学术英语读写 Article List

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PUT YOUR FAITH IN SCIENCE

By Naomi Oreskes

Are genetically modified crops safe to eat? Is climate change an emergency? Why are vaccinations necessary? Every day we face questions that implicate scientific claims. Many of these issues have become politically polarized, with people rejecting scientific evidence that doesn't align with their political preferences.

For several decades, there has been an extensive and organized campaign intended to generate distrust in science, funded by regulated industries and libertarian think tanks whose interests and ideologies are threatened by the findings of modern science. In response, scientists have tended to stress the success of science. After all, scientists have been right about most things, from the structure of the universe (the earth does revolve around the sun) to the relativity of time and space (relativistic corrections are needed to make global positioning systems work).

Citing successes isn't wrong, but for many people it's not persuasive. An alternative answer to the question "Why trust science?" is that scientists use the so-called scientific method. If you've got a high school science textbook lying around, you'll probably find that answer in it. But what is typically asserted to be the scientific method— develop a hypothesis, then design an experiment to test it—isn't what scientists actually do. Science is dynamic: new methods get invented; old ones get abandoned; and at any particular juncture, scientists can be found doing many different things. That's good, because the scientific method doesn't work. False theories can yield true r**e**sults, so even if an experiment works, it doesn't prove that the theory it was designed to test is true.

If there is no identifiable scientific method, then what is the warrant for trust in science? How can we justify using scientific knowledge in making difficult decisions?

The answer is the methods by which those claims are evaluated. The common element in modern science, regardless of the specific field or the particular methods being used, is the critical scrutiny of claims. It's this process—of tough, sustained scrutiny—that works to ensure that faulty claims are rejected.

A scientific claim is never accepted as true until it has gone through a lengthy process of examination by fellow scientists. This process begins when scientists discuss their data and preliminary conclusions. Then the claim is shopped around at conferences and workshops. This may result in the collection of additional data or revision of the preliminary interpretation. Then the scientist writes up the results and sends the preliminary write-up to colleagues.

Until this point, scientific feedback is typically fairly friendly. But the next step is different: once the paper is ready, it is submitted to a scientific journal, where things get a whole lot tougher. Editors deliberately send scientific papers to people who are not friends or colleagues of the authors, and the job of the reviewer is to find errors or other inadequacies. We call this process "peer review" because the reviewers are scientific peers—experts in the same field—but they act in the role of a superior who has both the right and the obligation to find fault. It is only after the reviewers and the

editor are satisfied that any problems have been fixed that the paper is accepted for publication and enters the body of "science."

A key Aspect of scientific judgment is that it is done collectively. It's a cliché that two heads are better than one: in modern science, no claim gets accepted until it has been vetted by dozens, if not hundreds, of heads. In areas that have been contested, like climate science and vaccine safety, it's thousands. This is why we are generally justified in not worrying too much if a single scientist, even a very famous one, dissents from the consensus. The odds that the lone dissenter is right, and everyone else is wrong, are probably in most cases close to zero. This is why diversity in science—the more people looking at a claim from different angles—is important.

In a way, science is like a trial, in which both sides get to ask tough questions in the hope that the truth becomes clear, and it is the jury that makes that call. But there are important differences: one, the jurors are not common citizens but experts who have the specialized training required to evaluate technical claims; two, the judges are all the other members of the expert community; three, double jeopardy is allowed, because there is always the possibility of reopening the case on the basis of new evidence.

Does this process ever go wrong? Of course. Scientists are human. But if we look carefully at historical cases where science went awry, typically there was no consensus.

Some people argue that we should not trust science because scientists are "always changing their minds." While examples of truly settled science being overturned are far fewer than is sometimes claimed, they do exist. But the beauty of this scientific process is that it explains what might otherwise appear paradoxical: that science produces both novelty and stability. New observations, ideas, interpretations and attempts to reconcile competing claims introduce novelty; transformative interrogation leads to collective decisions and the stability of scientific knowledge. Scientists do change their minds in the face of new evidence, but this is a strength of science, not a weakness.

Oreskes, a professor of the history of science at Harvard, is the author of Why Trust Science?

HOW TO STOP GUN VIOLENCE

By Thomas Abt, Eddie Bocanegra, and Emada Tingirides

Just before Thanksgiving in Philadelphia, dozens of residents gathered on a basketball court to mourn the loss of Jessica Covington, who at 32 and seven months pregnant had been shot and killed while unloading gifts for her baby shower. Colwin Williams, a street outreach worker, spoke: “we can’t tolerate this.” Later, he said what many feel: “The pain is everywhere.”

Last year in Philadelphia, the City of Brotherly Love, 562 citizens were murdered—an all-time high and a 12% increase over 2020, a year murders surged by 40%. Almost 90% of the 2021 homicides involved firearms, a sobering figure, but gun violence has been climbing in the city for almost a decade. And Philadelphia is not alone. At least 10 other major cities lost historic numbers of residents to murder last year, and police data suggests homicides rose 7% nationwide. If many Americans know that 2020 was a particularly bloody year—with homicides surging 29%, and 77% of them involving firearms—few realize that gun violence has been rising across this country since 2014.

In Philadelphia and elsewhere, gun violence isn’t spread evenly. Instead, it clusters around a relatively few city blocks and among small networks of high-risk people. In Philadelphia, there are at least 57 blocks in which 10 or more people have been shot over the past five years. Research shows that during the pandemic, marginalized communities bore the brunt of the increase in such violence.

Why is gun violence rising right now? While COVID-19 has played a role, violence has not increased in most other high-income countries during the same period of time. So it’s not only the pandemic, but our politics, that present a massive challenge.

American politics is hyperpolarized, and the criminal-justice arena is no exception. The public is consistently presented with a false choice between absolutes: either it’s all about tough policing and prosecution, or it’s the police and prosecutors who are the problem. It’s #BlackLivesMatter vs. #BlueLivesMatter. A few leaders push back on this framing, but this either/or construct is the dominant criminal-justice conversation in the country. Everything we Police at the Olney Transportation Center in Philadelphia on Feb. 17, 2021, after eight people were wounded by gunfire know about violence reduction tells us that we need law enforcement, but we need community and other partners as well. And most important, we know that a single approach won’t work—we need everybody to work together. Unfortunately, the current conversation makes such partnerships nearly impossible.

The fact is, we can have safety and justice at the same time. We can reduce violence and promote reform simultaneously. We can be tough when the circumstances call for it and be empathetic and supportive to achieve our goals as well.

Across the country, there are dozens of strategies with documented success in reducing gun violence. Oakland Ceasefire is a police/community partnership that

confronted high-risk individuals and groups with a double message of empathy and accountability and cut firearm homicides in the California city by roughly 31%. The Advance Peace effort in Richmond, Va., used conflict mediation, intensive mentorship, case management and life-skills training to reach people at the highest risk for violence, reducing firearm crimes by 43%. The Cure Violence approach uses community-based outreach workers to mediate potentially violent conflicts, reducing gun injuries in two neighborhoods in New York City by 50% and 37%.

We've learned over time that no single strategy, whether led by police or community members, can stem violence all by itself. For large, sustained declines in violence, cities need a collaborative effort that leverages multiple strategies at once. Here's a road map:

First, preserving life by preventing lethal or near-lethal violence must be at the top of the policymaking agenda. Local leaders should commit to tangible reductions in homicides and non-fatal shootings.

Second, policymakers must remember that gun violence concentrates among small sets of key people and places, and focus engagement there. Support and services must be offered while making clear that further violence will not be tolerated. Police can increase patrols to cool crime "hot spots" while cities invest to improve the long-term trajectory of these places.

Third, leaders must make these efforts sustainable via strategic plans and infrastructure to implement them. Cities should have a permanent unit on violence reduction inside the mayor's office.

Finally, cities must hold themselves accountable using rigorous research and data. Leaders must commit to recognizing when strategies are not working and then shifting course.

We can't sit on our hands and wait for the legislative impasse in our statehouses and in Congress to break. We must push past our toxic politics and embrace solutions that work.

Abt, a senior fellow at the Council on Criminal Justice, is chair of the council's Violent Crime Working Group; Bocanegra is senior director of READI Chicago; Tingirides is a deputy chief of the Los Angeles Police Department

ABORTION AFTER THE TEXAS LAW

By Robin Marty and Leah Torres

On Sept. 1, Texas enacted an extreme law that effectively ended abortion care in the states. Since then, clinics in states on the western and northern borders have seen a dramatic increase in patient visits and calls from abortion funds. But here in the Gulf region, not much has changed. And that might be the most alarming news of all.

There is no region more crippled by abortion restrictions than the Deep South. Across the more than 800 miles along the Gulf Coast between the eastern edge of Texas and the end of the Florida panhandle, there are fewer than a dozen abortion clinics, and Louisiana, Mississippi and Alabama require a waiting period of 24 or 48 hours between in-person visits to the clinic. That means a traveling patient must either make multiple trips or find the resources for some combination of housing, food, childcare and time off work, in addition to paying for the abortion. Most abortion patients come from low-income households, and state laws down here prohibit non-employer-based insurance from covering abortion.

So it is that with Texas prohibiting abortion as early as 14 days after a missed period, clinics in states like New Mexico and Oklahoma are seeing a flood of new appointments, but those in Louisiana, Mississippi and Alabama are not. While our phones at West Alabama Women's Center ring more than before, it is nowhere near what we would expect with one of the nation's largest states eliminating nearly all abortion care. It's not terribly surprising, though. With enough hoops to get through, of course people will be deterred from seeking an abortion in the Deep South. That was the intention.

