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### Advantage – Innovation

#### Current quality of education is sharply decreasing through teacher shortages

**Boyce 19** Paul Boyce, 9-17-2019, "The Teacher Shortage Is Real and about to Get Much Worse. Here's Why," No Publication, https://fee.org/articles/the-teacher-shortage-is-real-and-about-to-get-much-worse-heres-why/

Teacher Shortage According to research by the Economic Policy Institute (EPI), the teacher shortage could reach 200,000 by 2025, up from 110,000 in 2018. This shortage of workers is due to a number of factors. Among them are pay, working conditions, lack of support, lack of autonomy, and the changing curriculum. The shortage of teachers will inevitably cause a decline in educational standards. The shortage is crucially important to educational outcomes. Class sizes are rising, causing a detrimental effect on these outcomes. As the number of available teachers declines, class sizes have to increase to compensate. Having more kids in a class can also affect teacher performance—more books to mark, more children to monitor, more children's behavior that needs managing. The pressure on teachers to obtain high test scores amps up stress further. It creates a vicious cycle, and it is starting to snowball. The shortage is only set to increase unless something changes. Impact on Quality The shortage of teachers will inevitably cause a decline in educational standards. Principals face a shortage of highly qualified teachers. The natural response for them is to hire less qualified teachers, hire teachers trained in another field or grade, or make use of unqualified substitute teachers. This means students are being taught by teachers who lack sufficient skills and knowledge. According to the National Commission on Teaching and America's Future: Studies discover again and again that teacher expertise is one of the most important factors in determining student achievement, followed by the smaller but generally positive influences of small schools and small class sizes. That is, teachers who know a lot about teaching and learning who work in environments that allow them to know students well are the critical elements of successful learning. Teachers matter more to student achievement than any other factor. In fact, research by Chlotfelter, Ladd, & Vigdor states that teacher qualifications predict more of the difference in educational gains than race and parent education combined.

#### Status Quo policies make the opportunity cost for teacher strikes too high

**Casey 20** Leo Casey, 12-2-2020, "The Teacher Strike: Conditions for Success," Dissent Magazine, <https://www.dissentmagazine.org/online_articles/the-teacher-strike-conditions-for-success>

The most essential organizational task is winning and keeping the allegiance of teachers to the strike. Teachers are knowledgeable and discerning political actors. They understand full well that strikes are a high-intensity and high-risk tactic, with the potential both to deliver advances and victories that could not be otherwise obtained and to end in major setbacks and defeats. The risk side of this equation is particularly acute in the three-quarters of all states where teacher strikes are illegal; in these states, striking becomes an act of civil disobedience and can result in severe penalties to teachers and their unions. To be willing to go on strike and stay out until a settlement is won, therefore, teachers need to be convinced on a number of different counts: first, that they are fighting for important, worthwhile objectives; second, that those objectives cannot be achieved through other means that are not as high-intensity and high-risk as a strike; third, that the strike has reasonable prospects of success; fourth, that the strike objectives have strong support in the community; and fifth, that the solidarity among teachers, which is essential to a strike’s success, is strong and will hold. In significant measure, the last of these points is dependent not simply on the organization and mobilization of the strike, but also on the four antecedent conditions. If teachers become doubtful on any of these points, it will become difficult to mount or sustain a successful strike.

#### That causes teachers uproot and quitting through unsatisfaction

**Carpenter 17** Jennifer Carpenter., 05-17-21, "Opinion: Protect local control for schools," Burlington Free Press, https://www.burlingtonfreepress.com/story/opinion/my-turn/2017/05/17/opinion-protect-local-control-schools/101726614/

The most crucial part of the proposal put forward by House Speaker Mitzi Johnson and President Pro Tem Tim Ashe is that it protects local control of schools. Statewide health insurance negotiations for teachers is the first step towards a statewide teachers’ contract, kneecapping school boards and paving the way towards a single, statewide school district. That is unacceptable, but it is the hill Gov. Scott and his Republican allies have decided to make their stand on. It is telling that Sen. Degree, one of Gov. Scott’s strongest supporters, included in his proposed amendment a clause that would have removed teachers’ right to strike. That shows their true intentions. When teachers’ needs are not met, students’ needs will not be met, and we will be unable to retain and attract a workforce of young families which is critical to the revitalization of our state’s economy. There will be no incentive for the teaching profession to attract and retain new teachers to the field if our state government teaches our community that teachers have no say over their working conditions and therefore are not valued. Schools need teachers and we need enrollment of students. Teachers and families of school age children will simply uproot and go elsewhere to have their needs met, jeopardizing our educational system, our school-age population and workforce. A “one-size-fits-all” approach from our state government cannot possibly work across the board for every school. Having worked in four different school districts in the state, I have been exposed to potential consequences of centralized control. I recall an emergency meeting at one of those districts in 2016 between administration and teachers where there were very tense discussions on what the initial proposal of Act 46 per-pupil spending cap would have meant for the school. Had the administration and teachers not pulled together to discuss and demand more for their programs and allowed a reckless centralized decision to go forth, to paraphrase one of the teachers present at this meeting, the initial Act 46 proposal would have destroyed the institution, as it would have meant dismantling most aspects of the curriculum that would render the students to be competitive for college and in the workforce, as the cuts were too severe of an impact on the school programs to justify sending anyone there. As a result, several teachers said they would have been prepared to pull their own children from the school and move out of the area. This is only one example of how allowing the state to have centralized control, which has proved to be an approach lacking in carefully frontloaded research and detailed examination of impact on programs and teachers, would have devastating consequences on local communities.

#### The pandemic slowed growth, but it’s not irreversible – education improvement can turn the tide.

Hanushek and Woessmann 20 (Eric, award-winning economist and PhD Economics @ MIT, and Ludger, Prof. Economics @ Ludwig Maximillian University of Munich, September 2021, "The Economic Impact of Learning Losses,” https://www.oecd.org/education/The-economic-impacts-of-coronavirus-covid-19-learning-losses.pdf) AG

As a result of the schools being closed due to the COVID-19 pandemic, classes were almost universally disrupted for months in the first half of 2020. As pupils gradually return to school, the high costs of not learning should be taken into account. The future impact of past and future learning losses need to be considered when it comes to the design of mixed in-person and home learning and when classes are potentially cancelled again locally or regionally due to newly occurring infections. Roughly speaking, research in the economics of education shows that each additional year of schooling increases life income by an average of 7.5-10%. In other words, a loss of one third of a school year’s worth of learning would reduce the subsequent earned income of the pupils concerned by about 3%. Beyond crudely measured school attainment, the loss in cognitive skills resulting from school closures and the untested ways of re-opening is the larger issue. The different ways of estimating the economic costs of the pandemic for current students provide consistent estimates of today’s learning challenges. The costs of school closure and the associated learning losses go beyond the lower incomes that this cohort of students can expect. A less skilled work force also implies lower rates of national economic growth. A loss of one-third of a year in effective learning for just the students affected by the closures of early 2020 The Economic Impacts of Learning Losses | © OECD 2020 13 will, by historical data, lower a country’s GDP by an average of 1.5% over the remainder of the century. If the re-opened schools (which also involve new students) are not up to the same standard as before the pandemic, the impacts on future economic well-being will be proportionately larger. In addition to the economic effects of the cognitive skill losses emphasised here, there are other potentially important costs due to losses in social-emotional development of children, although neither the magnitude nor the economic impact of these are currently known. There is considerable anecdotal evidence that children from disadvantaged backgrounds and pupils with learning difficulties have a particularly difficult time coping with the home-learning phase. Due to the very different pressures, school closures threaten to become a major burden on the equality of educational opportunities and lead to increased inequality in society. Immediate concrete measures need to be taken to provide effective learning for all age groups, albeit in an adapted format – from improving distance learning to developing constructive ways to re-open schools to all children and adolescents. Because school attendance will likely remain disrupted for some time to come, the serious costs of not learning must be considered and comprehensive measures must be taken to ensure that learning takes place everywhere again. Indeed, as described, it is possible and important to build upon the new organisation of schools to ensure that the schools are actually superior to the pre-COVID schools. Unless schools get better, the current students will be significantly harmed. Moreover, the harm will disproportionately fall on disadvantaged students. Substantial learning differences across countries, closely related to institutional structures of their school systems, indicate that improvements are possible (Hanushek and Woessmann, 2011[12]; Woessmann, 2016[11]). Therefore, permanent learning losses are not inevitable if countries improve the learning gains of their students in the future.

#### High-quality education solves sustainable development.

WEF 15 (World Economic Forum, world-renowned economic/leadership organization, 5-19-2015, "Why education is the key to sustainable development," World Economic Forum, <https://www.weforum.org/agenda/2015/05/why-education-is-the-key-to-sustainable-development/>) AG

A strong education system broadens access to opportunities, improves health, and bolsters the resilience of communities – all while fueling economic growth in a way that can reinforce and accelerate these processes. Moreover, education provides the skills people need to thrive in the new sustainable economy, working in areas such as renewable energy, smart agriculture, forest rehabilitation, the design of resource-efficient cities, and sound management of healthy ecosystems.

Perhaps most important, education can bring about a fundamental shift in how we think, act, and discharge our responsibilities toward one another and the planet. After all, while financial incentives, targeted policies, and technological innovation are needed to catalyze new ways of producing and consuming, they cannot reshape people’s value systems so that they willingly uphold and advance the principles of sustainable development. Schools, however, can nurture a new generation of environmentally savvy citizens to support the transition to a prosperous and sustainable future.

Some schools are already becoming learning labs for sustainable development, where young students are being prepared to adapt to and help mitigate the consequences of climate change. Guided by the UNFCCC – as well as related initiatives like the UN Alliance on Climate Change Education, Training, and Public Awareness – governments are increasingly integrating education strategies, tools, and targets into national development policies. The UNESCO-led UN Decade of Education for Sustainable Development, which began in 2005, was explicitly intended to instill in every human being “the knowledge, skills, attitudes, and values necessary to shape a sustainable future.”

Together, UNESCO and the UNFCCC are not only promoting climate-change education in schools; they are also giving teachers the tools and knowledge they need to provide that education through online courses. Already, more than 14 million students and 1.2 million teachers in 58 countries have been engaged in such learning, and 550 business schools have signed on to the Principles for Responsible Management Education, developed by the UN Global Compact.

This progress, though important, is just the beginning. What is needed now is a global movement, with every student in every country learning about sustainable development from well-trained teachers, equipped with the appropriate curricula and resources. An ambitious sustainable development agenda, together with a legally binding global climate deal, could go a long way toward catalyzing such a movement.

Of course, we cannot secure a sustainable future in a matter of months. But, with a well-designed set of commitments and targets, we can move onto the right path. And, with effective educational programs that instill in future generations the importance of restoring Earth’s balance and delivering a prosperous future for the many, rather than the few, we can stay on that path.

