of annual rainfall is required to grow cereal crops without the aid of irrigation. [9] Meaning unassisted cereal agriculture is impossible for land on the wrong side of the aridity line. [10]

The reason this is important in the age of climate intelligence is that the aridity line is not a fixed demarcation, with territory on its border being susceptible to envelopment by the aridity line’s shifting boundaries due to swings in environmental conditions. Unsurprisingly, the aridity line runs right through some of the most intense active conflict zones. [11] When the ability to make a living through traditional agriculture and access to affordable foods is taken away, civil-unrest ensues. Climate change is projected not only to make the movement of the aridity line more extreme, but also to permanently extend the aridity line further north to encompass territory within NATO members’ borders in some cases. [12]

The impacts climate change induced pressures put on NATO’s security concerns are not just projections for the future, however. Experts have linked a climate change enhanced regional drought — that raised food prices and destroyed agricultural livelihoods in Syria — to massive rural-to-urban migration and subsequent pressure on limited infrastructure. The resulting economic trends sent millions into poverty. [13] Paired with the non-responsive nature of Syria’s Assad regime, what followed was societal unrest, protests, and eventually civil war. [14] Syria has demonstrated that climate pressures can lead to conflict within NATO’s backyard.

Could the conflict in Syria have been predicted? Modeling risk traditionally has two parts: a risk assessment to determine the probability of a hazard occurring and a concern assessment measuring the degree of detrimental social or
or economic impact if the hazard does occur. [15] Concerning climate change, the probability of a hazard occurring in the form of expected changes in rainfall, aquifer depletion, drought severity, and changes to average crop yield can be arrived at with increasing accuracy as climate modeling improves. [16] However, developing an accurate concern assessment is more difficult, due to the ability of governments and populations to display agency and act in response to climate hazards. [17] What this means is that it is not possible to predict a definitive cause-and-effect relationship between the physical impacts of climate change and societal breakdown. [18]

What Syria demonstrates though, is that it is possible to predict the likelihood of conflict if the physical impacts of climate change are measured and the target government’s corresponding response — or lack thereof — is tracked. It was well known that the Assad regime maintained social control especially in rural areas through government operation of the country’s agricultural systems, and by setting the price for agricultural inputs (i.e., fertilizers, seed, and water) and outputs (i.e., staple goods a farmer may be producing). [19] However, following the drought of 2006-2011, the government did nothing to adjust its agricultural systems to reduce water demand, [20] passing on prices to farmers and causing a destabilizing migration of 800,000 people from rural to urban Syria. [21]

Knowledge about the inaction of the Syrian regime and its failure to maintain rural livelihoods was available, so too was knowledge about subsequent stressors on food, water, and housing prices. Together this information could have been compiled to predict a high likelihood of social unrest. What NATO is missing is an entity that bridges these two information silos and produces actionable military intelligence.

Climate instability is not NATO's friend — it is an opportunity for China and Russia
NATO should be concerned about the impacts of climate change on fragile states, as beyond the risk of triggering great power conflict, such destabilization is not in NATO’s geopolitical interest. Regime collapse influenced by climate change provides an opportunity for NATO’s strategic rivals to extend their influence, as seen with Turkey’s partial embrace of Russia, for example. Turkey’s turn from the West was built on previous precedent such as its view of the US as a destabilizing force in the Middle East following the US invasion of Iraq. [22] Nonetheless, it is fair to say that US support for Kurdish paramilitary groups, as well as Russia’s increased presence as a dictating force in Syria, built the critical mass required to push Turkish President Recep Tayyip Erdoğan in favor of Russia. [23]

NATO emerged from the Cold War in the best position since its founding in 1949. It has the incentive to preserve as much of this post-Cold War world system of alliances as possible. Climate change presents the opportunity for rising powers such as China, or those embracing a more muscular foreign policy such as Russia, to expand their sphere of influence.

The Alliance needs to both adjust its mindset on what comprises a threat, while also building the institutional capacity to identify these new climate threats. Identifying and monitoring countries that are both at high risk of climate induced unrest and whose stability is of high priority to NATO’s security interests through some sort of intelligence headquarters is the first step. However, the ability to gather intel is only as impactful in changing the course of events as the Alliance’s ability to respond.

What potential response could NATO provide?
Delivery of food aid is one example of a stabilizing force NATO could deploy to reduce civil unrest and encourage population resiliency against opportunistic actors. It was well documented that during the Syrian civil war ISIS frequently used the delivery of food packages in territory it held to gain the obedience of occupied civilian populations. [24] During the coronavirus pandemic, both Russia and China have leveraged aid as a way to garner political capital. [25] In the era of climate change, if conditions have already deteriorated to the point where agriculture is failing in regions of high strategic importance, NATO forces could deliver food aid as a stop-gap stabilizing measure to protect against influence by hostile powers.

Food aid is at best a tool of last resort. Ideally, NATO could engage in preemptive targeted actions with the aid of a climate intelligence headquarters, to improve the resilience of strategic regions’ agricultural and other key supply chains. This could both prevent the failure of these key systems and mitigate against the opportunity for hostile powers to extend their influence.