Those who have the resources are able to travel, some as far as Illinois. But those who don't? What are they doing now?

It's a thought that consumes us daily. In Alabama, we've long seen patients from Mississippi, where there is just one clinic, and since Hurricane Ida, we've seen Louisiana patients unable to get into their own booked clinics. So it's unlikely that these states are taking in many patients from East Texas.

Our fear is that pregnant people wanting an abortion have simply stopped trying to access the procedure —at least for now. Because the ban has continued to have court challenges, including one from the Justice Department, those who are early in their pregnancies may just be waiting, hoping that a new hearing might mean a chance to stay in the state and get a termination. After all, if there will be a judicial review in two weeks and it takes two weeks to book an appointment in Louisiana, does it really make a difference?

Unfortunately, it does. Whether this barrier to health care is temporary or permanent, one thing we know for certain is that people who decide to end their pregnancies will now be doing so later in gestation—either because of waiting for legal abortion to return in Texas or needing to book out-of-state visits weeks in advance. These delays will increase health risks as well as financial burdens and lead more people to take legal risks to terminate. What they will not do, for the large part,

is make Texans and others affected in the region decide they should just give birth.

At our clinic, we will continue to do anything we can to meet this need as it arises. We now offer state-mandated informed-consent materials via certified mail, thus starting the clock on the 48-hour waiting period and eliminating one visit, which can be critical for patients traveling hundreds of miles. We will also increase our hours if needed so more patients can access the abortion care they need as quickly as possible, as is their constitutional right.

The problem is this may be just the beginning. With a number of other states considering similar bans—notably Florida—this crisis may get far worse. Florida is currently a destination for those in the region who are unable to navigate their states' multi visit requirements. It is also the only state in the region with a number of clinics that is more aligned with the number of people living there. A near total abortion ban would not just cripple that state but every state around it. If Florida's clinics were unavailable, the domino effect would essentially overflow the Southeast.

Abortion has always existed. Legal or not, it will continue to exist. Texas is playing a dangerous constitutional game—and using pregnant people as collateral.

SMALL REACTORS ARE BEAUTIFUL

Leaders Nov 13th 2021 edition

It makes fighting climate change a lot easier

In the negotiations which led up to the Rio Earth Summit in 1992, Saudi Arabia spent a great deal of time attempting to insert the term “environmentally safe and sound” in front of references to “energy sources” and “energy supplies”. Given that the oil Saudi Arabia exports in greater quantities than any other country is now understood to be anything but environmentally safe, this seems bizarre. At the time, though, the aim was obvious to all concerned: the phrase was a way to keep nuclear power off the Rio agenda.

The oil shocks of the 1970s had led to many countries increasing their nuclear efforts. In the ten years to 1992 the amount of nuclear energy consumed worldwide had increased by 130%. What was more, some talked of using nuclear plants to produce not just electricity, but also hydrogen which could then form the basis of synthetic fuels. The Saudis may or may not have had real concerns about the environment. But they knew a competitor when they saw one.

Their scheming proved unnecessary. In contrast to the oil shocks, the threat of global warming has not served the nuclear cause well. After peaking in 2006, the amount of nuclear energy consumed in 2019 was just 18% higher than it had been in 1992. As a share of global primary energy, it had fallen from 6.1% to 4.3%.

Because nuclear power is expensive in ways that show up in profits, whereas damage to the climate is not priced into burning fossil fuels, this would be unsurprising even if it were popular with environmentalists—which, by and large, it is not. But it is still too bad. The paradigm-shifting drop in the cost of renewable electricity in the past decade is central to the de-carbonization pathway the world is fitfully following. But a clean-energy system requires redundancy and reliability in its electricity grids that are hard to achieve with renewables alone. It will probably also require lots of hydrogen for, say, powering aircraft and making steel and chemicals, which reactors could provide.

Nuclear power has its drawbacks, as do all energy sources. But when well-regulated it is reliable and, despite its reputation, extremely safe. That is why it is foolish to close down perfectly good nuclear power stations such as Diablo Canyon, in California, because of little more than prejudice. It is why some countries, most notably China, are building out their nuclear fleets. It helps explain why others—including, as it happens, Saudi Arabia—are getting into the game for the first time. And it is why approaches to reducing nuclear energy’s cost penalty are at last coming into their own.

France, which has found its newest generation of huge reactors impossible to build on time and within budget, and consequently also hard to export, has new plans for small, modular reactors (SMRs) that might do better on both counts. Rolls-Royce, a British engineering company, is touting a similar approach. On November 4th an American company, NuScale, signed a deal to sell six such reactors to Romania at the

cop26 in Glasgow. Russia already has a floating SMR power station.

Such designs can in principle be produced in factories and shipped where they are required, keeping their costs down. These advantages have been extolled for decades without being realized, so caution is in order. But today's efforts are broader-based and have real impetus. They need regulatory approaches which, while not lax, permit their makers to learn as they build. That will allow competing designs to prove themselves against each other, making nuclear power, once again, a source of innovation—and adding to the world's capacity to ditch unsafe and unsound fossil energy.

For the latest from COP26 see our news updates. For more coverage of climate change, register for The Climate Issue, our fortnightly newsletter, or visit our climate-change hub

A FOSSIL FUEL FUTURE

By Ciara Nugent

Can natural gas—a fossil fuel that emits 50% less carbon dioxide than coal, but still contributes to global warming—help us achieve a transition to green energy? The question has long divided policymakers, but the debate is now coming to a head in Europe.

After years of delays, the E.U. wants to finalize its green "taxonomy"—an official list of investments the bloc classifies as sustainable for the planet—by the end of January. The taxonomy aims to help Europe's private sector, which is trying to overhaul spending to meet recent environmental pledges, move its money to the right places. A draft version, sent to member states on Dec. 31, says natural-gas projects should count as green under certain conditions; natural gas is labeled as a "transitional fuel," and investments in it will count as green if power plants produce emissions below 270 g of CO_2 equivalent per kilowatt-hour. Any new natural-gas project must also replace a more polluting fossil-fuel plant, receive a construction permit by Dec. 31, 2030, and be equipped to transition to lower-carbon gas by 2035.

The technical document has become a political battleground for warring visions over the future, as the E.U. aims to cut its greenhouse-gas emissions by 55% by 2030 to stay on track to avoid the worst of climate change. And it has divided the E.U.'s two largest economies: Germany's government has said the draft taxonomy amounts to "greenwashing," while France has backed it, largely because it includes nuclear energy, the country's main energy source. (The taxonomy's inclusion of nuclear power, which does not emit greenhouse gases but carries other environmental risks, as a green investment has also proved controversial.)

On One side, countries including Italy and many Central and Eastern European nations argue that Europe needs to invest more in natural gas, which currently provides 22% of the bloc's energy, as a "bridge fuel" and complement to renewable-energy sources like solar and wind power.

Classifying some natural gas as green is a pragmatic decision to help member states shift off even dirtier coal and oil more quickly, according to Christian Ehler, a German member of the European Parliament (MEP) from the center-right European People's Party. "Poland is not jumping from coal to wind—there will be a step in between. So politically there needs to be a compromise," he says. "This politics of symbolism has to come to an end if you really want to reach those [emissions] goals."

The other side—including Austria, Denmark, Spain, Ireland and Green Party lawmakers across the bloc—rejects that idea, and says that the E.U. needs to push all possible investment toward renewables, which make up only around 16% of Europe's energy supply.

"This transitional mentality arguing in favor of 'less bad' energy sources could have worked a couple of decades ago," says Jakop Dalunde, a Green MEP from Sweden. "But today, in a climate emergency, we have to have full focus on energy sources that are truly sustainable."

Granting natural gas a “green stamp” will unnecessarily encourage more fossil-fuel infrastructure, Dalunde argues, and could divert funding from clean energy—a problem, given renewables capacity needs to expand by 12% every year to stay on track for net zero at 2050, per the International Energy Agency, a Paris-based intergovernmental organization.

And although the taxonomy includes fairly stringent conditions for natural-gas projects to be classed as green, campaigners are concerned that it will be difficult to hold projects accountable for meeting them, says Tsvetelina Kuzmanova, a sustainable-finance-policy adviser at European climate think tank E3G. She also argues that any expansion of natural gas will threaten the E.U.’s 2030 goal to reduce methane emissions by 30%. The main component of natural gas, methane is a potent greenhouse gas with more than 80 times the near-term warming power of CO_2. Leaks from natural-gas infrastructure are a major source of methane emissions.

Many Observers worry about the signal that the move sends to the rest of the world, which looks to the E.U. as a leader in climate policy. Analysts say policy makers in South Korea followed the E.U.’s discussion closely when drafting their own sustainable-energy taxonomy, which also classifies natural gas as a transitional fuel.

On Jan. 12, a coalition of investors including most of the world’s largest asset managers sent an open letter to E.U. representatives urging them not to classify natural gas as green. Such a move, they wrote, “would seriously compromise Europe’s status as a global leader in sustainable finance, potentially triggering a ‘race to the bottom’ that could dilute the level of climate ambition” in other regions. “As a bloc, we are losing a lot of the legitimacy we need to convince others to shift their policies in order to achieve climate sustainability,” says Mounir Satouri, a Green MEP from France. “This is a huge mistake.”