#### Econ decline escalates to full blown war

Liu 18 [Qian Liu, an economist based in China who works in collaboration with the World Economic Forum and Project Syndicate, World Economic Forum, “The next economic crisis could cause a global conflict. Here’s why”, https://www.weforum.org/agenda/2018/11/the-next-economic-crisis-could-cause-a-global-conflict-heres-why, 11/13/18] JN

The next economic crisis could cause a global conflict. Here's why The response to the 2008 economic crisis has relied far too much on monetary stimulus, in the form of quantitative easing and near-zero (or even negative) interest rates, and included far too little structural reform. This means that the next crisis could come soon – and pave the way for a large-scale military conflict. The next economic crisis is closer than you think. But what you should really worry about is what comes after: in the current social, political, and technological landscape, a prolonged economic crisis, combined with rising income inequality, could well escalate into a major global military conflict. The 2008-09 global financial crisis almost bankrupted governments and caused systemic collapse. Policymakers managed to pull the global economy back from the brink, using massive monetary stimulus, including quantitative easing and near-zero (or even negative) interest rates. But monetary stimulus is like an adrenaline shot to jump-start an arrested heart; it can revive the patient, but it does nothing to cure the disease. Treating a sick economy requires structural reforms, which can cover everything from financial and labor markets to tax systems, fertility patterns, and education policies. Policymakers have utterly failed to pursue such reforms, despite promising to do so. Instead, they have remained preoccupied with politics. From Italy to Germany, forming and sustaining governments now seems to take more time than actual governing. And Greece, for example, has relied on money from international creditors to keep its head (barely) above water, rather than genuinely reforming its pension system or improving its business environment. The lack of structural reform has meant that the unprecedented excess liquidity that central banks injected into their economies was not allocated to its most efficient uses. Instead, it raised global asset prices to levels even higher than those prevailing before 2008. In the United States, housing prices are now 8% higher than they were at the peak of the property bubble in 2006, according to the property website Zillow. The price-to-earnings (CAPE) ratio, which measures whether stock-market prices are within a reasonable range, is now higher than it was both in 2008 and at the start of the Great Depression in 1929. As monetary tightening reveals the vulnerabilities in the real economy, the collapse of asset-price bubbles will trigger another economic crisis – one that could be even more severe than the last, because we have built up a tolerance to our strongest macroeconomic medications. A decade of regular adrenaline shots, in the form of ultra-low interest rates and unconventional monetary policies, has severely depleted their power to stabilize and stimulate the economy. If history is any guide, the consequences of this mistake could extend far beyond the economy. According to Harvard’s Benjamin Friedman, prolonged periods of economic distress have been characterized also by public antipathy toward minority groups or foreign countries – attitudes that can help to fuel unrest, terrorism, or even war. For example, during the Great Depression, US President Herbert Hoover signed the 1930 Smoot-Hawley Tariff Act, intended to protect American workers and farmers from foreign competition. In the subsequent five years, global trade shrank by two-thirds. Within a decade, World War II had begun. To be sure, WWII, like World War I, was caused by a multitude of factors; there is no standard path to war. But there is reason to believe that high levels of inequality can play a significant role in stoking conflict. According to research by the economist Thomas Piketty, a spike in income inequality is often followed by a great crisis. Income inequality then declines for a while, before rising again, until a new peak – and a new disaster. Though causality has yet to be proven, given the limited number of data points, this correlation should not be taken lightly, especially with wealth and income inequality at historically high levels. This is all the more worrying in view of the numerous other factors stoking social unrest and diplomatic tension, including technological disruption, a record-breaking migration crisis, anxiety over globalization, political polarization, and rising nationalism. All are symptoms of failed policies that could turn out to be trigger points for a future crisis. Voters have good reason to be frustrated, but the emotionally appealing populists to whom they are increasingly giving their support are offering ill-advised solutions that will only make matters worse. For example, despite the world’s unprecedented interconnectedness, multilateralism is increasingly being eschewed, as countries – most notably, Donald Trump’s US – pursue unilateral, isolationist policies. Meanwhile, proxy wars are raging in Syria and Yemen. Against this background, we must take seriously the possibility that the next economic crisis could lead to a large-scale military confrontation. By the logic of the political scientist Samuel Huntington , considering such a scenario could help us avoid it, because it would force us to take action. In this case, the key will be for policymakers to pursue the structural reforms that they have long promised, while replacing finger-pointing and antagonism with a sensible and respectful global dialogue. The alternative may well be global conflagration.

#### Education k2 innovation to develop new strategies to combat emerging threats

Peter **Serdyukov 17**. National University, La Jolla, California. 03/27/2017. “Innovation in Education: What Works, What Doesn’t, and What to Do about It?” Journal of Research in Innovative Teaching & Learning, vol. 10, no. 1, pp. 4–33.

Introduction Education, being a social institution serving the needs of society, is indispensable for society to survive and thrive. It should be not only comprehensive, sustainable, and superb, but must continuously evolve to meet the challenges of the fast-changing and unpredictable globalized world. This evolution must be systemic, consistent, and scalable; therefore, school teachers, college professors, administrators, researchers, and policy makers are expected to innovate the theory and practice of teaching and learning, as well as all other aspects of this complex organization to ensure quality preparation of all students to life and work. Here we present a systemic discussion of educational innovations, identify the barriers to innovation, and outline potential directions for effective innovations. We discuss the current status of innovations in US education, what educational innovation is, how innovations are being integrated in schools and colleges, why innovations do not always produce the desired effect, and what should be done to increase the scale and rate of innovation-based transformations in our education system. We then offer recommendations for the growth of educational innovations. As examples of innovations in education, we will highlight online learning and time efficiency of learning using accelerated and intensive approaches. Innovations in US education For an individual, a nation, and humankind to survive and progress, innovation and evolution are essential. Innovations in education are of particular importance because education plays a crucial role in creating a sustainable future. “Innovation resembles mutation, the biological process that keeps species evolving so they can better compete for survival” (Hoffman and Holzhuter, 2012, p. 3). Innovation, therefore, is to be regarded as an instrument of necessary and positive change. Any human activity (e.g. industrial, business, or educational) needs constant innovation to remain sustainable. The need for educational innovations has become acute. “It is widely believed that countries’ social and economic well-being will depend to an ever greater extent on the quality of their citizens’ education: the emergence of the so-called ‘knowledge society’, the transformation of information and the media, and increasing specialization on the part of organizations all call for high skill profiles and levels of knowledge. Today’s education systems are required to be both effective and efficient, or in other words, to reach the goals set for them while making the best use of available resources” (Cornali, 2012, p. 255). According to an Organization for Economic Cooperation and Development (OECD) report, “the pressure to increase equity and improve educational outcomes for students is growing around the world” (Vieluf et al., 2012, p. 3). In the USA, underlying pressure to innovate comes from political, economic, demographic, and technological forces from both inside and outside the nation. Many in the USA seem to recognize that education at all levels critically needs renewal: “Higher education has to change. It needs more innovation” (Wildavsky et al., 2012, p. 1). This message, however, is not new – in the foreword to the 1964 book entitled Innovation in Education, Arthur Foshay, Executive Officer of The Horace Mann-Lincoln Institute of School Experimentation, wrote, “It has become platitudinous to speak of the winds of change in education, to remind those interested in the educational enterprise that a revolution is in progress. Trite or not, however, it is true to say that changes appear wherever one turns in education” (Matthew, 1964, p. v).

#### Global challenges are increasing and require innovating learning---otherwise automation causes social instability and transnational threats overwhelm public responses.

Rebecca Winthrop & Eileen Mcgivney 16, senior fellow and director of the Center for Universal Education at the Brookings Institution, 9-12-2016, "Rethinking Education in a Changing World (SSIR)," No Publication, https://ssir.org/articles/entry/rethinking\_education\_in\_a\_changing\_world

Earlier this year, we visited developers from IBM Watson, famous for creating the intelligent machine that beat both the world’s top chess player and the long-time Jeopardy! champion. IBM’s work to simulate the intelligence and actions of humans has reached the level of science fiction, prompting the question: What will the world look like in the future? Depending on which economist you talk to, advances in technology such as AI either hold incredible promise—enabling increases in productivity that will give us twice as much leisure time—or mark the end of decent work for most of the population and an incredible increase in inequality. Skills that allow young people to adapt to rapid change could be an important factor in determining whether the future is full of promise or peril. Automation has hollowed out the labor market, leaving many middle-skilled workers out of work or in low-wage jobs, a phenomenon documented in more than 30 countries across the developed and developing world. On the other hand, the skills that are uniquely human and that complement digital technologies are increasingly in demand. These skills, such as communication, teamwork, critical thinking, and flexibility, have always been important for work and life, but the current context makes them even more crucial for future generations. A 70-country study by the McKinsey Global Institute estimates that by 2020, approximately 83 million high- and middle-skilled jobs will go unfilled because employers looking to hire in developed and developing countries will not find people with the necessary skills. Not only individuals’ future employment needs, but also ever-more-complex global challenges demand a new approach to education. As boundaries between nations and communities that once contained our problems fade, we will need creative solutions to problems such as climate change, the global migrant crisis, and, as the spread of the Zika virus reminds us, cross-border health epidemics. We need to foster good global citizens who actively care about their communities and the world, work together to solve problems across boundaries, and contribute to more inclusive and peaceful societies. Throughout history, every society has grappled with how to best educate and prepare its young people for the world they will face. From hunter-gatherers thousands of years ago who had to impart vast amounts of knowledge about plants, animals, and relations between tribes to their youth, to craftsmen who taught trades through apprenticeships that defined education for many young men in the 18th and 19th centuries, humans have adapted education to meet the needs and challenges of the time. Our current world and the changes we predict for the future call for education to equip every young person with the appropriate set of skills. Academic skills—such as mastery of reading, math, and science—are crucial but not sufficient. Young people increasingly need to be able to do such things as develop ideas, empathize with others, and collaboratively problem-solve; they also need to have the resilience and adaptability to continue to learn and master new things. Indeed, some learning scientists argue that these non-academic skills are among the most important skills of all, as they can help to both drive better academic outcomes in school and prepare children to thrive in a changing world. The problem is that most children are not participating in the learning experiences that would help them develop this full breadth of skills. Opportunities to engage in the types of experiences in and out of school that do promote these skills are too often unequally distributed between richer and poorer children, perpetuating deep inequities both between and within nations. We know more about young people’s academic competence, including their ability to think critically and analytically, than their non-academic skills, due to regular international student assessments in subjects such as math, reading, and science. The United States, which regularly beats itself up about the quality of its education system, actually has some of the best schools in the world, but stark inequities hold it back. Students in the state of Massachusetts, for example, achieve scores equivalent to the top 10 high-income countries in the world, demonstrating strong problem-solving and critical thinking skills in math. However, scores of students in Mississippi are tied with Chile for second-to-last place on the same list, beating out only Mexico. Most students in low- and middle-income countries, those where per-capita income is less than $12,475 per year, perform far worse in academic competence than even the least accomplished students in the United States. By one estimate of reading and math skills, an average student in these countries scores alongside the worst 8 percent of students in countries where the annual per-capita income is above $12,475. And that only considers the students who are in school and being tested—not the 120 million kids shut out of academic learning all together, of which more than 96 percent live in developing countries. Based on a number of measures of academic learning and school completion, we have found that at the current pace of change, it would take nearly 100 years to close the education gap between rich and poor countries. We know much less about children’s non-academic skills, largely because they are not easily captured in international student assessments. However, we do know that many educators, employers, and academics are deeply worried that children’s learning experiences often do not enable them to develop the full breadth of skills they need. For example, employers around the world regularly express unhappiness with young people’s lack of “workplace competencies” like communication and teamwork. The foundation for these and other skills, such as creativity and learning agility, are laid in early childhood, and we know that globally a full 200 million children below the age of 5 are not achieving proper cognitive development due to impoverished early childhood experiences that include poor nutrition and lack of stimulation. We also know that children from high-income families struggle to master the full range of skills necessary, even if they perform well on academic measures, often because parents and schools do not provide learning experiences that would cultivate skills and attitudes such as the ability to work hard to meet goals and resilience in the face of failure. Ultimately, we need to redefine the basics to include the full breadth of academic and non-academic skills that all children, rich and poor alike, need. Then we need to rethink how to help children have the types of learning experiences—both in and outside of school—that can help cultivate these skills.