Marching Roman centurions carried spade and sword, as the empire knew that maintaining vital infrastructure was just as important as projecting force in ensuring stability. The US Army Corps of Engineers was deployed to construct field
As the impacts of climate change heighten, maintaining and constructing water and agricultural infrastructure will be vital to ensuring social stability and reducing the risk of conflict. Where it is deemed to be in the interest of national security, the US Army Corps of Engineers provides support by constructing levees and dams, and, most recently, building-up the coastal shoreline to hold back sea-level rise—such as in Norfolk, Virginia where the US Atlantic Fleet is based.

NATO’s contribution could be as simple as deploying forces to guard and escort agronomists, allowing them to impart more climate-suited agricultural techniques in unstable regions. It may also involve the deployment of military engineers and forces to aid in the construction of water resilience infrastructure, such as wide scale rain catchment and storage at the level of the refugee camp, or the construction of desalination plants.

The road to conflict is paved by more than just the movement of troops. NATO needs a climate intelligence headquarters to identify which areas of strategic interest will become the next climate pressure hot spots, and advise the Alliance on how to prevent these unfurling situations from producing an unfavorable geopolitical result.
Many historical documents that are seen today as milestones in advancing and protecting human rights, such as the US Declaration of Independence and Emancipation Proclamation and the French Declaration of the Rights of Man and of the Citizen were forged in times of political uncertainty and were subject to both widespread support and opposition. A similar situation could arise regarding artificial intelligence rights. Artificial intelligence (or AI for short) is an expansive and expanding field with different branches, each with their own intended behavior and responsibility. Public policy both present and future should support AI rights in the context of AI that seems to act in a conscious, humanlike manner.

Firstly, I would like to introduce the three general types of AI that I will analyze – AI that plays a narrow and specialized role, AI that acts in a more autonomous manner and thus has more impact in its actions, and finally AI that acts in a humanlike manner and exhibits traits associated with consciousness.

One way in which AI rights can take form is through legal personhood. In its pure, legal form, legal personhood simply refers to the status of being an entity that can sue, be sued, own property, and enter into contracts.[1] The idea of legal personhood has also been fundamental to the American view of rights, morality, agency, and obligation as a definition of humanity. [2] However through many countries’ legal systems there have been numerous examples of non-human entities being granted certain protections and rights based upon legal personhood. For example, the US Supreme Court ruled in *Burwell v. Hobby Lobby Stores, Inc.* (2014) that Hobby Lobby, an arts and crafts establishment, was exempt from certain provisions of the Patient Protection and Affordable Care Act (commonly referred to as “Obamacare”) because those provisions infringed upon the religious views of the owners. Essentially this case demonstrates that there are instances in which a non-human entity, though controlled by human persons, can be granted certain legal rights and protections afforded to human persons.

The fact that Hobby Lobby itself was the defendant in the aforementioned lawsuit instead of the business owners is a prime example of corporate personhood, or the ability of an organization to be legally recognized as an individual, thus enjoying certain rights that are enjoyed by human beings. [3] Thus, if corporations can be granted legal rights and be legally recognized as a person, then it should not be inconceivable to grant legal rights and legal recognition of personhood to an AI. This will be of great importance for AI in the issue of legal liability, particularly in the context of an AI serving a specific purpose for a human or corporation.

Normally, if someone wishes to sue a human associated with a corporation, such as an employee or the employer, then legal liability would fall to the corporation through corporate personhood. However, there is one notable exception. For example, if a corporate officer of a company knowingly lies to persuade a client to pay for a delivered product when the product itself...
is actually undelivered, that corporate officer can be sued through a lawsuit known as a tort. [4] That begs the question: are there situations where an AI entity can be held legally liable? Let’s say we have a surgeon who allows an AI to help nurses monitor a patient’s vital signs during a surgical procedure but the AI fails to detect an abnormality. There is currently very little, if any, legal precedent for legal liability in cases similar to this scenario, but under typical legal procedures it may be the case that the human medical professionals would be held legally liable if their decision to employ the AI resulted in their care falling below a certain standard. [5] Therefore, an AI entrusted with a limited amount of responsibility would not require legal personhood or legal rights as they do not assume the burden of legal liability.

When analyzing the idea of legal rights for AI that act in a more autonomous manner, thus having more responsibility, limitations can play a huge factor in legal liability. Take the example of an AI in the not-too-distant future that is placed in charge of autonomously driving a car. If the AI-driven car collides with or injures a pedestrian due to a software limitation, then would a situation arise in which the AI is held legally liable? As with the previous example of an AI assistant to a surgeon, there is very little, if any, legal precedent for legal liability in cases similar to the AI driving scenario. It is known that AI systems are notoriously poor when “considering edge cases (cases where one variable in the case takes an extreme value) or corner cases [multiple variables take extreme values]”, [6] thus potentially taking no, or poor, decisive action when faced with a situation that they are not programmed for. Thus, a legal case for this scenario, given that there was no criminal intent from the programmers to cause a collision, would potentially analyze the specific wording of communicated limitations from the AI’s programmers to the users for legal liability. [7] If there were criminal intent from the programmers or from the user to cause a collision, the criminal liability would likely fall on the perpetrator. [8] No matter the offense or intent, autonomous AI programs would not require legal personhood or legal rights as they do not assume the burden of legal liability.