THE SILENCE STRATEGY

By Sean Gregory

Brooklyn Nets star point guard Kyrie Irving has put Nike, his primary sponsor, in an awkward position. Irving, one of the most dazzling players on the globe, has declined to receive a COVID-19 vaccine. The Nets have said Irving won't be able to join the team unless he gets the shot. Nike's response? The company has chosen to stay mum.

With the basketball season about to begin, Irving's stance has caused everyone from Kareem Abdul-Jabbar to New York City Mayor Bill de Blasio to Spain's Prime Minister to oppose him. Under New York City law, Irving cannot compete in Brooklyn home games without at least one dose of a COVID-19 vaccine. The Nets don't want Irving as a part-time player. Meanwhile, Nike plans to release its new Kyrie 8 sneakers in November. Sales would benefit if he were actually playing. The company—not to mention the NBA, his Nets teammates and fans—wants Irving to receive a vaccine; some 95% of NBA players are already vaccinated.

We're living in an age when consumers demand that companies take stands on important issues. Nike itself, for example, threw its full support behind Colin Kaepernick after his social-justice protest effectively got him fired from the NFL. Supporting vaccines—and public health—would seem like a worthy cause for the company. Not to mention its own self-interest. If Irving gets sick, his performance could suffer. If he spreads the disease, his reputation could take a serious hit.

So by staying silent on Irving, is Nike being hypocritical, or just carrying out a smart business strategy that protects a company that generated $44.5 billion in revenues in its most recent fiscal year?

Call it some combination of both.

In early October, Nike announced that all U.S. office-based employees will need to be vaccinated. The company plans on calling its workers back to offices on Jan. 10. So while Irving may not technically be a Nike employee, the company's position could be interpreted as a double standard. "If Nike and other sponsors believe that vaccines are important and everyone should get them, they should say the same about their athletes," says Ricardo Fort, a former VP of global sports and entertainment partnerships at Coca-Cola who now has his own consulting firm. "I don't see a reason for having two different approaches."

From a strategic perspective, however, Nike has reason to stay on the sidelines. First off, Irving may still change course; the Nets' first game in Brooklyn is on Oct. 24. And while some consumers may be upset about Irving's stance, they're not taking it out on Nike—at least not yet. So the company has little incentive to inject itself into the vaccine wars. "Look, their business is built on selling sneakers and apparel," says Scott Rosner, a sports consultant and academic director of Columbia University's sports management program. "There's a social-justice component of what they do. But that's not what drives their business and their growth."

While the numbers would indicate that most consumers disagree with Irving—

62% of Americans have received at least one vaccine dose, and 57% are fully vaccinated—that might not really matter. “From Nike’s perspective, athletes do have freedom of choice,” says Rosner, “and, at the end of the day, the bottom line is still the bottom line. Kyrie Irving sells a significant number of sneakers for Nike. That kind of thing, at least for the time being, allows them to take more of a hands-off approach.”

If Irving ultimately decides to sit out, Nike may have to craft some sort of response. The timing—right before the release of his latest Nike shoe—would likely prove more harmful to business than any kind of backlash the brand may then face. “Brand shaming and virtue signaling by advocacy groups of all types have become so commonplace as to have lost part of their power and influence,” says David Carter, founder of the Sports Business Group.

Remember, when Nike threw its weight behind Kaepernick, loud calls for Nike boycotts followed. Instead, sales rose. “We can disagree with Irving’s misunderstanding of science,” says Rosner. “But does that make it rise to the level of a boycott, where there’s going to be a mass boycott against Kyrie? I don’t think so.”

Irving is a complicated character. He committed $1.5 million to supplement the income of WNBA players who chose to sit out their 2020 season because of COVID-19 concerns or to work on social-justice issues. But he has also shared fat-earth theories and last season broke NBA safety protocols by attending a family birthday party without a mask. Now on the eve of the NBA’s 75th season, Irving’s created a vaccine controversy. “It’s a bad spot,” says longtime sports-business professor Kenneth Shropshire, who leads Arizona State University’s Global Sport Institute. “It’s hard for Nike to lay low. But I think that’s the best thing they can do.”

While hoping he just gets that jab

THE RUDENESS EPIDEMIC

By Belinda Luscombe

The pandemic may have had a lethal effect on American manners. Lawyers are reporting ruder clients. Restaurants are reporting ruder clients. Flight attendants, for whom rude clients are no novelty, are reporting mayhem; passenger fines have exceeded $1 million this year. Re-entry into society is proving to be a little bumpy.

Some people may have thought that, having been prevented from mingling with other humans for a period, folks would greet the return of social activity with hugs, revelry and fellowship. But in many ways, say psychologists, the long separation has made social interactions more fraught. The combination of a contagious, life-threatening disease and a series of unprecedented, life-altering changes in the rules of human engagement have left people anxious, confused and—if they do not believe the restrictions were necessary—deeply resentful.“

We’re going through a time where physiologically, people’s threat system is at a heightened level,” says Bernard Golden, a psychologist and the author of Overcoming Destructive Anger. This long strain on people’s mental health could have been exacerbated by isolation, a loss of resources, the death of loved ones and reduced social support. “During COVID, there has been an increase in anxiety, a reported increase in depression and an increased demand for mental- health services,” he adds. Lots of people, in other words, are on their very last nerve. This is true, he adds, whether they believe the virus is an existential threat or not. “Half the people fear COVID,” says Golden. “Half the people fear being controlled.”

Heightening the anxiety, the current situation is unfamiliar to most people. “We didn’t have time to prepare psychologically,” says Cristina Bicchieri, director of the Center for Social Norms and Behavioral Dynamics at the University of Pennsylvania. Then, just as it seemed the danger had passed, other limitations arrived; staff shortages, product shortages, and longer delivery times. “People think, O.K., now we can go shopping and go out, and they find that life is not back to normal,” Bicchieri says. “There is an enormous amount of frustration.”

It’s not a coincidence, psychologists say, that much of the incivility occurs toward people in customer- service industries. “People feel almost entitled to be rude to people who are not in a position of power,” says Hans Steiner, emeritus professor of psychiatry at Stanford University. “Especially when they come at them, and remind them that they have to do their piece to get rid of this pandemic. The authority dynamic has been completely upended. And it’s always easier to punch down.

It wasn’t as If Americans were exactly overlooking their differences before the pandemic. Some researchers point to the increase in crude public discourse, both from political leaders and in online discussion—which encourages outsize emotions—as the tremor of tactlessness that presaged the current tsunami.

But it goes deeper. Angry interactions are not the only thing on the rise; crimes are too. “We’re seeing measurable increases in all kinds of crimes, so that suggests to me that there is something changing,” says Jay Van Bavel, associate professor of

psychology and neural science at New York University, and co-author of a new book on social harmony, The Power of Us. He suggests the reasons are structural and profound; America has lost its sense of solidarity as a result of the widening gaps between haves and have-nots. “The more inequality you get, the less of a sense of cohesion there is across socio economic classes.”

The U.S. is not alone in its re-entry rudeness. In their book, Recovering Civility During COVID-19, Matteo Bonotti and Steven T. Zech, of the politics department at Monash University in Melbourne, argue that people were initially bamboozled because they had to communicate using a new set of rules. “At the beginning, people just didn’t know how to be polite,” says Zech. It was hard to communicate a smile, and it became necessary to avoid rather than embrace people.

But after a certain point, the rudeness became deliberate. “It’s meant to call attention to what they see as this kind of unjust policy,” says Zech. In the minds of some of the discourteous, snapping at flight attendants is not rude, it’s civil disobedience.

If the rash of brashness is not just impatience with a unique situation and actually a harbinger of something much deeper, then unwinding it will be more difficult than merely giving flight attendants more training, although that can’t hurt. Meanwhile, psychologists suggest that people calm down, breathe more slowly and lower their voices when encountering difficult social situations or irate people so as not to make any situation worse. “All of anger management,” says Golden, “involves pausing.”

WHY IT'S SO HARD TO TREAT PAIN IN INFANTS

Doctors once believed that infants—especially premature babies—did not feel pain, and if they did, they would not remember it.

This might sound like Medieval medicine. But as recently as the 1980s, babies undergoing surgery were given a muscle relaxant to paralyze them while in the operating room but were not given any pain medication, says Fiona Moultrie, a pediatrician and researcher at the University of Oxford who focuses on neonatal pain. "At the time, it was assumed that most of the behaviors that infants were exhibiting were just reflexes."

Over the next decades, studies documented changes in infant behavior, stress hormones, and brain activity, proving that even the tiniest babies did indeed suffer pain. Research also revealed that continued pain could derail a child's short- and long-term neurological, social, and motor development, especially in fragile, preterm babies born earlier than 37 weeks, says Björn Westrup, a neonatologist and researcher at the Karolinska Institute near Stockholm, Sweden.

How do babies express pain?

In the early 1980s, Canadian newborn medicine researcher Celeste Johnston, an emeritus professor at McGill University in Montreal, was approached by nurses working in the NICU who wanted a way to measure pain in infants. In 1986, she was among the first to publish evidence that infants' heart rates and oxygen levels changed when they were subjected to painful procedures. Their cries and facial expressions revealed what she calls "honest signaling," behaviors that babies are born with that communicate distress.

"There is a particular grimace that was described by Darwin in the 1800s that is recognized universally as pain," she says. That's ironic, Moultrie notes, "as Darwin's celebrated work on evolutionary theory and the expression of emotions in man promoted the concept of infants as primitive beings with under-developed senses and merely reflexive behaviors."