#### Extinction—climate innovation is the only way to avoid tipping points.

Naam, fellow of the Institute for Ethics and Emerging Technologies, 13

(Ramez, former Microsoft executive, "How Innovation Could Save the Planet", World Future Society, The Futurist, 2013 Issues of The Futurist, March-April 2013 (Vol. 47, No. 2), www.wfs.org/futurist/2013-issues-futurist/march-april-2013-vol-47-no-2/how-innovation-could-save-planet)

The Best of Times: Unprecedented Prosperity There are many ways in which we are living in the most wonderful age ever. We can imagine we are heading toward a sort of science-fiction utopia, where we are incredibly rich and incredibly prosperous, and the planet is healthy. But there are other reasons to fear that we’re headed toward a dystopia of sorts. Ramez Naam spoke at WorldFuture 2013, the annual conference of the World Future Society in Chicago, in July of 2013. On the positive side, life expectancy has been rising for the last 150 years, and faster since the early part of the twentieth century in the developing world than it has in the rich world. Along with that has come a massive reduction in poverty. The most fundamental empowerer of humans—education—has also soared, not just in the rich world, but throughout the world. Another great empowerer of humanity is connectivity: Access to information and access to communication both have soared. The number of mobile phones on the planet was effectively zero in the early 1990s, and now it’s in excess of 4 billion. More than three-quarters of humanity, in the span of one generation, have gotten access to connectivity that, as my friend Peter Diamandis likes to say, is greater than any president before 1995 had. A reasonably well-off person in India or in Nigeria has better access to information than Ronald Reagan did during most of his career. With increased connectivity has come an increase in democracy. As people have gotten richer, more educated, more able to access information, and more able to communicate, they have demanded more control over the places where they live. The fraction of nations that are functional democracies is at an all-time high in this world—more than double what it was in the 1970s—with the collapse of the Soviet Union.\* Economically, the world is a more equal place than it has been in decades. In the West, and especially in the United States, we hear a lot about growing inequality, but on a global scale, the opposite is true. As billions are rising out of poverty around the world, the global middle classes are catching up with the global rich. In many ways, this is the age of the greatest human prosperity, freedom, and potential that has ever been on the face of this planet. But in other ways, we are facing some of the largest risks ever. The Worst of Times: The Greatest Risks At its peak, the ancient Mayan city of Tikal was a metropolis, a city of 200,000 people inside of a civilization of about 20 million people. Now, if you walk around any Mayan city, you see mounds of dirt. That’s because these structures were all abandoned by about the mid-900s AD. We know now what happened: The Mayan civilization grew too large. It overpopulated. To feed themselves, they had to convert forest into farmland. They chopped down all of the forest. That, in turn, led to soil erosion. It also worsened drought, because trees, among other things, trap moisture and create a precipitation cycle. When that happened, and was met by some normal (not human-caused) climate change, the Mayans found they didn’t have enough food. They exhausted their primary energy supply, which is food. That in turn led to more violence in their society and ultimately to a complete collapse. The greatest energy source for human civilization today is fossil fuels. Among those, none is more important than oil. In 1956, M. King Hubbert looked at production in individual oil fields and predicted that the United States would see the peak of its oil production in 1970 or so, and then drop. His prediction largely came true: Oil production went up but did peak in the 1970s, then plummeted. Oil production has recently gone up in the United States a little bit, but it’s still just barely more than half of what it was in its peak in the 1970s. Hubbert also predicted that the global oil market would peak in about 2000, and for a long time he looked very foolish. But it now has basically plateaued. Since 2004, oil production has increased by about 4%, whereas in the 1950s it rose by about 4% every three months. We haven’t hit a peak; oil production around the world is still rising a little bit. It’s certainly not declining, but we do appear to be near a plateau; supply is definitely rising more slowly than demand. Though there’s plenty of oil in the ground, the oil that remains is in smaller fields, further from shore, under lower pressure, and harder to pump out. Water is another resource that is incredibly precious to us. The predominant way in which we use water is through the food that we eat: 70% of the freshwater that humanity uses goes into agriculture. The Ogallala Aquifer, the giant body of freshwater under the surface of the Earth in the Great Plains of the United States, is fossil water left from the melting and the retreat of glaciers in the end of the last Ice Age, 12,000–14,000 years ago. Its refill time is somewhere between 5,000 and 10,000 years from normal rainfall. Since 1960, we’ve drained between a third and a half of the water in this body, depending on what estimate you look at. In some areas, the water table is dropping about three feet per year. If this was a surface lake in the United States or Canada, and people saw that happening, they’d stop it. But because it’s out of sight, it’s just considered a resource that we can tap. And indeed, in the north Texas area, wells are starting to fail already, and farms are being abandoned in some cases, because they can’t get to the water that they once did. Perhaps the largest risk of all is climate change. We’ve increased the temperature of the planet by about 2°F in the last 130 years, and that rate is accelerating. This is primarily because of the carbon dioxide we’ve put into the atmosphere, along with methane and nitrous oxide. CO2 levels, now at over 390 parts per million, are the highest they’ve been in about 15 million years. Ice cores go back at least a million years, and we know that they’re the highest they’ve been in that time. Historically, when CO2 levels are high, temperature is also high. But also, historically, in the lifetime of our species, we’ve actually never existed as human beings while CO2 levels have been this high. For example, glaciers such as the Bear and Pedersen in Alaska have disappeared just since 1920. As these glaciers melt, they produce water that goes into the seas and helps to raise sea levels. Over the next century, the seas are expected to rise about 3 to 6 feet. Most of that actually will not be melting glaciers; it’s thermal expansion: As the ocean gets warmer, it gets a little bit bigger. But 3 to 6 feet over a century doesn’t sound like that big a deal to us, so we think of that as a distant problem. The reality is that there’s a more severe problem with climate change: its impact on the weather and on agriculture. In 2003, Europe went through its worst heat wave since 1540. Ukraine lost 75% of its wheat crop. In 2009, China had a once-in-a-century level drought; in 2010 they had another once-in-a-century level drought. That’s twice. Wells that had given water continuously since the fifteenth century ran dry. When those rains returned, when the water that was soaked up by the atmosphere came back down, it came down on Pakistan, and half of Pakistan was under water in the floods of 2010. An area larger than Germany was under water. Warmer air carries more water. Every degree Celsius that you increase the temperature value of air, it carries 7% more water. But it doesn’t carry that water uniformly. It can suck water away from one place and then deliver it in a deluge in another place. So both the droughts are up and flooding is up simultaneously, as precipitation becomes more lumpy and more concentrated. In Russia’s 2010 heat wave, 55,000 people died, 11,000 of them in Moscow alone. In 2011, the United States had the driest 10-month period ever in the American South, and Texas saw its worst wildfires ever. And 2012 was the worst drought in the United States since the Dust Bowl—the corn crop shrank by 20%. So that’s the big risk the world faces: that radical weather will change how we grow food, which is still our most important energy source—even more important than fossil fuels. A number of people in the environmentalist movement are saying that we have to just stop growing. For instance, in his book Peak Everything: Waking Up to the Century of Declines, Richard Heinberg of the Post-Carbon Institute says that the Earth is full. Get used to it, and get ready for a world where you live with less wealth, and where your children live with less wealth, than any before. I don’t think this idea of stopping growth is realistic, because there are a top billion people who live pretty well and there are another 6 billion who don’t and are hungry for it. We see demand rising for everything—water, food, energy—and that demand is rising not in the United States or Europe or Canada or Australia. It’s rising in the developing world. This is the area that will create all of the increased demand for physical resources. Even if we could, by some chance, say That’s enough, sorry, we’re not going to let you use these resources, which is doubtful, it wouldn’t be just, because the West got rich by using those natural resources. So we need to find a different way. Ideas as a Resource Expander, Resource Preserver, and Waste Reducer The best-selling environmental book of all time, Limits to Growth, was based on computer modeling. It was a simple model with only about eight variables of what would happen in the world. It showed that economic growth, more wealth, would inevitably lead to more pollution and more consumption of finite resources, which would in turn take us beyond the limits and lead ultimately to collapse. While it’s been widely reported recently that its predictions are coming true, that’s actually not the case. If you look at the vast majority of the numbers that the researchers predict in this model, they’re not coming true. Why did they get these things wrong? The most important thing that the forecasters did was underestimate the power of new ideas to expand resources, or to expand wealth while using fewer resources. Ideas have done tremendous things for us. Let’s start with food. In The Population Bomb (1968), Paul Ehrlich predicted that food supply could not support the population, just as Malthus did. But what’s happened is that we’ve doubled population since 1960, and we’ve nearly tripled the food supply in total. We’ve increased by 30%–40% the food supply per person since the 1960s. Let’s look at this on a very long time scale. How many people can you feed with an acre of land? Before the advent of agriculture, an acre of land could feed less than a thousandth of a person. Today it’s about three people, on average, who can be fed by one acre of land. Pre-agriculture, it took 3,000 acres for one person to stay alive through hunting and gathering. With agriculture, that footprint has shrunk from 3,000 acres to one-third of one acre. That’s not because there’s any more sunlight, which is ultimately what food is; it’s because we’ve changed the productivity of the resource by innovation in farming—and then thousands of innovations on top of that to increase it even more. In fact, the reason we have the forests that we have on the planet is because we were able to handle a doubling of the population since 1960 without increasing farmland by more than about 10%. If we had to have doubled our farmland, we would have chopped down all the remaining forests on the planet. Ideas can reduce resource use. I can give you many other examples. In the United States, the amount of energy used on farms per calorie grown has actually dropped by about half since the 1970s. That’s in part because we now only use about a tenth of the energy to create synthetic nitrogen fertilizer, which is an important input. The amount of food that you can grow per drop of water has roughly doubled since the 1980s. In wheat, it’s actually more than tripled since 1960. The amount of water that we use in the United States per person has dropped by about a third since the 1970s, after rising for decades. As agriculture has gotten more efficient, we’re using less water per person. So, again, ideas can reduce resource use. Ideas can also find substitutes for scarce resources. We’re at risk of running out of many things, right? Well, let’s think about some things that have happened in the past. The sperm whale was almost hunted into extinction. Sperm whales were, in the mid-1800s, the best source of illumination. Sperm whale oil—spermaceti—was the premier source of lighting. It burned without smoke, giving a clear, steady light, and the demand for it led to huge hunting of the sperm whales. In a period of about 30 years, we killed off about a third of the sperm whales on the planet. That led to a phenomenon of “peak sperm-whale oil”: The number of sperm whales that the fleet could bring in dropped over time as the sperm whales became more scarce and more afraid of human hunters. Demand rose as supply dropped, and the prices skyrocketed. So it looked a little bit like the situation with oil now. That was solved not by the discovery of more sperm whales, nor by giving up on this thing of lighting. Rather, Abraham Gesner, a Canadian, discovered this thing called kerosene. He found that, if he took coal, heated it up, captured the fumes, and distilled them, he could create this fluid that burned very clear. And he could create it in quantities thousands of times greater than the sperm whales ever could have given up. We have no information suggesting that Gesner was an environmentalist or that he cared about sperm whales at all. He was motivated by scientific curiosity and by the huge business opportunity of going after this lighting market. What he did was dramatically lower the cost of lighting while saving the sperm whales from extinction. One more thing that ideas can do is transform waste into value. In places like Germany and Japan, people are mining landfills. Japan estimates that its landfills alone contain 10-year supplies of gold and rare-earth minerals for the world market. Alcoa estimates that the world’s landfills contain a 15-year supply of aluminum. So there’s tremendous value. When we throw things away, they’re not destroyed. If we “consume” things like aluminum, we’re not really consuming it, we’re rearranging it. We’re changing where it’s located. And in some cases, the concentration of these resources in our landfills is actually higher than it was in our mines. What it takes is energy and technology to get that resource back out and put it back into circulation. Ideas for Stretching the Limits So ideas can reduce resource use, can find substitutes for scarce resources, and can transform waste into value. In that context, what are the limits to growth? Is there a population limit? Yes, there certainly is, but it doesn’t look like we’re going to hit that. Projections right now are that, by the middle of this century, world population will peak between 9 billion and 10 billion, and then start to decline. In fact, we’ll be talking much more about the graying of civilization, and perhaps underpopulation—too-low birthrates on a current trend. What about physical resources? Are there limits to physical resource use on this planet? Absolutely. It really is a finite planet. But where are those limits? To illustrate, let’s start with energy. This is the most important resource that we use, in many ways. But when we consider all the fossil fuels that humanity uses today—all the oil, coal, natural gas, and so on—it pales in comparison to a much larger resource, all around us, which is the amount of energy coming in from our Sun every day. The amount of energy from sunlight that strikes the top of the atmosphere is about 10,000 times as much as the energy that we use from fossil fuels on a daily basis. Ten seconds of sunlight hitting the Earth is as much energy as humanity uses