I will now turn my attention to AI that can act in a sentient or conscious manner, but before doing so, I must recognize that there is a fierce debate over whether or not AI can ever be classified as sentient or conscious. There is already legal precedence for declaring non-human entities as sentient beings, such as the 2015 Animal Welfare Amendment Bill passed in the New Zealand legislature that stipulated the necessity to “recognise that animals are sentient” and thus deserving of legal protection. [9] Before asking whether not legal rights should be granted to AI that can act in a sentient or conscious manner, we must ask if AI can ever be truly sentient or conscious. For the purposes of AI rights, I use the definition of consciousness as the structure in which an entity models itself and reasons about itself, [10] although it should be noted that studying artificial consciousness is still a new field. There is currently no AI that can be described as conscious, and furthermore there is no guarantee that AI can achieve a level of true consciousness, [11] but there exists a possibility of a “reasonably accurate simulation of [a human brain, which] would have whatever properties the [brain] has, including phenomenal consciousness”. [12] Phenomenal consciousness itself is not the same as the type of consciousness enjoyed by humans, but is still a state of consciousness. [13] Therefore, legally speaking, there exists a distinct possibility in the future for declaring AI as sentient beings, and therefore deserving of certain legal rights.

However, I will focus on seemingly-conscious AI that are intended to serve as companions to humans with the assumption that there has not been a legal declaration of AI consciousness. With that being said, the development of a seemingly-conscious AI, particularly one programmed to exhibit human behavior, will most likely lead to a great ethical debate. One way to frame the ethical dilemma of AI rights would be to recognize that if two entities deserve different levels of moral consideration, then “there must be some relevant difference between the two entities that grounds this difference in moral status”. [14] However, if we have AI that is programmed to replicate a human’s behavior and attributes, then there would be very little, if any, relevant difference observed by the human user or by an outside observer. The importance of this cannot be understated when placed in the context of abusive behavior by humans. AI simulating human behavior and placed into humanlike bodies, a prime example of a robot, are “precisely the sort of robots that are most likely to be abused”. [15] A human would most likely not take too kindly to being abused or treated unreasonably, and would react accordingly; thus, an AI-programmed robot simulating a human could react in a way that would provoke even more violent behavior from a human user. [16] There is no guarantee that this would not affect the human user’s behavior towards other humans, and thus it would not be
ethically justifiable to allow such behavior towards an AI-controlled robot because it would also place human lives at risk. Furthermore, if the possibility that the AI possesses phenomenal consciousness is true, then the ethical dilemma presented by abuse towards the AI would be exponentially compounded as the recipient of abuse would be sentient. Therefore, based on ethical considerations, certain legal rights must be seriously considered and be supported for AI that simulates human behavior, particularly for companion robots.

Still, there are some who argue against AI rights on principle. In 2017, Saudi Arabia granted citizenship to a robot named Sophia. Some critics label Sophia as a glorified chatbot with a face, [17] but many feminist scholars have noted that Sophia was given more rights than many Saudi women, [18] and thus the action of granting citizenship was seen by many as an indignity. Granting an AI more rights than a human can easily be seen as a grave injustice, but it does not have to be a zero-sum game where granting AI certain rights corresponds to a loss of human rights. Rather, granting AI rights will strengthen human rights by showing that humans can judge when basic and necessary rights are needed. Furthermore, historically and currently Saudi Arabia has indeed had poor performance on gender equality, but that does not in itself justify opposing granting AI rights on principle; two wrongs do not make a right.

In terms of AI exhibiting traits of consciousness, particularly AI-controlled robots simulating human behavior, there are also those who oppose AI rights from arguments such as the objection of “existential debt,” or that AI fundamentally should not have rights if they only exist in the first place to serve humans. [19] However, if we were to arrive at a stage of technological advancement where we have phenomenally conscious AI, then it can be argued that choosing to create the phenomenally conscious AI is an irrevocable decision like choosing to conceive human children. [20] It would be anathema, and very much illegal, to murder a human child because the parent does not want the responsibility of raising the child anymore. I have previously established that legal rights must be seriously considered for AI simulating human behavior, even if the AI in question is not conscious. But the principle that no AI deserves rights because they were created for the specific purpose of serving humans is an invalid one.

The question of AI rights will only grow larger and more important as AI technology advances, and it is clear that there is no one-size-fits-all solution. While it may seem at first glance that there is a distinction between the legal and ethical debates on AI rights, that distinction is not as pronounced as some may think. In a democracy like the US, laws are created to reflect the will of the electorate, voters which represent greater society with their own morals and ethics. Thus, while policymakers ought to proactively debate and implement rights for certain AI, the opinions and ethical considerations of the public should drive a fight for AI rights, much like the activism seen in defining movements such as the Civil Rights Movement, particularly if AI achieves a state of consciousness. However, unilaterally opposing AI rights is at best a misguided approach to a developing technology, and at worst a catalyst for risk to human life and, potentially, a grim condemnation of a conscious entity’s life and liberty.

[16] Ibid 15.
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