Johnston was later horrified to learn that in intensive care, babies averaged about 14 painful procedures each day.

But understanding how these small, nonverbal beings experience pain is extremely difficult. "One of the biggest challenges in caring for preterm and sick infants is that they can't tell us," says Erin Keels, a nurse practitioner and director of advanced neonatal providers at Nationwide Children's Hospital in Columbus, Ohio. "We can only infer by their behaviors and their vital signs." But since physiology can change for many reasons, and a baby may be too sick or too medicated to grimace, these are not always objective markers. There is an ongoing quest to better understand how infants perceive and experience painful stimuli.

In a later studies, researchers at the University of Oxford used MRI scans to pinpoint brain activity. They found that 20 out of 22 brain regions activated in an adult's brain in response to pain are also activated in a newborn baby's brain. One area that did not register was the amygdala, which is associated with fear and anxiety, likely because days-old babies may not yet make these associations, Moultrie says.

But there's still a lot researchers still don't know about exactly what's going on in the infant brain. "When you're tiny and underdeveloped, differentiation between pain and stress is not clear," says Johnston.

Alternatives to alleviate pain

The downside of painkillers has spurred the search for alternate treatments. One method gives babies sucrose before procedures because it can release endorphins and potentially ease pain. While it seems to soothe them and lower physical response to painful stimuli, the baby's stress hormones and reactive brain signals remain high, says Nils Bergman, a researcher and pediatric specialist also at Karolinska Institute.

The physical environment also matters in reducing a baby's stress during painful procedures. In 2000, a trial in Sweden compared the progress of babies cared for in a traditional intensive care ward versus a darkened, quiet, more womb-like room with parents present. The latter group was discharged quicker and had grown slightly more by the end of their stay.

Today, many neonatal experts think this kind of family-centered care is the wave of the future. One of the most effective methods is Kangaroo Mother Care, which involves wrapping an infant skin-to-skin on its mother's or father's chest.

The method was developed in Colombia by pediatrician Edgar Rey, who began using it at Bogotá's Maternal and Child Institute in 1978. At the time, some 70 percent of preemies died in their overcrowded neonatal ward. Rey had stumbled upon a report describing how a kangaroo raised its peanut-size underdeveloped joey to about a quarter of her own weight, raising it inside her pouch and keeping it warm through skin-to-skin contact.

Rey discovered that human babies also thrived in this way, and after implementing the technique, preemie death rates plummeted. The World Health Organization recently estimated that annually, kangaroo care could save 450,000 lives.

Toward zero separation

In 2010 Westrup revealed that even the smallest, sickest babies benefitted from having parents with them 24/7. Notably, there were fewer lung issues and much shorter hospital stays. Sweden has since incorporated this knowledge by redesigning many NICUs so parents can live with their baby, even in high intensive care situations. Pre-COVID-19, siblings could also visit.

This type of "zero separation" approach requires a holistic mindset that also cares for mothers: At least 50 percent of those who birth early have other health conditions and need obstetric care. In a number of countries, new NICUs are being built with individual rooms to house families. But government support is needed for most people to devote months to caring for their sick child.

In Sweden, nationalized medicine covers costs, and the government pays parental benefits up to 35 weeks; extended benefits can stretch to 61 weeks. In Canada, which also provides medical coverage, both mother and father are entitled to 240 days of paid leave.

Keels of Nationwide Children's Hospital is optimistic about the evolution in preemie care and the research that will continue to inform best practices. "I'm hopeful that in the near future, we'll have greater knowledge and better ways of evaluating pain so we can do really individualized medicine right at the bedside."

THE WELCOME SPREAD OF ASSISTED DYING

The Economist（Nov 13th 2021）

In 1995 Australia's Northern Territory enacted the world's first law explicitly allowing assisted dying. It said that terminally ill, mentally competent adults who wanted to die could ask a doctor for help, using lethal drugs. The law sparked outrage. Within months the federal government had overturned it. Yet today five of Australia's six states have assisted-dying laws.

The Economist first made the case for assisted dying in 2015. We argued that freedom should include the right to choose the manner and timing of one's own death, while also cautioning that the practice should be carefully monitored and regulated to avoid abuses. Since then, it has become more widely available. Assisted dying is now legal in one form or another in a dozen countries, and the trend seems likely to continue. Last week New Zealand enacted a euthanasia law for the terminally ill after 65% of voters backed it in a referendum. The same week Portugal's parliament passed a broader law. Assisted dying is still illegal in Britain, but the House of Lords is debating a bill to allow it.

The number of people who die this way is increasing, though still small. In the Netherlands it rose from roughly 1,800 in 2003 to nearly 7,000 in 2020, or 4% of all deaths. As more countries liberalize, the global total will rise further.

Many people object to assisted dying on religious grounds: some faiths deem suicide a sin. Others worry that safeguards will prove insufficient, or that legalization is a slippery slope. Critics have long predicted that families exhausted by the demands of caring for sick, elderly relatives will place undue pressure on them to end their lives, or that cash-strapped states will encourage the most expensive terminally ill patients to hurry up and die.

Yet such horrors do not seem to have come to pass. In places with the longest experience of assisted dying, charities that represent the elderly or disabled have not reported any abuse. It is conceivable that some has taken place unobserved, but scrutiny has been intense and in most countries permission to help someone die is revoked if there is even a hint of coercion. Fears that the poor and marginalized might be hastened to their ends have also proved to be unfounded. In America, the Netherlands and Switzerland the overwhelming majority of those who choose an assisted death are educated and middle-class.

Far from being too lax, the rules have often been too restrictive. The Australian state of Victoria, for example, bars doctors from mentioning assisting dying to their patients. The aim is to avoid coercion, but the consequence is that many sufferers do not know that it is an option. In some jurisdictions only those with less than six months to live are allowed help to die. Thus, patients can be terminally ill and in intense pain, but unless a doctor estimates that the end is very near, they cannot end their own suffering. In some cases the diagnosis comes too late. In Victoria in the first six months of 2021 no cases were withdrawn because the patient decided not to proceed, but in 90 cases the patient died before receiving relief. Some countries, such as Spain and Colombia, have liberal laws in theory, but in practice health authorities are reluctant to let anyone make use of them. Last week in Spain a desperate 83-year-old threw herself out of a window

after her repeated requests for euthanasia were refused.

Canada offers a better model, because it provides more leeway for individuals to make their own choices. Anyone whose suffering is unbearable can choose an assisted death. They do not have to be terminally ill. And, uniquely, the question of what constitutes "unbearable" suffering is for the patients themselves to decide, so long as they are of sound mind. There is a cooling-off period of 90 days for those whose deaths are not reasonably foreseeable, in case they have second thoughts. In many cases, simply having the option of an assisted death gives people a sense of comfort and control. In Oregon a third of those people who receive the prescribed lethal medication ultimately choose not to take it.

Even as more societies accept the principle of assisted dying, hard questions remain. Some people worry that its availability may prompt health services to skimp on palliative care. But that is not ordained. Canada's assisted-dying bill was explicitly linked to increased funding for palliative and long-term care.

If assisted dying becomes common, will old people who require round-the-clock care feel more social pressure to choose death? Many already worry that they are a burden on their children or carers. Some may feel additional guilt if continuing to live is seen as an individual choice, rather than the blind workings of fate. This is a genuine concern. But the possibility that some may agonize over whether to die should not trump the certainty that others will suffer unendurable pain if their freedom to choose is denied.

The trickiest questions arise when an individual's capacity to make an informed choice is in doubt. Some people with mental disorders have suicidal thoughts that come and go. For them, the bar should be very high. Doctors must be sure they can distinguish between a temporary mental-health crisis and a sustained, considered wish to die. If in doubt, they should offer treatment aimed at helping the patient to live.

Free to choose, to the end

Dementia poses the hardest problem of all. Someone diagnosed with the condition may make a living will, asking for an assisted death when it becomes severe. But they may change their mind. Such a document should never be used to kill someone against their wishes, and if those wishes are unknowable, they should be left to live. Assisted dying should be only for those who can make an informed decision at the time they take the drugs.

No rules in this area are perfect. All should be subject to revision in the light of new evidence about how they work in practice, or to take account of medical advances. But the overall principle—that individuals are entitled to choose how they end their lives—is, we believe, a sound one. The evidence from countries that allow assisted dying is that abuses remain largely hypothetical, whereas the benefits are real and substantial. It relieves suffering, and restores a measure of dignity to people at the end of their lives.

Correction (November 12th 2021): An earlier version of this article stated that there is a cooling off period of ten days for patients who choose to have an assisted death in Canada. This is incorrect. There is a cooling-off period of 90 days for those whose deaths are not reasonably foreseeable. Sorry.

VIDEO GAME RULES IN CHINA

China has a complex relationship with video games. New government rules for minors have made it even more so.

China's video game industry is booming. But it sure doesn't feel that way to Stone Shi, a game designer in China.

Mr. Shi, 27, got his first job in 2018, when Beijing temporarily suspended approval of new games. The next year, the government placed new limits on minors 'playing time. A few weeks ago, the rules got stricter still. People under 18 can now play just three hours a week, during prescribed times on weekends.

"We never hear any good news about the gaming industry," Mr. Shi said. "We have this joke, 'Each time this happens, people say it's doomsday for the video game industry. 'So we say, 'Every day is doomsday.'"