in an entire day; one hour of sunlight hitting the Earth provides as much energy to the planet as a whole as humanity uses from all sources combined in one year. This is an incredibly abundant resource. It manifests in many ways. It heats the atmosphere differentially, creating winds that we can capture for wind power. It evaporates water, which leads to precipitation elsewhere, which turns into things like rivers and waterfalls, which we can capture as hydropower. But by far the largest fraction of it—more than half—is photons hitting the surface of the Earth. Those are so abundant that, with one-third of 1% of the Earth’s land area, using current technology of about 14%-efficient solar cells, we could capture enough electricity to power all of current human needs. The problem is not the abundance of the energy; the problem is cost. Our technology is primitive. Our technology for building solar cells is similar to our technology for manufacturing computer chips. They’re built on silicon wafers in clean rooms at high temperatures, and so they’re very, very expensive. But innovation has been dropping that cost tremendously. Over the last 30 years, we’ve gone from a watt of solar power costing $20 to about $1. That’s a factor of 20. We roughly drop the cost of solar by one-half every decade, more or less. That means that, in the sunniest parts of the world today, solar is now basically at parity in cost, without subsidies, with coal and natural gas. Over the next 12–15 years, that will spread to most of the planet. That’s incredibly good news for us. Of course, we don’t just use energy while the Sun is shining. We use energy at night to power our cities; we use energy in things like vehicles that have to move and that have high energy densities. Both of these need storage, and today’s storage is actually a bigger challenge than capturing energy. But there’s reason to believe that we can tackle the storage problem, as well. For example, consider lithium ion batteries—the batteries that are in your laptop, your cell phone, and so on. The demand to have longer-lasting devices drove tremendous innovations in these batteries in the 1990s and the early part of the 2000s. Between 1991 and 2005, the cost of storage in lithium ion batteries dropped by about a factor of nine, and the density of storage—how much energy you can store in an ounce of battery—increased by a little over double in that time. If we do that again, we would be at the point where grid-scale storage is affordable and we can store that energy overnight. Our electric vehicles have ranges similar to the range you can get in a gasoline-powered vehicle. This is a tall order. This represents perhaps tens of billions of dollars in R&D, but it is something that is possible and for which there is precedent. Another approach being taken is turning energy into fuel. When you use a fuel such as gasoline, it’s not really an energy source. It’s an energy carrier, an energy storage system, if you will. You can store a lot of energy in a very small amount. Today, two pioneers in genome sequencing—Craig Venter and George Church—both have founded companies to create next-generation biofuels. What they’re both leveraging is that gene-sequencing cost is the fastest quantitative area of progress on the planet. What they’re trying to do is engineer microorganisms that consume CO2, sunlight, and sugar and actually excrete fuel as a byproduct. If we could do this, maybe just 1% of the Earth’s surface—or a thirtieth of what we use for agriculture—could provide all the liquid fuels that we need. We would conveniently grow algae on saltwater and waste water, so biofuel production wouldn’t compete for freshwater. And the possible yields are vast if we can get there. If we can crack energy, we can crack everything else: • Water. Water is life. We live in a water world, but only about a tenth of a percent of the water in the world is freshwater that’s accessible to us in some way. Ninety-seven percent of the world’s water is in the oceans and is salty. It used to be that desalination meant boiling water and then catching the steam and letting it condense. Between the times of the ancient Greeks and 1960, desalination technology didn’t really change. But then, it did. People started to create membranes modeled on what cells do, which is allow some things through but not others. They used plastics to force water through and get only the fresh and not the salty. As a result, the amount of energy it takes to desalinate a liter of water has dropped by about a factor of nine in that time. Now, in the world’s largest desalination plants, the price of desalinated water is about a tenth of a cent per gallon. The technology has gotten to the point where it is starting to become a realistic option as an alternative to using up scarce freshwater resources. • Food. Can we grow enough food? Between now and 2050, we have to increase food yield by about 70%. Is that possible? I think it is. In industrialized nations, food yields are already twice what they are in the world as a whole. That’s because we have irrigation, tractors, better pesticides, and so on. Given such energy and wealth, we already know that we can grow enough food to feed the planet. Another option that’s probably cheaper would be to leverage some things that nature’s already produced. What most people don’t know is that the yield of corn per acre and in calories is about 70% higher than the yield of wheat. Corn is a C 4 photosynthesis crop: It uses a different way of turning sunlight and CO2 into sugars that evolved only 30 million years ago. Now, scientists around the world are working on taking these C 4 genes from crops like corn and transplanting them into wheat and rice, which could right away increase the yield of those staple grains by more than 50%. Physical limits do exist, but they are extremely distant. We cannot grow exponentially in our physical resource use forever, but that point is still at least centuries in the future. It’s something we have to address eventually, but it’s not a problem that’s pressing right now. • Wealth. One thing that people don’t appreciate very much is that wealth has been decoupling from physical resource use on this planet. Energy use per capita is going up, CO2 emissions per capita have been going up a little bit, but they are both widely outstripped by the amount of wealth that we’re creating. That’s because we can be more efficient in everything—using less energy per unit of food grown, and so on. This again might sound extremely counterintuitive, but let me give you one concrete example of how that happens. Compare the ENIAC—which in the 1940s was the first digital computer ever created—to an iPhone. An iPhone is billions of times smaller, uses billions of times less energy, and has billions of times more computing power than ENIAC. If you tried to create an iPhone using ENIAC technology, it would be a cube a mile on the side, and it would use more electricity than the state of California. And it wouldn’t have access to the Internet, because you’d have to invent that, as well. This is what I mean when I say ideas are the ultimate resource. The difference between an ENIAC and an iPhone is that the iPhone is embodied knowledge that allows you to do more with less resources. That phenomenon is not limited to high tech. It’s everywhere around us. So ideas are the ultimate resource. They’re the only resource that accumulates over time. Our store of knowledge is actually larger than in the past, as opposed to all physical resources. Challenges Ahead for Innovation Today we are seeing a race between our rate of consumption and our rate of innovation, and there are multiple challenges. One challenge is the Darwinian process, survival of the fittest. In areas like green tech, there will be hundreds and even thousands of companies founded, and 99% of them will go under. That is how innovation happens. The other problem is scale. Just as an example, one of the world’s largest solar arrays is at Nellis Air Force Base in California, and we would need about 10 million of these in order to meet the world’s electricity needs. We have the land, we have the solar energy coming in, but there’s a lot of industrial production that has to happen before we get to that point. Innovation is incredibly powerful, but the pace of innovation compared to the pace of consumption is very important. One thing we can do to increase the pace of innovation is to address the biggest challenge, which is market failure. In 1967, you could stick your hand into the Cuyahoga River, in Ohio, and come up covered in muck and oil. At that time, the river was lined with businesses and factories, and for them the river was a free resource. It was cheaper to pump their waste into the river than it was to pay for disposal at some other sort of facility. The river was a commons that anybody could use or abuse, and the waste they were producing was an externality. To that business or factory, there was no cost to pumping waste into this river. But to the people who depended upon the river, there was a high cost overall. That’s what I mean by a market externality and a market failure, because this was an important resource to all of us. But no one owned it, no one bought or sold it, and so it was treated badly in a way that things with a price are not. That ultimately culminated when, in June 1969, a railway car passing on a bridge threw a spark; the spark hit a slick of oil a mile long on the river, and the river burst into flames. The story made the cover of Time magazine. In many ways, the environmental movement was born of this event as much as it was of Rachel Carson’s Silent Spring. In the following three years, the United States created the Environmental Protection Agency and passed the Clean Water and Clean Air acts. Almost every environmental problem on the planet is an issue of the commons, whether it’s chopping down forests that no one owns, draining lakes that no one owns, using up fish in the ocean that no one owns, or polluting the atmosphere because no one owns it, or heating up the planet. They’re all issues of the commons. They’re all issues where there is no cost to an individual entity to deplete something and no cost to overconsume something, but there is a greater cost that’s externalized and pushed on everybody else who shares this. Now let’s come back again to what Limits to Growth said, which was that economic growth always led to more pollution and more consumption, put us beyond limits, and ends with collapse. So if that’s the case, all those things we just talked about should be getting worse. But as the condition of the Cuyahoga River today illustrates, that is not the case. GDP in the United States is three times what it was when the Cuyahoga River caught on fire, so shouldn’t it be more polluted? It’s not. Instead, it’s the cleanest it’s been in decades. That’s not because we stopped growth. It’s because we made intelligent choices about managing that commons. Another example: In the 1970s, we discovered that the ozone layer was thinning to such an extent that it literally could drive the extinction of all land species on Earth. But it’s actually getting better. It’s turned a corner, it’s improving ahead of schedule, and it’s on track to being the healthiest it’s been in a century. That’s because we’ve reduced the emissions of CFCs, which destroy ozone; we’ve dropped the amount of them that we emit into the atmosphere basically to zero. And yet industry has not ground to a halt because of this, either. Economic growth has not faltered. And one last example: Acid rain—which is primarily produced by sulfur dioxide emitted by coal-burning power plants—is mostly gone as an issue. Emissions of sulfur dioxide are down by about a factor of two. That’s in part because we created a strategy called cap and trade: It capped the amount of SO2 that you could emit, then allowed you to swap and buy emission credits from others to find the optimal way to do that. The cost, interestingly enough, has always been lower than projected. In each of these cases, industry has said, This will end things. Ronald Reagan’s chief of staff said the economy would grind to a halt, and the EPA would come in with lower cost estimates. But the EPA has always been wrong: The EPA cost estimate has always been too high. Analysis of all of these efforts in the past shows that reducing emissions is always cheaper than you expect, but cleaning up the mess afterwards is always more expensive than you’d guess. Today, the biggest commons issue is that of climate change, with the CO2 and other greenhouse gases that we’re pumping into the atmosphere. A logical thing to do would be to put a price on these. If you pollute, if you’re pumping CO2 into the atmosphere and it’s warming the planet, so you’re causing harm to other people in a very diffuse way. Therefore, you should be paying in proportion to that harm you’re doing to offset it. But if we do that, won’t that have a massive impact on the economy? This all relates to energy, which drives a huge fraction of the economy. Manufacturing depends on it. Transport depends on it. So wouldn’t it be a huge problem if we were to actually put a price on these carbon emissions? Well, there has been innovative thinking about that, as well. One thing that economists have always told us is that, if you’re going to tax, tax the bad, not the good. Whatever it is that you tax, you will get less of it. So tax the bad, not the good. The model that would be the ideal for putting a price on pollution is what we call a revenue-neutral model. Revenue-neutral carbon tax, revenue-neutral cap and trade. Let’s model it as a tax: Today, a country makes a certain amount of revenue for its government in income tax, let’s say. If you want to tax pollution, the way to do this without impacting the economy is to increase your pollution tax in the same manner that you decrease the income tax. The government then is capturing the same amount of money from the economy as a whole, so there’s no economic slowdown as a result of this. This has a positive effect on the environment because it tips the scales of price. Now, if you’re shopping for energy, and you’re looking at solar versus coal or natural gas, the carbon price has increased the price of coal and natural gas to you, but not the cost of solar. It shifts customer behavior from one to the other while having no net impact on the economy, and probably a net benefit on the economy in the long run as more investment in green energy drives the price down. Toward a Wealthier, Cleaner Future The number-one thing I want you to take away is that pollution and overconsumption are not inevitable outcomes of growth. While tripling the wealth of North America, for instance, we’ve gone from an ozone layer that was rapidly deteriorating to one that is bouncing back. The fundamental issue is not one of limits to growth; it’s one of the policy we choose, and it’s one of how we structure our economy to value all the things we depend upon and not just those things that are owned privately. What can we do, each of us? Four things: First is to communicate. These issues are divisive, but we know that beliefs and attitudes on issues like this spread word of mouth. They spread person to person, from person you trust to person you trust. So talk about it. Many of us have friends or colleagues or family on the other side of these issues, but talk about it. You’re better able to persuade them than anyone else is. Second is to participate. By that I mean politically. Local governments, state and province governments, and national governments are responsive when they hear from their constituents about these issues. It changes their attitudes. Because so few constituents actually make a call to the office of their legislator, or write a letter, a few can make a very large impact. Third is to innovate. These problems aren’t solved yet. We don’t have the technologies for these problems today. The trend lines look very good, but the next 10 years of those trend lines demand lots of bright people, lots of bright ideas, and lots of R&D. So if you’re thinking about a career change, or if you know any young people trying to figure out what their career is now, these are careers that (A) will be very important to us in the future and (B) will probably be quite lucrative for them.

### Solvency

#### Plan text: A just government ought to recognize an unconditional right of teachers to strike.

#### Strikes with institutional backing hold the biggest influence in gaging support and effective solutions – hinder employer monopsony power that drives teacher shortage in the first place

**Bahn 19** [(Kate, Kate Bahn is the director of labor market policy and interim chief economist at the Washington Center for Equitable Growth), “The once and future role of strikes in ensuring U.S. worker power”, Washington Center for Equitable Growth, 8/29/19] kzheng

Strikes have historically been one of the strongest tools used by unions to ensure they have power to engage in collective bargaining. But striking was viewed as a negative attribute in the survey done by Hertel-Fernandez, Kimball, and Kochan. Yet, when they presented workers with the hypothetical choice of a union exercising strike power with other attributes of unions, such as collective bargaining, support increased. But strikes, of course, do not take place in a bubble. The wider climate of worker bargaining power and institutions that support labor organizing plays a role in making this historically crucial tool effective again. So, too, does the power of employers to resist these organizing efforts when the labor market lacks competition that would increase worker bargaining power. The role of monopsony power in the U.S. labor market [Monopsony power](https://equitablegrowth.org/understanding-the-importance-of-monopsony-power-in-the-u-s-labor-market/) is a situation in the labor market where individual employers exercise effective control over wage setting rather than wages being set by competitive forces (akin to monopoly power, where a limited number of firms exercise pricing power over their customers.) In a new Equitable Growth [working paper](https://equitablegrowth.org/working-papers/how-does-market-power-affect-wages-monopsony-and-collective-action-in-an-institutional-context/) by Mark Paul of New College of Florida and Mark Stelzner of Connecticut College, the role of collective action in offsetting employer monopsony power is examined in the context of institutional support for labor. Paul and Stelzner construct an abstract model with the assumption of monopsonistic markets and follow the originator of monopsony theory Joan Robinson’s insight that unions can serve as a countervailing power against employer power. Their model shows that institutional support for unions, such as legislation protecting the right to organize, is necessary for this dynamic process of balancing employers’ monopsony power. In an accompanying [column](https://equitablegrowth.org/rethinking-collective-action-and-u-s-labor-laws-in-a-monopsonistic-economy/), the two researchers write that they “find that a lack of institutional support will devastate unions’ ability to function as a balance to firms’ monopsony power, potentially with major consequences … In turn, labor market outcomes will be less socially efficient.” In short, policies and enforcement that support collective action such as strikes not only creates benefits for workers directly but also addresses a larger problem of concentrated market power. The return of strikes in the U.S. labor market Within the past few years, strikes have been revived as a bargaining tool. “Red for Ed” became the name referring to teachers strikes that took place across traditionally conservative right-to-work states. Beginning with the closure of all schools in West Virginia in 2018 following 20,000 teachers across the state walking out, this movement spread to Oklahoma, Kentucky, Arizona, and Colorado, among other places. These strikes were led by rank-and-file union members, rather than by union leadership, rendering them illegal under the Taft-Hartley Act, which prohibits so-called wildcat strikes. These strikes led to [significant gains](https://www.cnn.com/2018/05/29/us/what-teachers-won-and-lost/index.html) for these public-sector workers through organizing against policymakers rather than direct management. Before Red for Ed, the “Fight for Fifteen” movement starting in 2012 and “OUR Walmart” starting in 2010 exemplified labor organizing in new mediums by conducting worker-led actions against large corporations that directly employ or control the employment (as in the franchisor-franchisee model) of low-wage workers. The efforts of [Fight for Fifteen](https://www.nytimes.com/2018/12/31/nyregion/15-minimum-wage-new-york.html) directly impacted New York state’s minimum wage increase to $15 per hour and has paved the way for a national movement for a higher minimum wage. OUR Walmart led [walkouts and Black Friday protests](https://www.thenation.com/article/great-walmart-walkout/) in the years leading up to [Walmart’s decision to increase wages](https://finance.yahoo.com/news/walmarts-hourly-wages-for-employees-will-go-beyond-15-probably-over-time-ceo-doug-mc-millon-160008612.html). Many structural changes, such as the fissuring of the workplace, have reduced the ability of private-sector unions to make gains against employers, yet these strikes and labor actions represent an opportunity for growth. With the U.S. labor market increasingly dominated by the services sector, these strikes were conducted by workers whose jobs cannot move elsewhere and whose work we interact with in our daily lives. Ruth Milkman of the City University of New York [describes these labor actions](https://www.gc.cuny.edu/CUNY_GC/media/LISCenter/2019%20Inequality%20by%20the%20Numbers/Instructor%20Readings/Milkman-2.pdf) as similar to those that existed before the Fair Labor Standards Act of 1938 protected the right strike (before these rights were subsequently chipped away by the Taft-Hartley Act 20 years later) in order to unionize. With popular and successful strikes in unexpected places, what will the role of strikes be in the future? Will workers continue recognize the strength of the strike and other labor actions, and will policymakers and enforcers make it a successful tool for increasing worker bargaining power? Research by Alex Hertel-Fernandez, Suresh Naidu, and Adam Reich of Columbia University [looked at](https://onlabor.org/polling-the-teacher-walkouts-strong-support-for-the-teachers-unions-and-future-labor-action/) the response to strikes following the Red for Ed movement in conservative states and found that residents of areas affected by the teacher walkouts broadly supported the strikes, with 39 percent saying they strongly supported the walkouts and another 27 percent somewhat in support of the walkouts, including half of self-identified Republicans supporting the strikes. What’s more, the three researchers found that families that learned about them from their teachers or directly from the union had even stronger support for the strikes, compared to those who learned about them from other sources, such as talk radio. First-hand knowledge of strikes increases support for them. In addition to Hertel-Fernandez’s work showing broad support for unions generally and increasing support for bold labor actions, more policymakers and advocates are providing much-needed proposals on how to foster a robust U.S. labor market and strengthen institutions that would make collective action more successful. Emblematic of this is Harvard Law’s Labor and Worklife Program’s [Clean Slate Project](https://lwp.law.harvard.edu/clean-slate-project), led by Sharon Block and Ben Sachs of Harvard University, which gathers academic experts and labor organizers to develop strong proposals that would increase worker bargaining power. Multiple 2020 presidential campaigns have followed suit, with new proposals to boost unions.