That's a bit of an exaggeration. Mr. Shi remains employed and hundreds of millions of Chinese continue to play games each day. Minors still find ways around government blocks. Chinese tech companies, like Tencent, are cornerstones of the global gaming industry. The country has also been quick to embrace competitive gaming, building e-sports stadiums and enabling college students to major in the topic.

Yet China's relationship with games is decidedly complex. A major source of entertainment in the country, games offer a social outlet and an easily accessible hobby in a country where booming economic growth has disrupted social networks and driven long work hours. The multiplayer mobile game Honor of Kings, for example, has more than 100 million players a day.

For years, though, officials — and many parents — have worried about the potential downsides, like addiction and distraction. As a more paternalistic government under the Chinese leader has turned to direct interventions to mold how people live and what they do for fun, gaining control over video games has been high on the priority list. In addition to other pursuits, like celebrity fan clubs, the government has increasingly deemed games a superfluous distraction at best — and at worst, a societal ill that threatens the cultural and moral guidance of the authorities.

On social media, gamers fumed about the latest rules. Some pointed out that the age of sexual consent, at 14, was now four years younger than the age at which people can game without limit. Even though minors represent a small portion of Chinese video gaming revenue, shares in game companies plummeted on concerns about the long-term impact on gaming culture.

Mr. Shi said despite the anger, gamers and the industry are growing used to the array of government demands. For most adults, the new bans have little impact. For companies, it's simply one more obstacle to entering a lucrative industry.

Many in China's gaming industry agree that games have some downsides. The most popular games in the country are made for smartphones and are free to play, meaning the businesses making them live and die based on how well they draw users in and get them to pay for extras. The game makers have become experts at hooking players.

But top-down attempts to wean children off games — what state media has called "poison" and "spiritual pollution" — have sometimes been worse than the problem itself. Boot camps fond of military discipline have proliferated. So have Chinese media accounts of abuses, like beatings, electroconvulsive therapy and solitary confinement.

Even the country's past ban on consoles like the PlayStation made things worse, Mr. Shi said. That ban helped propel the popularity of the free-to-play mobile games. Studios selling games for consoles are motivated to make high-quality games, like blockbuster movies. Not so, he said, with free-to-play games, which are motivated to maximize what they can get out of players.

For Mr. Shi, the government's new limits are similar to the ones his mother imposed on him growing up. During weekdays, his PlayStation 2 stayed locked away in a cabinet. Each disc he bought was scrutinized. Plenty of them were deemed inappropriate.

When he got to college, he entered a period that he called "payback," trying to make up for the years when he had strict limits. Even now, he sometimes indulges his gaming habits or spends more than he should. What's important to understand, he said, is that for a generation that grew up largely without siblings, many with parents who worked late, video games offered a portal to a social world beyond the doldrums of school pressures.

"After school, I would finish supper alone, and it sounds pathetic. But what made it less pathetic was I had my gaming friends," he said. He recalled that when his parents kept him from playing games, he would go online and watch others game.

"Banning people from doing something does not mean people will do what you want them to do," he said.

China is uniquely equipped to control how children spend time online. A real-name registration system for phone numbers has effectively ended internet anonymity. To register for just about anything on China's internet, for instance, social media or gaming, you need a phone number. If a child's identity is linked to their cellphone plan, it's simple for companies to identify them as minors.

Yet workarounds persist. When officials began limiting minors 'playing time in 2019, children found ways to get access to cellular numbers linked to adults. Some would buy, others would rent. Many just borrowed or took their parents 'or grandparents 'phones. In response, Tencent has required facial recognition to confirm the identity of players on its most popular games.

When Chinese internet users this month pointed to an account they said was probably being used by minors — because it belonged to a 60-year old who was masterly in one late-night session on Honor of Kings — the company released a statement that the account had passed 17 facial recognition scans since March.

Many gamers and designers have wondered what will happen to the popular competitive gaming industry. Those in e-sports said the rules would probably hurt recruitment and talent development. The rules may even foreclose careers, said Ma Xue, a 30-year-old e-sports player and streamer. "A talented 15-year-old player will have to wait a few years to participate. The e-sports world can change massively in two years," she said. "E-sports is a cruel world."

Hou Xu, the founder of the Yizhimeng e-sports training center, said it may take a while for the effect of the new rules to be felt, since there's already a pipeline of gamers. A 20-year veteran of the industry, Mr. Hou said the ban was "too one-size-fits all," though it was unlikely

to change training, as schools get parents ’permissions and accounts to make sure athletes under 18 can play enough.

Through his school, Mr. Hou said he mostly tries to show video-game obsessed children, and often their parents, how difficult it is to make it in competitive gaming. Only one in his latest class of 60 got trials at a pro club. He failed to get a spot.

Instead of focusing his students on improbable careers as gaming stars, he tries to work with them on deeper issues. “Often, children’s spiritual needs aren’t met. It is easy in the virtual world to get a sense of accomplishment, identification and initiative, but they may not have that in study or in life,” he said.

Mr. Shi, the game designer, said he had already noticed children moving to other gamelike pastimes. After the ban, he ran into a large number of children at a store examining and painting figurines for the strategy board game Warhammer.

“If I have kids and they have a problem with video games, I would explore something we can do together, like Warhammer, chess, Go, or sports. They're all very good substitutions for video games,” he said.

CHINA BARS FOR-PROFITING TUTORING IN CORE SUBJECTS

SHANGHAI, July 23 (Reuters) - China is barring tutoring for profit in core school subjects to ease financial pressures on families that have contributed to low birth rates, news that sent shockwaves through its vast private education sector and share prices plunging.

The policy change, which also restricts foreign investment in a sector that had become essential to success in Chinese school exams, was contained in a government document widely circulated on Friday and verified by sources.

The move threatens to decimate China's $120 billion private tutoring industry and triggered a heavy selloff in shares of tutoring firms traded in Hong Kong and New York including *New Oriental Education & Technology Group* and *Koolearn Technology Holding Ltd*.

All institutions offering tutoring on the school curriculum will be registered as non-profit organizations, and no new licenses will be granted, according to the document, which says it was distributed by China's State Council, or cabinet, to local governments and is dated July 19.

More than 75% of students aged from around 6 to 18 in China attended after-school tutoring classes in 2016, according to the most recent figures from the Chinese Society of Education, and anecdotal evidence suggests that percentage has risen.

China International Capital Corp said the rules are "tougher than market expectations, and we expect material impact on future business and capital market activities."

The pressure for children to succeed in an increasingly competitive society has given rise to the term Jiwa, or "chicken baby", which refers to children pumped with extracurricular classes and energy-boosting "chicken blood" by anxious parents.

Existing online tutoring firms will be subject to extra scrutiny and after-school tutoring prohibited during weekends, public holidays and school vacations, the document said. China's State Council did not immediately respond to a request for comment.

Curriculum-based tutoring institutions would be barred from raising money through listings or other capital-related activities, while listed companies would be banned from investing in such institutions, according to the document.

China's for-profit education sector has been under scrutiny as part of Beijing's push to ease pressure on school children and reduce a cost burden on parents that has contributed to a drop in birth rates. In May, China said it would allow couples to have up to three children, from two previously.

The policy aims to reduce burdens on students and family finances "effectively" within one year and "significantly" within three, the document said.

Three sources told *Reuters* last month that the crackdown is being driven from the top. In June the official Xinhua news agency quoted President Xi Jinping as saying schools, rather than tutoring firms, should be responsible for student learning.

FOREIGN INVESTMENT RESTRICTIONS

The new policy would also bar foreign investors from investing in China's curriculum-based tutoring businesses through mergers and acquisitions, franchises, or variable interest entity (VIEs) arrangements, according to the document. VIEs are a commonly used structure to circumvent rules restricting foreign investment in certain industries.

Those which have already violated the rules must make corrective measures, it added.

"The worst case in our scenario analysis could imply 70%+ K12 revenue plunge for leaders," Citi wrote, referring to kindergarten to grade 12.

New Oriental's (9901.HK) Hong Kong-traded shares slumped as much as 50.4% to their lowest since its listing late last year. *Scholar Education Group* (1769.HK) and *Koolearn Technology* Holding Ltd (1797.HK) both tumbled nearly 30% in Hong Kong.

The policy change slammed U.S.-listed Chinese internet stocks, with Alibaba , <9988.HK> and Baidu , <9888.HK> each down about 4% as investors worried about increased regulation by China's government.

"The regulations have not been published, and the Company has not received official notification of the regulations," New Oriental, whose U.S.-listed shares slumped about 60%, said in a statement late on Friday.

TAL Education (TAL.N) and Gaotu Techedu (GOTU.N), whose U.S. listed shares also tumbled roughly 60% in response to the news, made similar statements about waiting for details.

Shares of other U.S.-listed Chinese education companies, including China Online Education Group , Zhangmen Education Inc (ZME.N) and 17 Education & Technology Group Inc (YQ.O) also plunged.

Education stocks also saw a sell-off in mainland China, with an index tracking the sector (.CSI930717) dropping nearly 5%.

The rules threaten the listing ambitions of numerous venture capital-backed education firms, including Alibaba-backed Zuoyebang, and online education platforms Yuanfudao and Classin, both backed by Tencent.