#### Strikes empower unions and are successful achieving bargaining power, which keeps them in education.

**LawInfo 20** [Peter Serdyukov, National University, La Jolla, California. 05/18/20, Teachers Unions & Collective Bargaining. <https://www.lawinfo.com/resources/labor-law/teachers-unions-collective-bargaining.html>] // SC SD

A **teachers' union** is a special type of labor union designed to fight for the rights of educators. With roots dating back more than 150 years in the U.S., these organizations **play critical roles not only in securing benefits for teachers but also shaping the way education works. For instance, thanks to lobbying by the National Education Association, or NEA, in the late 1860s, Congress created the Department of Education.** What Teachers' Unions Bargain For **Like other types of** [**trade unions**](https://www.lawinfo.com/resources/employment-law-employee/unions/)**, teachers' unions use collective bargaining agreements, or CBAs, to protect their members. Over the years, collective bargaining has helped educators gain many rights, such as: Fair working conditions, compensation, and pay equality Tenure mechanisms that prevented qualified educators from being punished for their personal biases, political beliefs, or other unfair reasons Access to various benefits** When it comes to education policy, teachers' unions also work to ensure that educators can fulfill their job duties in the face of tough odds. For instance, the NEA played a critical role in shifting the focus from federal policies like the Elementary and Secondary Education Act, which included 2001's No Child Left Behind Act, towards alternatives like the Every Student Succeeds Act of 2015. At the same time, education policy is a very politicized issue, and not every lawmaker is onboard with the kinds of changes that teachers seek. These differences of opinion mean that individual educators may be subject to a variety of laws depending on where they are in their careers. State Laws and the NLRA **Some states prohibit certain types of collective bargaining for certain workers. For teachers, such restrictions usually come into effect in public schools, where educators are classified as public employees. In Texas, Georgia, North Carolina, Virginia, and South Carolina, collective bargaining was entirely prohibited for public employees as of 2014. Only 11 states explicitly give teachers the right to do things like going on strike, and many states make it completely illegal for public employees to strike. In some right-to-work states, these employees may be allowed to strike, but the power of unions to compel them to join is often significantly limited**. As major walkouts and strikes over low pay have shown, these rules aren't always successful at stopping collective action, and public opinion may be evolving about educators' rights as employees. How are states allowed to prohibit teachers from doing something that many workers view as a fundamental freedom? **The right to form unions, strike, bargain collectively, and take other actions are laid out in the National Labor Relations Act of 1935, or NLRA. This federal legislation also prohibits actions like unions trying to force people to join and stops employers from retaliating against workers who exercise their union rights. Although the NLRA can take precedence over many state laws, its protections exclude employees in the public sector, such as teachers.** Teachers' Unions and the U.S. Constitution Labor unions aren't mentioned anywhere in the U.S. Constitution. At the same time, however, **Article I of the Constitution grants Congress the power to regulate various forms of commerce among the states. The Constitution also protects people's right to assemble and speak freely, both of which are critical to common union activities, such as meeting, discussing employment conditions, promoting union membership, and collective bargaining.** Bargaining Units Bargaining units are groups of workers who are represented by a common labor union when it comes to collective bargaining and negotiation. Employers or official bodies, such as the Indiana Education Employment Relations Board, recognize bargaining unit groups as being represented by labor unions. **States that allow teachers to participate in collective bargaining may also mandate that schools clearly specify to which bargaining units they belong so that employees can take advantage of their rights. Bargaining unit positions are jobs that receive labor union representation. Although all employees can hold these jobs regardless of their union membership status, only those who hold bargaining unit jobs gain the full benefits of being in unions.** Being in a bargaining unit position generally makes it easier to file complaints and appeals because unions outline specific grievance procedures. At the same time, all teachers can exercise non-union complaint rights and appeals. For example, the Equal Employment Opportunity Commission protects current employees and would-be workers from discrimination based on certain protected classes, such as race, sexual orientation, gender identity, age, national origin, or religion. Teachers' Unions and Charter Schools As in many other labor fields, unions sometimes clash with employers, such as schools. Notably, these disputes have come into the public eye as certain states move towards voucher and charter school education models. One key distinction in such battles is the fact that although charter schools receive funds from the government, they're often treated and operated as independent entities. According to the Emory Law Journal, charter school efforts to secure funding while retaining their independence has led to significant uncertainty. For instance, almost half of all states exempt charter schools from the collective bargaining agreements that public schools in the same districts must follow, and only around an eighth of charter schools have labor unions. Some charter schools have even argued that as “political subdivisions,” they don't count as employers under the NLRA. Other Teachers’ Union Benefits **Joining a union might give certain teachers more control over their futures. Since the benefits they receive go above and beyond what many school districts would provide of their own accord, these teachers may enjoy heightened access to vital resources that make it easier to focus on their career development**. Union members may receive: Prescription medication benefits Consumer discounts Dental and vision health benefits Pension plans For teachers, the decision whether to join a union is a personal matter. Those who want to keep their options open, however, may benefit from learning about what kinds of allowances they enjoy in different states and distinct employment positions.

#### Labor strikes are a keystone to improvement in labor rights beyond the empty promises of the state – empower unions in ways that no other independent policy action can replicate – required first ideological step for legal reform to follow

Reddy 1/6 [Diana S. Reddy is a Doctoral Fellow at the Law, Economics, and Politics Center at UC Berkeley Law, Published: 1/6/21, “’There is no such thing as an illegal strike’: Reconceptualizing the strike in law and political economy”, The Yale Law Journal Forum, <https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy>] Re-highlighted & tagged kzheng

These ideological and legal changes did not take place in a vacuum. If America was born of protest, so too was the modern American state. As historian David Huyssen recently explained, “Although middle-class philanthropists and technocratic politicians gave voice to policies that began to curtail inequality, they did not generate the conditions that made such policies either politically possible or effective.”[38](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref38) That, he argues, “took decades of . . . organizing from working people—in labor unions, youth groups, radical political parties, and coalitions of mass protest—from the 1870s through the 1940s.”[39](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref39) Labor unrest was massive during the Gilded Age and Progressive Era. Prior to 1877, most labor conflicts were small and localized.[40](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref40) The large-scale conflicts of the late 1800s were unprecedented, and “the new American state remained unprepared for [what was to come,] the great upheaval of 1885-86, the 1892 Homestead strike, and the 1894 Pullman strike.”[41](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref41) Between 1901 and 1910, there were 162 strikes per million nonagricultural workers.[42](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref42) During the 1919-1920 strike wave, twenty-two percent of the nonagricultural workforce went on strike.[43](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref43) In comparison, in 2015, there were thirteen “major work stoppages” total, involving less than .04% of the nonagricultural workforce.[44](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref44) These strikes were part of a new strategic repertoire[45](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref45) for the incipient labor movement, a form of protest made possible by the unique circumstances of industrial waged labor.[46](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref46) Striking was risky, and not all labor unions were initially sanguine about the tool. The Knights of Labor, for instance, originally insisted that striking was counter-productive, too prone to backlash.[47](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref47) Strikes were largely deemed illegal at the time, as criminal conspiracies and then as antitrust violations, and subject to court injunction.[48](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref48) But workers kept striking, anyway. In the 1880s, workers struck throughout the country for the eight-hour day, the ability to share in the improved quality of life rapid growth had enabled. They proclaimed, “Eight hours for work, eight hours for sleep, eight hours for what we will.”[49](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref49) In 1902, mine workers in eastern Pennsylvania struck, seeking shorter hours, higher pay, and recognition of their union.[50](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref50) In 1912, the well-known “Bread and Roses” strike took place, in reaction to a pay cut. Female textile workers in Lawrence, Massachusetts walked out en masse, proclaiming “Hearts starve as well as bodies; give us bread, but give us roses!”[51](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref51) The immediate outcomes of these strikes were mixed. With the help of government intervention, the 1902 coal strike was a relative victory; workers secured a nine-hour day and a pay raise, albeit no union recognition.[52](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref52) But government intervention was usually not neutral. Strikes were deemed unlawful conspiracies, or anti-competitive cartel action. They were subject to massive legal repression by state police, federal military power, and federal courts.[53](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref53) In contrast to the Progressive hope for state power, it was employers, not workers, who tended to benefit from state intervention during on-the-ground disputes between capital and labor. In the face of employer resistance, facilitated by law, workers often lost. The “Great Steel Strike” of 1919-20—the last large strike of the Progressive Era—illustrates all that seemed possible, yet turned out not to be, in this Era. In the fall of 1919, more than 350,000 steel workers across the Northeast and Midwest walked off the job, bringing half of American steel production to a halt.[54](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref54) But the Russian Revolution of 1917 had turned public opinion against labor, and the federal government opted not to intervene on behalf of the striking workers.[55](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref55) State militias and local police imprisoned strikers, and employers brought in strike-breakers, weakening worker solidarity. In some areas, local police rounded up striking workers from their homes and forced them back to work.[56](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref56)After this loss, virtually no union organizing occurred in the steel industry for fifteen years.[57](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref57) But these immediate losses were not the end of the story. These strikes grew the labor movement, creating the material (organized workers) and ideological (something must be done about the “labor problem”) infrastructure for the legal reforms to come.[58](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref58) Importantly, they changed public consciousness. By ensuring that workers’ experience of the new economy was a part of public discourse, strikes contributed to the Progressive challenge to laissez faire. As Louis Brandeis proclaimed following the 1902 coal strike, “The growth in membership has been large, but the change in the attitude toward unions both on the part of the employer and of the community marks even greater progress. . . . That struggle compelled public attention to the trades union problem in a degree unprecedented in this country.”[59](https://www.yalelawjournal.org/forum/there-is-no-such-thing-as-an-illegal-strike-reconceptualizing-the-strike-in-law-and-political-economy" \l "_ftnref59)

## Framing

#### The standard is minimizing suffering.

#### 1. Government policy is constrained by limitations on resources. Any government decision must account for tradeoffs, which only utilitarian ethics can quantify.

#### 2. Pleasure and pain are intrinsically valuable. People consistently regard pleasure and pain as good reasons for action, despite the fact that pleasure doesn’t seem to be instrumentally valuable for anything.

Moen 16 [(Ole Martin Moen, Research Fellow in Philosophy at University of Oslo) “An Argument for Hedonism,” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281, <https://link.springer.com/article/10.1007/s10790-015-9506-9>] TDI

Let us start by observing, empirically, that **a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable.** **On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues.** This inclusion makes intuitive sense, moreover, for **there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have.** “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 **The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values.** If you tell me that you are heading for the convenience store, **I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so**, not merely for the sake of going to the convenience store, but **for the sake of achieving something further that you deem to be valuable.** You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” **If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.**3 As Aristotle observes**: “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.**”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that **pleasure and pain are both places where we reach the end of the line in matters of value.**

#### Moreover, *only* pleasure and pain are intrinsically valuable. All other values can be explained with reference to pleasure; Occam’s razor requires us to treat these as instrumentally valuable.

Moen 16 [(Ole Martin Moen, Research Fellow in Philosophy at University of Oslo) “An Argument for Hedonism,” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281, <https://link.springer.com/article/10.1007/s10790-015-9506-9>] TDI

I think several things should be said in response to Moore’s challenge to hedonists. First, **I do not think the burden of proof lies on hedonists to explain why the additional values are not intrinsic values. If someone claims that X is intrinsically valuable, this is a substantive, positive claim, and it lies on him or her to explain why we should believe that X is in fact intrinsically valuable.** Possibly, this could be done through thought experiments analogous to those employed in the previous section. Second, **there is something peculiar about the list of additional intrinsic values** that counts in hedonism’s favor**: the listed values have a strong tendency to be well explained as things that help promote pleasure and avert pain.** To go through Frankena’s list, life and consciousness are necessary presuppositions for pleasure; activity, health, and strength bring about pleasure; and happiness, beatitude, and contentment are regarded by Frankena himself as “pleasures and satisfactions.” The same is arguably true of beauty, harmony, and “proportion in objects contemplated,” and also of affection, friendship, harmony, and proportion in life, experiences of achievement, adventure and novelty, self-expression, good reputation, honor and esteem. Other things on Frankena’s list, such as understanding, **wisdom, freedom, peace, and security, although they are perhaps not themselves pleasurable, are important means to achieve a happy life, and as such, they are things that hedonists would value highly.** **Morally good dispositions and virtues, cooperation, and just distribution of goods and evils, moreover, are things that, on a collective level, contribute a happy society, and thus the traits that would be promoted and cultivated if this were something sought after.** To a very large extent, the intrinsic values suggested by pluralists tend to be hedonic instrumental values. Indeed, pluralists’ suggested intrinsic values all point toward pleasure, for while the other values are reasonably explainable as a means toward pleasure, pleasure itself is not reasonably explainable as a means toward the other values. Some have noticed this. Moore himself, for example, writes that though his pluralistic theory of intrinsic value is opposed to hedonism, its application would, in practice, look very much like hedonism’s: “Hedonists,” he writes “do, in general, recommend a course of conduct which is very similar to that which I should recommend.”24 Ross writes that “[i]t is quite certain that by promoting virtue and knowledge we shall inevitably produce much more pleasant consciousness. These are, by general agreement, among the surest sources of happiness for their possessors.”25 Roger Crisp observes that “those goods cited by non-hedonists are goods we often, indeed usually, enjoy.”26 What Moore and Ross do not seem to notice is that their observations give rise to two reasons to reject pluralism and endorse hedonism. The first reason is that if **the suggested non-hedonic intrinsic values are potentially explainable by appeal to just pleasure and pain** (which, following my argument in the previous chapter, we should accept as intrinsically valuable and disvaluable), **then—by appeal to Occam’s razor—we have at least a pro tanto reason to resist the introduction of any further intrinsic values and disvalues. It is ontologically more costly to posit a plurality of intrinsic values and disvalues, so in case all values admit of explanation by reference to a single intrinsic value and a single intrinsic disvalue, we have reason to reject more complicated accounts.** **The fact that suggested non-hedonic intrinsic values tend to be hedonistic instrumental values does not, however, count in favor of hedonism solely in virtue of being most elegantly explained by hedonism; it also does so in virtue of creating an explanatory challenge for pluralists.** The challenge can be phrased as the following question: **If the non-hedonic values suggested by pluralists are truly intrinsic values in their own right, then why do they tend to point toward pleasure and away from pain?**27

#### 3. Extinction comes first!

Pummer 15 [Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

#### 4. Making impactful contributions demands causal policy relevance AND methodological pluralism -- that is the only way to draw accurate contextual conclusions and prevent violent, imprecise reification.

Michael C. Desch 19. Packey J. Dee Professor of International Relations at Notre Dame and founding director of the Notre Dame International Security Center, former Professor and Director of the Patterson School of Diplomacy and International Commerce at the University of Kentucky, #gocats. 2019. “Conclusions, Responses to Objections, and Scholarly Recommendations.” Cult of the Irrelevant: The Waning Influence of Social Science on National Security, Princeton University Press.