A broad crackdown on China's massive internet sector has already rattled investors and saw Beijing launch a data-related cybersecurity investigation into ride-hailing giant Didi Global Inc (DIDI.N) just two days after it raised $4.4 billion in a New York initial public offering

THE CITY THAT ENDURES

By Stephanie Zacharek

If New York is a city of reinvention, it's also a place of perpetual wistfulness, of missing people and things that are gone. Every day, even in the best of times, something you love about New York disappears: Your favorite restaurant can't hack it; the awesome little card store had to close because people stopped sending cards. With life comes attrition. The guy who used to fix your shoes just got old and, one day, he died—there was no one to take over his business. Those of us who live here now, as the city tries to shimmer back to life amid the seemingly endless COVID crisis, feel that toothache of the heart every time we pass one of our many shuttered storefronts. Yet those of us who lived here on 9/11, and continue to live here today, have an advantage: we once saw in our city a smoking hole that also served as a mass grave for lives, and flesh, that had been incinerated in a flash on a gorgeous late-summer day.

Once you've seen what your city can do in the wake of that, you understand it as a place of awe as well as sorrow. Against all odds, it always comes back.

It's true that in addition to boarded-up businesses, we have many ugly things in New York: terrible needle high-rises that splinter our already rather kooky patchwork of a skyline; streets mottled with piles of stinky garbage; a much-relied-upon subway system that's also perpetually on the verge of falling apart. These are things that say to outsiders, "Don't come here, to live or to play." But they're also an unintentionally misleading language, because all of them, even the ugly new buildings, are signs of the city's life, evidence of its growth and change. Its workaday elements—streets and sidewalks as well as subways and buses—get used, and used hard, by its citizens.

We rely on those things, and we rely on one another too, essential truths that we learned after 9/11 even if, in our perpetual coolness—we're Noo Yawkers, after all—we pretend to have forgotten. It's hard to explain to anyone who wasn't here, but the time after 9/11 was a season of undercover tenderness among New Yorkers. You might not come out and ask the stranger next to you, "Are you O.K.?" but you didn't have to—just catching another person's gaze could be enough.

Yet in the early days of the pandemic—as our hospitals began filling rapidly and our death toll climbed—many New Yorkers seemed unsure how we'd get through, or if we would. Whatever we'd learned from 9/11 seemed lost, or at least obscured. Many people left, for good—this New York, with no Broadway or museums or restaurants, wasn't the New York they knew or wanted to know.

But those of us who stayed stuck around expressly to preserve the New York we knew. This city is haughty and knows its self-worth; it won't miss its traitors. Plus, we don't need their lousy energy. We get enough of that from outsiders who aggressively fail to understand this city, even if they professed sympathy for us after 9/11. I'm often surprised by people's hostility toward New York and New Yorkers. In early April, when we were by far the darkest dot on the country's COVID map, people I love—or used to love—who do not live here said things like, "Well, that's New

York." As if, somehow, just by living so close together—a together- apartness that drives us crazy, makes us lonely and is what we live for, all in equal measure—we were asking for death.

What's most astonishing, though, is how much New Yorkers have invested in helping one another survive. When, amid rapidly shifting public guidance, citizens worldwide were told that wearing masks could prevent the spread of the disease, New Yorkers got on board, fast. Sure, there was some early resistance, and even now you see a few scofflaws on the subway. But in such a huge and diverse city, the level of compliance is both astounding and heartening. Our motivations may not be purely altruistic—many may have their children or at-risk loved ones in mind. Still, New Yorkers inherently understand that a rising tide lifts all boats. And in that way, we hold one another above water.

Even if the threat of the pandemic never disappears completely, it will subside. New Yorkers will come through this too. Those who left, good riddance! And those outsiders who feel the city beckoning, who are ready to accept both its challenges and its pleasures—please come. You'll be welcomed by us lifers and long-timers. New Yorkers who were babies at the time of 9/11 are now grown up, nearly ready to start their adult lives. People who were 20 at the time may be raising children of their own. And those who were middle-aged in 2001 are now thinking about what it will be like to grow old here, a bittersweet mission in a place that changes by the day, if not by the hour. The city doesn't slow down, even when we do.

But we do have space for memories. A closed restaurant or store or nightclub is never fully forgotten, as long as there is a New Yorker alive who once loved it. We also have our own physical memorial to those who died on 9/11, which, like the buildings that once stood there, divides New Yorkers sharply. Some grumble that it's a tourist attraction, but it's one of my favorite spots in the city. On a hot day, the air around those deep, sloping pools is always at least 10°F cooler. It's a place of true tranquility, of mournful reckoning, an instance of urban planning striking just the right note in the face of a city's overwhelming grief. But as beautiful as it is, I think the truest 9/11 memorial isn't made of granite and water. It's the population of New Yorkers who got one another through that sooty, uncertain time of despair and signed on for anything and everything that might lie ahead. We barely speak to one another, but when we link arms, watch out. The memorial is everyone who stayed.

SPOTIFY'S BIG PROBLEM

By Joanne Lipman

Spotify has a much bigger problem than Joe Rogan. The streaming service has been in damage-control mode, trying to quell the outcry over COVID-19 misinformation spread by Rogan, the popular podcast host. Spotify released its internal rules prohibiting "dangerous content," and said it will attach an advisory to any podcast that discusses the pandemic, directing listeners to a new informational hub.

But despite these moves, Spotify CEO Daniel Ek also suggested this issue is about free speech. He stressed that Spotify doesn't want to become a "content censor" and that he is committed to "supporting creator expression."

That's where his trouble starts. He is hiding behind the same argument that platforms like Facebook and Google make—that Spotify is a platform that distributes content created by others, but isn't really responsible for that content. That's a dubious proposition for Facebook and Google—and it's completely nonsensical when it comes to Spotify.

Spotify isn't some sort of neutral conduit. It isn't just a tool that podcasters use to upload their work. It's a publisher. It makes intentional choices about the content it disseminates, especially when it comes to Rogan. It is a crucial distinction. Spotify paid Rogan a reported $100 million for exclusive rights to his podcast. He is the streaming service's biggest star, its calling card, its billboard name. Rogan is Spotify. There's no daylight between the two. For Spotify to maintain that it's not responsible for what comes out of his mouth, or that somehow it's too difficult to moderate its content, is ludicrous.

I've spent my career in publishing, including as editor in chief of USA Today. Anybody in my field would be out of a job if we knowingly published nonsense and then disavowed any responsibility for it. We would be liable if we intentionally published false information. When sources pushed falsehoods, our responsibility was to challenge them and to report the facts—not to hand them the microphone and turn up the volume.

Spotify is in a similar position. The Rogan episode has thrown into high relief the question of whether it's a "platform" that simply allows creators to spread content, or whether it is a media company, which is responsible for the content it publishes. The answer has implications not just for Spotify but also for other digital platforms that have begun paying some content creators, including Facebook, Snapchat, and TikTok.

From my vantage point, the answer seems pretty clear. When you pay to acquire content, "you're it." You don't get to have it both ways: you can't both own it—and profit from it as Spotify does—yet not take responsibility for it. This isn't a First Amendment issue. I'm as fierce a defender as you will find of freedom of speech.

This isn't a free-speech issue. Rogan and his guests have the right to believe and say anything they'd like, without fear of government reprisal. But the Constitution doesn't give them the right to spout misinformation on any platform they choose.

Spotify, as a private company, gets to make its own rules, to make choices about what it allows and doesn't on its own air. What it doesn't get to do is set rules and then pretend it isn't responsible for enforcing them.

Ek's suggestion that moderating content would make Spotify a "censor" is especially egregious. It's a straw-man argument: nobody's asking Spotify to be a censor, not even its harshest critics. They're simply asking it to publish standards and uphold them. That's not "censorship." It's fact checking.

The current controversy was kicked off a few weeks ago when more than 250 scientists and health care professionals wrote an open letter about Rogan's podcast "promoting baseless conspiracy theories." They were especially alarmed by a December podcast in which Dr. Robert Malone declared that people who trust vaccines are victims of "mass formation psychosis." Soon, rock star Neil Young pulled his music from Spotify, quickly followed by other musicians.

Scrambling to undo the damage, Rogan took to Instagram to say, "If I pissed you off, I'm sorry," and to promise he would try to "balance things out" with "more experts with differing opinions." Spotify CEO Ek, meanwhile, put out his blog post, but conspicuously didn't mention Rogan, suggesting there won't be any repercussions for the podcaster.

But even if this controversy dies down, it has already called attention to the other potentially problematic content Spotify carries. Anyone can add a podcast to Spotify; the company says it has 3.2 million of them.

That's where the real lasting legacy of this affair may play out. Spotify says it bans any content that "incites violence or hatred" toward any person or group. Yet New Statesman writer Will Dunn, in a search of the site, easily found podcasts that celebrate white nationalism, Nazism, racism, and homophobia, and that encourage vaccine hesitancy and climate-change denial.

Rogan may be the most visible purveyor of misinformation. But what's disturbing is there's a lot more where he came from. It's time for Spotify to wake up and take responsibility, and finally act like the publisher it already is.

Lipman is the author of That's What She Said: What Men Need to Know

BENEFITS & RISKS OF ARTIFICIAL INTELLIGENCE

From SIRI to self-driving cars, artificial intelligence (AI) is progressing rapidly. While science fiction often portrays AI as robots with human-like characteristics, AI can encompass anything from Google's search algorithms to IBM's Watson to autonomous weapons.

Artificial intelligence today is properly known as narrow AI (or weak AI), in that it is designed to perform a narrow task (e.g. only facial recognition or only internet searches or only driving a car). However, the long-term goal of many researchers is to create general AI (AGI or strong AI). While narrow AI may outperform humans at whatever its specific task is, like playing chess or solving equations, AGI would outperform humans at nearly every cognitive task.

WHY RESEARCH AI SAFETY?

In the near term, the goal of keeping AI's impact on society beneficial motivates research in many areas, from economics and law to technical topics such as verification, validity, security and control. Whereas it may be little more than a minor nuisance if your laptop crashes or gets hacked, it becomes all the more important that an AI system does what you want it to do if it controls your car, your airplane, your pacemaker, your automated trading system or your power grid. Another short-term challenge is preventing a devastating arms race in lethal autonomous weapons.

In the long term, an important question is what will happen if the quest for strong AI succeeds and an AI system becomes better than humans at all cognitive tasks. As pointed out by I.J. Good in 1965, designing smarter AI systems is itself a cognitive task. Such a system could potentially undergo recursive self-improvement, triggering an intelligence explosion leaving human intellect far behind. By inventing revolutionary new technologies, such a superintelligence might help us eradicate war, disease, and poverty, and so the creation of strong AI might be the biggest event in human history. Some experts have expressed concern, though, that it might also be the last, unless we learn to align the goals of the AI with ours before it becomes super intelligent.

There are some who question whether strong AI will ever be achieved, and others who insist that the creation of super intelligent AI is guaranteed to be beneficial. At FLI we recognize both of these possibilities, but also recognize the potential for an artificial intelligence system to intentionally or unintentionally cause great harm. We believe research today will help us better prepare for and prevent such potentially negative consequences in the future, thus enjoying the benefits of AI while avoiding pitfalls.

We believe research today will help us better prepare for and prevent such potentially negative consequences in the future, thus enjoying the benefits of AI while avoiding pitfalls. Click here to view our growing community of AI existential safety researchers.

HOW CAN AI BE DANGEROUS?

Most researchers agree that a super intelligent AI is unlikely to exhibit human emotions like love or hate, and that there is no reason to expect AI to become intentionally benevolent or malevolent. Instead, when considering how AI might become a risk, experts think two scenarios most likely:

The AI is programmed to do something devastating: Autonomous weapons are artificial intelligence systems that are programmed to kill. In the hands of the wrong person, these weapons could easily cause mass casualties. Moreover, an AI arms race could inadvertently lead to an AI war that also results in mass casualties. To avoid being

thwarted by the enemy, these weapons would be designed to be extremely difficult to simply "turn off," so humans could plausibly lose control of such a situation. This risk is one that's present even with narrow AI, but grows as levels of AI intelligence and autonomy increase.

The AI is programmed to do something beneficial, but it develops a destructive method for achieving its goal: This can happen whenever we fail to fully align the AI's goals with ours, which is strikingly difficult. If you ask an obedient intelligent car to take you to the airport as fast as possible, it might get you there chased by helicopters and covered in vomit, doing not what you wanted but literally what you asked for. If a super intelligent system is tasked with a ambitious geoengineering project, it might wreak havoc with our ecosystem as a side effect, and view human attempts to stop it as a threat to be met.

As these examples illustrate, the concern about advanced AI isn't malevolence but competence. A super-intelligent AI will be extremely good at accomplishing its goals, and if those goals aren't aligned with ours, we have a problem. You're probably not an evil ant-hater who steps on ants out of malice, but if you're in charge of a hydroelectric green energy project and there's an anthill in the region to be flooded, too bad for the ants. A key goal of AI safety research is to never place humanity in the position of those ants.

WHY THE RECENT INTEREST IN AI SAFETY

Stephen Hawking, Elon Musk, Steve Wozniak, Bill Gates, and many other big names in science and technology have recently expressed concern in the media and via open letters about the risks posed by AI, joined by many leading AI researchers. Why is the subject suddenly in the headlines?

The idea that the quest for strong AI would ultimately succeed was long thought of as science fiction, centuries or more away. However, thanks to recent breakthroughs, many AI milestones, which experts viewed as decades away merely five years ago, have now been reached, making many experts take seriously the possibility of superintelligence in our lifetime. While some experts still guess that human-level AI is centuries away, most AI researches at the 2015 Puerto Rico Conference guessed that it would happen before 2060. Since it may take decades to complete the required safety research, it is prudent to start it now.

Because AI has the potential to become more intelligent than any human, we have no surefire way of predicting how it will behave. We can't use past technological developments as much of a basis because we've never created anything that has the ability to, wittingly or unwittingly, outsmart us. The best example of what we could face may be our own evolution. People now control the planet, not because we're the strongest, fastest or biggest, but because we're the smartest. If we're no longer the smartest, are we assured to remain in control?

FLI's position is that our civilization will flourish as long as we win the race between the growing power of technology and the wisdom with which we manage it. In the case of AI technology, FLI's position is that the best way to win that race is not to impede the former, but to accelerate the latter, by supporting AI safety research.

TEXBOOK’S DIGITAL FUTURE

Harold Elder is not your typical Apple fan. Yet the 58-year-old University of Alabama economics professor pre-ordered an iPad to make sure he had one of the first ones. The device is "something that I've been waiting for years," he says. And not, to be clear, merely for reasons of gadget desire. "It really has the possibility of making the learning experience much richer," says Elder, who is considering testing a new iPad-ready digital textbook in his introductory microeconomics course in the fall term.

"Richer" is certainly the right word to use. App developers aren't the only ones who greeted the iPad's release with gratitude and optimism. The textbook industry, too, sees it as a way to attract customers away from the used-book market, boost profits, and help students learn better. It’s a crucial moment for a segment of the publishing industry that has stubbornly resisted change. Thanks in large part to the iPad and an expected rush of competitor slates, that resistance is collapsing.

Of course, it won't happen overnight. Textbooks today are still bought and sold in much the same way they've always been: as ink-and-paper objects assigned by professors and purchased by students in campus bookstores. "It's a slow-moving pharmaceutical market,” says Matt Maclnnis, the CEO of Inkling, a startup working on digital textbooks. "The professor writes a prescription, and the student goes to fill it." It may be slow-moving, but it's highly profitable. While McGraw-Hill Education's earnings fell by 14% in 2013 because of the recession, college textbook sales actually increased.

But just ask any journalist or musician: technology has a way of laying siege to comfortable industries. And the iPad may be the first of many barbarians at the gate. Apple sold 3 million of the devices in its first three months, and now competitors, reportedly including Google, Hewlett-Packard, and Amazon, are preparing rivals. Educators and students are enthusiastic about them; at least three colleges, including the Illinois Institute of Technology, will offer free iPads to incoming students. But what will they put on them besides Bejeweled and Facebook?

There are already digital textbooks available, and their numbers are expected to grow: according to Simba Information, which provides data and research on the media industry, they represent less than 2% of textbook sales today, but will reach 10% by 2015. But in 2013 the offerings were pretty scarce. CourseSmart, a San Mateo, Calif., company collectively owned by five of the biggest textbook publishers, has 6,000 educational titles for sale in digital format. But its electronic books are little more than scanned versions of printed works. A CourseSmart e-book includes some neat functions, like search capability and digital note-taking, but for the most part, it has few advantages over a traditional textbook other than weight and price. （CourseSmart books usually cost less than half the price of a new printed book.）

That's where a company like Inkling comes in. Inkling, a 20-person San Francisco startup, and its competitors—including New York City's ScrollMotion—are working with the textbook publishers to bring their books onto the iPad, iPhone, and other future devices. The aim, says Inkling's Maclnnis, is to harness all the advantages of a multitouch, Web-enabled slate. That means chemistry students won't just see an illustration of a benzene molecule; they'll spin and rotate a three-dimensional model of one. Biology students won't just read about the cardiovascular system; they'll see video of a beating heart, narrated by a world-class heart surgeon.

Interactivity, though, is only part of the story. Bringing texts onto a digital platform provides an opportunity to make the book as social as the classroom. With

Inkling's technology, for instance, a student can choose to follow another's "note stream", or view a heat map of the class's most-highlighted passages. Professors get real-time information on how much of the reading assignment the class actually did, or whether a particular review problem is tripping up large numbers of students. All that comes on top of the cost savings： even these advanced digital textbooks will cost less than their print equivalents （with most of them in the $ 99 range） and some will even come "unbundled," allowing students to buy the individual chapters they need most for a small fraction of the cost of a full textbook.

Textbook publishers stand to lose some revenue if individual chapter purchases catch on, but they hope to more than offset the loss by attracting new customers. Big publishers like McGraw-Hill, Pearson, and Cengage are locked in a longstanding battle against the used-textbook market, which now totals about $ 2.2 billion, according to Simba, and from which they earn no revenue. Online textbook-rental companies like Chegg. com offer lower prices than the publishers, and reach a wide customer base. But traditional publishers think technology will be their salvation. There's no such thing as a "used" e-book, and digital textbooks are the center of a whole ecosystem of services-such as homework-management systems and video-capture technology for recording lectures-that publishers hope will be profitable. "We're becoming a software service company instead of a textbook company," says Peter Davis, president of McGraw-Hill Education.

But what about the students? Are manipulable molecules just digital eye candy or real improvements to the learning process? "Technologfy is never the silver bullet, but it can sometimes be the bullet," says Diana Rhoten, an education researcher and cofounder of Startl, which invests in innovative education companies. She notes that different students have different learning styles. Some are just fine reading text, while others prefer audiovisual aids, and kinesthetic learners need to interact with something. "In a digital book, I have all of those types available to me," she says. "That is huge. Customization is going to have a great impact on learning." And if it means getting an A in organic chemistry, paying $ 500 for an iPad seems like a smart choice.

MCCONELL'S DEBT GAMBLE

By Phillip Elliot

As senate minority leaders Mitch McConell mulled blocking Democrats from raising the nation's debt ceiling, he faced two scenarios. Neither was good.

In the first, the U.S. could default on its debt, triggering a global recession and costing Americans millions of jobs. In the second, Democrats could get rid of the filibuster to raise the ceiling without GOP help and create a Senate where the party in power—notably, not McConnell's—could prevail with a simple majority vote.

So McConnell relented, agreeing on Oct. 6 that Republicans would allow a temporary extension of the debt ceiling to the end of the year. (A vote to that effect passed in the Senate on Oct. 7, and in the House of Representatives on Oct. 12.) But the deal McConnell offered shouldn't be confused with magnanimity. With Democrats in control of the House, the Senate and the White House, he is maneuvering to extract as high a political price as possible for helping avoid a financial crisis.

The debt ceiling is a vestige of World War I, created to curb unlimited spending on a conflict that many Americans would have preferred to sit out. It requires lawmakers to vote periodically to raise the amount of money the government can borrow to pay bills, and has been lifted by both parties as a routine matter for most of the last century. (The ceiling has been raised 78 times since 1960.)

But in 2006, lawmakers started to use what had always been a procedural vote as a way to virtue-signal. That year, Democrats—including then Senator Joe Biden—used a debt-ceiling vote to lodge an election-year protest against President George W. Bush's tax cuts and heavy military spending. In the end, Democrats allowed the hike to clear without getting their way, but it started a nasty political habit.

Over the next 15years, debate around the debt ceiling careened into the partisan gutter. In 2011, the new GOP majority in the House led a revolt over the Obama Administration's spending and threatened the nation's first ever default; ultimately, Obama signed a deal that reduced deficits by more than $2trillion without any new taxes. Two year later, House Republicans linked a looming default deadline to scrapping Obama care. In that case, McConnell stepped in to help negotiate a climb-down, and the Republicans retreated in defeat.

More recently, the U.S. faced an Oct. 18 deadline to move the country's current borrowing limit of $28.4 trillion higher. For months, McConnell had insisted that if Democrats planned to pass Biden's multitrillion-dollar Build Back Better Act through reconciliation—a procedural loophole that would not require any GOP votes—then they could raise the debt limit the same way. In other words, alone.

Democrats said they didn't have enough time to make that complicated process work. And given the dire implications of a default—6 million jobs gone, a 9% unemployment rate and a $15 trillion slash to the stock market, according to Moody's—some Democratic Senators started to seriously consider ditching the filibuster to get around McConnell. If all Democrats agreed, they could nix the archaic rule that requires three-fifths of the Senate to vote together to end debate on a

matter, and stop Republicans from holding up the vote. Progressives have long been agitating to get rid of the filibuster, arguing too much of the Democrats' agenda is stuck because the minority party can gum it up. Institutionalists had resisted such talk, but on Oct. 5, the nation's institutionalist- in-chief, President Biden, said dumping the filibuster solely to raise the debt limit was "a real possibility."

A day later, McConnell offered his deal—a $480 billion boost to the borrowing limit, which would push the default deadline back to December. Senator Elizabeth Warren said McConnell "caved," an assessment many Democrats seemed eager to amplify. But others spotted a trap.

The extension gave democrats a brief reprieve to regroup and pivot back to their other big problem: getting their own members on board with Biden's agenda. Democrats continue to harangue the Senate saboteurs Kyrsten Sinema and Joe Manchin, either of whom can scuttle Democrats' agenda in a 50-50 chamber, to get on board the Biden train. Both lawmakers have said the price tag and reach of the Build Back Better bill are too high. And House Speaker Nancy Pelosi says she won't bring the plan to a vote in her chamber until she's sure it can pass the Senate, leaving it and a separate Senate-passed infrastructure package of $550 billion in new spending in limbo. Biden, who campaigned as an insider skilled in legislative compromise, has been reluctant to browbeat Democrats and could end up paying politically for a failure.

McConell, a political infighter without peer in Washington, understands all this. Even if Biden is able to corral Democrats to pass his plans, it will play to McConnell's advantage when the debt-ceiling issue crops back up in December. At that point, McConell is still likely to force Democrats, fresh off a spending plan of historic proportion, to pass a borrowing increase along party lines. The increase won't have anything to do with the vast sum Democrats committed to spend, but it won't look that way to many voters. And it's probably safe to say McConnell won't be shy about laying blame for all that red ink with the Democrats.

WHY WAITING IS TORTURE

By Alex Stone

Some years ago, executives at a Houston airport faced a troubling customer-relations issue. Passengers were lodging an inordinate number of complaints about the long waits at baggage claim. In response, the executives increased the number of baggage handlers working that shift. The plan worked: the average wait fell to eight minutes, well within industry benchmarks. But the complaints persisted.

Puzzled, the airport executives undertook a more careful, on-site analysis. They found that it took passengers a minute to walk from their arrival gates to baggage claim and seven more minutes to get their bags. Roughly 88 percent of their time, in other words, was spent standing around waiting for their bags.

So the airport decided on a new approach: instead of reducing wait times, it moved the arrival gates away from the main terminal and routed bags to the outermost carousel. Passengers now had to walk six times longer to get their bags. Complaints dropped to near zero.

This story hints at a general principle: the experience of waiting, whether for luggage or groceries, is defined only partly by the objective length of the wait. “Often the psychology of queuing is more important than the statistics of the wait itself,” notes the M.I.T. operations researcher Richard Larson, widely considered to be the world’s foremost expert on lines. Occupied time (walking to baggage claim) feels shorter than unoccupied time (standing at the carousel). Research on queuing has shown that, on average, people overestimate how long they’ve waited in a line by about 36 percent.

This is also why one finds mirrors next to elevators. The idea was born during the post-World War II boom3, when the spread of high-rises led to complaints about elevator delays. The rationale behind the mirrors was similar to the one used at the Houston airport: give people something to occupy their time, and the wait will feel shorter. With the mirrors, people could check their hair or slyly ogle other passengers. And it worked: almost overnight, the complaints ceased.

The drudgery of unoccupied time also accounts in large measure for the popularity of impulse-buy items, which earn supermarkets about $5.5 billion annually. The tabloids and packs of gum offer relief from the agony of waiting.

Our expectations further affect how we feel about lines. Uncertainty magnifies the stress of waiting, while feedback in the form of expected wait times and explanations for delays improves the tenor of the experience.

And beating expectations buoys our mood. All else being equal, people who wait less than they anticipated leave happier than those who wait longer than expected. This is why Disney, the universally acknowledged master of applied queuing psychology, overestimates wait times for rides, so that its guests — never customers, always guests — are pleasantly surprised when they ascend Space Mountain ahead of schedule.

This is a powerful ploy because our memories of a queuing experience, to use an

industry term, are strongly influenced by the final moments, according to research conducted by Ziv Carmon, a professor of marketing at the business school Insead, and the behavioral economist Daniel Kahneman. When a long wait ends on a happy note — the line speeds up, say — we tend to look back on it positively, even if we were miserable much of the time. Conversely, if negative emotions dominate in the final minutes, our retrospective audit of the process will skew toward cynicism, even if the experience as a whole was relatively painless.

Professors Carmon and Kahneman have also found that we are more concerned with how long a line is than how fast it's moving. Given a choice between a slow-moving short line and a fast-moving long one, we will often opt for the former, even if the waits are identical. (This is why Disney hides the lengths of its lines by wrapping them around buildings and using serpentine queues.)

Perhaps the biggest influence on our feelings about lines, though, has to do with our perception of fairness. When it comes to lines, the universally acknowledged standard is first come first served: any deviation is, to most, a mark of iniquity and can lead to violent queue rage. Last month a man was stabbed at a Maryland post office by a fellow customer who mistakenly thought he'd cut in line. Professor Larson calls these unwelcome intrusions "slips" and "skips."

The demand for fairness extends beyond mere self-interest. Like any social system, lines are governed by an implicit set of norms that transcend the individual. A study of fans in line for U2 tickets found that people are just as upset by slips and skips that occur behind them, and thus don't lengthen their wait, as they are by those in front of them.

Surveys show that many people will wait twice as long for fast food, provided the establishment uses a first-come-first-served, single-queue ordering system as opposed to a multi-queue setup. Anyone who's ever had to choose a line at a grocery store knows how unfair multiple queues can seem; invariably, you wind up kicking yourself for not choosing the line next to you moving twice as fast.

But there's a curious cognitive asymmetry at work here. While losing to the line at our left drives us to despair, winning the race against the one to our right does little to lift our spirits. Indeed, in a system of multiple queues, customers almost always fixate on the line they're losing to and rarely the one they're beating.

Fairness also dictates that the length of a line should be commensurate with the value of the product or service for which we're waiting. The more valuable it is, the longer one is willing to wait for it. Hence the supermarket express line, a rare, socially sanctioned violation of first come first served, based on the assumption that no reasonable person thinks a child buying a candy bar should wait behind an old man stocking up on provisions for the Mayan apocalypse.

Americans spend 37 billion hours each year waiting in line. The cost of waiting is an emotional one: stress, boredom, that nagging sensation that one's life is slipping away. The last thing we want to do with our dwindling leisure time is squander it in stasis. We'll never eliminate lines altogether, but a better understanding of the psychology of waiting can help make those inevitable delays that inject themselves into our daily lives a touch more bearable. And when all else fails, bring a book.