I want to reiterate that I am not arguing that scholarship that is formal or quantitative is by definition irrelevant. Indeed, one can point to examples of both that are. When applied to economic issues, the discipline of economics has managed to be both highly “scientific” and, at times, quite relevant, though for both good and ill. Likewise, there are examples of highly quantitative political science that policymakers have found useful.1 Finally, there is much nonquantitative scholarship, particularly but not exclusively in the humanities that, is jargon laden and otherwise inaccessible to a wider audience, including government policymakers.2 This is by no means an anti-social science methods screed, just a reminder of the tensions between rigor and relevance that need to managed rather than assumed away. Nor is this in any way a brief against theory. Former State Department official Roger Hilsman reminded us that everyone, including policymakers, uses theory. Paraphrasing John Maynard Keynes, he concluded that “it seems obvious that all thinking involves notions of how and why things happen. Even the ‘practical’ man who despises theory has a number of assumptions and expectations which lead him to believe that when certain things are done, certain results follow.. . .It is this ‘theory’ that helps a problem solver select from the mass of facts surrounding him those which he hopes are relevant.”3 Given that, I fully associate myself with Hans Morgenthau’s balanced view that “theory without verification is metaphysics, but empiricism without theory is aimless.”4 Since policymakers implicitly use theory in analyzing situations and assessing their alternatives, such theories should be stated explicitly and analyzed systematically, which is a comparative advantage of the scholars. Instead, what I offer is simply a critique of the increasing tendency of many social scientists to embrace methods and models for their own sake rather than because they can help us answer substantively important questions. This inclination is in part the result of the otherwise normal and productive workings of science, but is also reinforced by less positive factors such as organizational self-interest and intellectual culture. As a result of the latter, many political scientists have committed themselves to particular social science methods not so much because they believe they will illuminate real-world policy problems but because they serve a vested interest in disciplinary autonomy and dovetail with a particular image (mathematized and model-based) of what a “science” of politics should look like. In other words, the professionalization of social science is the root of the enduring relevance question. This tendency to equate rigor with technique imposes costs on the rest of society as well as the discipline, especially when it excludes a more balanced approach to rigor and relevance of the sort that characterized the subfield of security studies in the past. On the former, as diplomat George Kennan rightly observed, policymakers need academic expertise because they have to make decisions about issues and areas of the world “about which they cannot be expert and learned.”5 They depend on the academy for the raw data—whether quantitative or historical—that they use in decision making. They also rely on the social sciences for the theories they use to analyze and make sense of this data. The problem with relying exclusively on in-house government research to make up for the lack of policy-relevant academic research is that it is often of low quality. The role of the “independent policy analyst” is essential for three reasons: 6 He or she can challenge basic policy assumptions. As RAND’s Hans Spier put it, they can undertake “research which does not necessarily take the mission of the military for granted and admits the possibility U.S. may be wrong”7 And academic social scientists are particularly well suited to this role by virtue of the fact that they both conduct research and also teach future policymakers. Academics have some other advantages over policymakers. They have the time to develop greater depth of knowledge on issues and regions than most policymakers can. The institution of tenure also gives them, at least in theory, the freedom to explore controversial issues and take unpopular stands. And while peer review can homogenize and narrow scholarship, it also plays an indisputably positive role in advancing it. Finally, university-based scholars have less of a vested interest in certain policies and programs than do policymakers, though of course that is not to deny that they have their own institutional interests and biases.9 I am not suggesting, of course, that scholars would make better policy than bureaucrats and elected officials. They lack inside knowledge, have little actual power, and are often politically out of step with the rest of American society.10 They also come to policy issues with a markedly different intellectual orientation than policymakers.11 Rather, my point is simply that our democratic political system depends on the successful functioning of the marketplace of ideas and checks and balances in which individuals and groups with various strengths and weaknesses and offsetting biases participate in the larger policy debate, thereby compensating for each other’s limitations.12 We run into trouble when we lack one of these perspectives in policy debates. Indeed, there are instances—the war in Vietnam and the recent Iraq War—in which had the majority consensus of scholars in academia influenced policy, the country’s national interest would have been better served. As the flawed Iraq War debate demonstrates, our nation’s marketplace of ideas is bankrupt, particularly in national security affairs.13 Of course, our political problems run much deeper than just the Beltway/Ivory Tower gap, but closing it would represent an important step in the country’s intellectual recapitalization. This nation’s universities need to reclaim their place as one of society’s main sources of independent ideas about the problems that it faces.14 Less widely recognized, and perhaps more controversial given the prevailing sentiments in the Academy for a sharp distinction between “science” and “policy,” is my contention that the growing gap is ultimately bad for the generation of new knowledge. There are at least two reasons why greater attention to policy relevance produces better scholarship. First, it leads to more realistic theorizing. As John Kenneth Galbraith warned his economics colleagues nearly forty years ago, “No arrangement for the perpetuation of thought is secure if that thought does not make contact with the problems that it is presumed to solve.”15 Second, a focus on manipulatable variables makes it more likely that they are testable because the analyst can ensure variation on them. Also, the hyperspecialization of knowledge today makes it difficult for even scholars in related disciplines to understand each other, much less the general public. Such intellectual fragmentation makes the application of scholarly knowledge to policymaking extremely difficult. Therefore, a deeper and more regular engagement between the Ivory Tower and the Beltway will be mutually beneficial for both sides.16 Ultimately, even the most sophisticated social science will be judged by what it tells us about things that affect the lives of large numbers of people and which policymakers therefore seek to influence and control.17 The recurrent congressional debates about National Science Foundation funding for political science highlight the direct costs to the discipline of not being able to justify itself in terms of broader impact on the rest of society. Harkening back to the debate about the Mansfield Amendment, an article in Science cautioned that “to the extent that the research community disdains work on major national missions or behaves self-servingly in mission-oriented work, anti-intellectualism will increase its influence on the fate of American science.”18 Also, public and philanthropic community support for investment in academia generally reflects the belief that it will produce work that will speak to problems of broader importance. When the academy fails on that score, it can undermine that support.19 Political science’s subfield of international security studies can plausibly claim to save large amounts of money and even lives and so its increasing marginalization is a self-inflicted wound on the discipline. Response to Objections There are at least eight reasonable, though ultimately unpersuasive, objections to my argument that we should consider. First, some point to the influence of the Democratic Peace Theory (DPT) on the Clinton, George W. Bush, and Obama administrations as evidence that one of the most scientific of social science theories in international relations was both useful and influential among policymakers.20 The argument that democracies are unlikely to go to war with each other gained currency among social scientists based on statistical analysis of every major interstate war since 1815. In the words of Rutgers political scientist Jack Levy, the Democratic Peace Theory is “as close as anything we have to an empirical law in international relations.”21 Two scholars argued that the theory became relevant outside of the academy precisely “because of the law-like status of a particular empirical finding.”22 Others hold it up as a model of how basic research in political science can contribute to policymakers.23 It is not clear, though, that the influence of the DPT on recent U.S. foreign policy was due to its unassailable social scientific standing. While former Defense Department official and Ohio State political scientist Joseph Kruzel conceded that DPT “had substantial impact on public policy,” he attributed its attractiveness to policymakers to its simplicity rather than its social scientific rigor.24 It clearly identifies America’s enemies (nondemocratic states) and prescribed a simple response to them (make them democratic). It is also likely that the much less methodologically sophisticated articulation of the theory in the work of Michael Doyle was far more influential.25 And the process by which DPT entered the Clinton White House did not involve sophisticated social science. Rather, the key administration proponent of the democratic peace was National Security Advisor (and former college professor) Anthony Lake.26 It is clear, however, that to the extent that Lake was drawing support for the democratic peace from academic sources, it was not from statistically based research, but rather from the qualitative work of scholars like Harvard’s Samuel Huntington.27 The results of a survey of senior national security policymakers found that more than half of those familiar with the methodologically sophisticated democratic peace theory reported not being influenced by it in their government work.28 Finally, one could argue that U.S. policymakers have embraced the democratic peace because of its compatibility with our political culture rather than its scientific standing.29 A second, and in some ways, flip side of the first critique, is that the relevance problem with contemporary security studies is the result of the subfield’s domination by realism, and particularly its most abstruse and theoretical manifestation, neorealism.30 Critics point particularly to neorealist arguments that tout the virtues of nuclear proliferation as examples of theoretically elegant but politically unacceptable social science.31 Despite its respectability among scholars, neorealist proliferation optimism has reportedly had little influence on actual policy.32 While that particular policy issue may not have been influenced by realist thinking, as this book has shown realists have remained committed to policy relevance at times when the rest of the discipline has eschewed it. And they have more often been on the right side of policy debates as well.33 A third potential challenge to my argument is that many social scientists believe that they should avoid offering policy recommendations in favoring of focusing on basic research tasks such as identifying empirical regularities and offering generalizations to explain them.34 As Dartmouth political scientist Kalman Silvert warned, “It is not the legitimate role of the social scientist as scholar to advocate specific courses of governmental action or to act as implementer of government decisions.”35 Another rationale is that doing so is unnecessary given that the applied implications of basic research tend to trickle down by themselves.36 Policy engagement—particularly offering explicit policy recommendations—is both unwise and unnecessary in the view of many social scientists. Neither of these views, however, are shared by policymakers. Most believe that in addition to providing basic research findings, “scientists must explicitly define the linkage, whether immediate or remote, of the knowledge acquired or being acquired, to specific operational problems and continually assess the import of such knowledge to solution of the problems.”37 Nor are current and former policymakers sanguine about the trickle-down (or bubble-up in which senior policymakers get the results of scholarly work through their methodologically savvy staffs) process. As John K. Plank of the Brookings Institution, a former DoD official, recollected, “There is presumably a process whereby the research product is filtered up to [senior policymakers], but in point of fact very little of operational usefulness is transmitted.”38 Fourth, some political scientists believe that there are now so many new outlets for scholars to engage in the policy debate, it is both easier for them to do so and also unnecessary for them to concern themselves with doing so in their scholarship.39 Academics can now publish basic research in scholarly venues and then disseminate its applied implications through the new media. George Washington political scientist and blogger Marc Lynch effused that with the rise of the new media “this is in most ways a golden age for policy-relevant public spheres.”40 Indeed, many see the proliferation of new media outlets as the answer to political science’s perennial problem: its diminished public profile.41 The assumption here is that political scientists are simply not communicating their results effectively. There are three problems with these arguments: Until recently, we had no idea whether blogs and other new media reached policymakers. As one optimist conceded, we have “no solid statistics” on our impact.42 But we do now and it suggests that blogs and other new media are in fact not an important source of information for policymakers and therefore are unlikely to effectively convey the implications of basic research to policymakers, the media, or the general public.43 Moreover, even if a few blogs get some attention, many others do not, simply making more noise in an already cacophonous marketplace of ideas.44 And suggesting that the failure of communication argument misses the mark, Social Science Research Council president Craig Calhoun noted that scholarly “engagement with public constituencies must move beyond a dissemination model” that assumes that “pure research” will naturally triclde down, even with better communication.45 In other words, it is not the medium that matters as much as the message. And the message must be made more intelligible and useful to policymakers and the general public. Finally, there is systematic evidence that academic bloggers and scholars who utilize other new media venues receive little professional credit for them in the critical areas of promotion and tenure.46 In short, despite the explosive growth of new media outlets, professional incentives still do not encourage scholars to use them. A fifth conceivable objection is that advanced social science techniques and basic research will eventually become more useful to policymakers as they (or at least their staffs) become more sophisticated in their understanding of them. One optimist, for example, noted that most graduate public policy schools now include one or two required courses in economics and social science methods in their curricula. As these increasingly methodologically savvy young bureaucrats become senior policymakers, so this argument goes, they will be more adept at using them and more appreciative of their policy relevance.47 However, this argument assumes that training in advanced research techniques is a recent development. Policy schools, however, have long had methods courses as part of their required curriculum. Even prior to this, many national security policymakers came out of academic Ph.D. programs in which they were exposed to the latest innovations in social science methodology. It also ignores that the security studies subfield played a leading role in developing many of these sophisticated social science techniques, particularly at RAND in the 1950s.48 An example of the reverse flow of ideas from the policy world to the Academy was the “unquestionably” leading role that RAND mathematicians and other social scientists played in the development of game theory, a mathematical framework for strategizing under uncertainty.49 Despite early enthusiasm, many at RAND concluded that game theory had an Achilles Heel in its application to national security policy: how to assign the numerical values that were to be plugged into its formulas. That was not a trivial limitation, which led Hitch to confess that “for our purposes, Game Theory has been quite disappointing.”50 It also assumes that today’s aspiring policymakers come away from these methods courses with an unqualified appreciation of their usefulness. My experience after ten years in teaching in such schools, and familiarity with the evaluations students give these courses, leaves me skeptical. They often do not see the usefulness of such courses and suspect they are being forced to take them for academic, not professional, reasons.51 Other colleagues at professional schools share this impression.52 Finally, an earlier survey of current and former national security policymakers reveals that the more highly educated the policymaker, the greater the skepticism about their utility.53 This is consistent with the argument that familiarity with advanced techniques instills greater appreciation not only for their promise but also their limits. Even proponents of modern social science methods in international relations concede that “the emerging science of international relations has a long way to go before it can be of direct use to policy makers.”54 It is hard to find much evidence that the most sophisticated approaches to international relations are of much direct use to policymakers, and there are ample reasons for caution about how much of the discipline’s “basic” research is really trickling down to indirectly influence policymakers. Sixth, some point to the post-9 /11 resurgence of interest among younger social scientists as a harbinger of another renaissance of interest in policy relevance. Others suggest that changes in the nature of the “new paradigm of knowledge production,” which is “socially distributed, application-oriented, trans-disciplinary, and subject to multiple accountabilities” constitute grounds for optimism about a broader return to relevance among the social sciences.55 To be sure, there are reasons for optimism on this score but also for continuing caution. As we have seen, previous periods of optimism about answering the relevance question have given way to disappointment. Moreover, many scholars have claimed to be policy relevant even though policymakers did not find them so.56 As one CIA analyst warned, “Social scientists commonly define policy-relevant research far more broadly than the foreign policy community does.”57 A seventh potential criticism of my argument is there are other forms of “relevance” beyond just influencing government policymakers by offering policy recommendations to which scholars should aspire.58 Especially in a democratic political system, a scholar’s vocation for politics can also involve educating students and informing the wider public about pressing issues of policy. Moreover, an engaged scholar could serve with nongovernmental and private organizations rather than just through government service. While there is no doubt that policy influence is broader than just affecting government policy, that is ultimately the goal of the enterprise, either directly through policymakers or indirectly through the media or the public. Moreover, it is the clearest and most demanding standard of relevance available. So if we want to understand when and how social science matters to policymakers that is the most important, if not the only, aspect of it to consider.59 Finally, many political scientists share Daniel Drezner’s view that economics has solved the relevance question in being both rigorous and relevant. 60 The logical implication of such a belief is that the rest of social sciences should follow that discipline’s lead in terms of its approach and methodology. This economics envy is based on a misapprehension that academic trends in economics have not also created a relevance problem. For example, a recent review of research at the World Bank by leading academic economists raised questions about how much of the scholarship of bank analysts that was written for publication in academic journals was of any use to the bank.61 Their answer was not much. They blamed intellectual trends in the discipline because it encouraged research that was “too academic, too focused toward the previously existing academic agenda, and too directed towards technical rather than pressing policy issues.”62 Behind this economics envy lies an even deeper inferiority complex visa- vis the natural sciences. Many social scientists believe that the physical sciences have two advantages over the “softer” social sciences: more reliable data and a consensus on how to analyze it. Quantifiable data, in this view, is more persuasive, because it is clearer and less subject to dispute.63 This view of the superiority of the physical over the social sciences is widespread, with many of the former reveling in their preeminence and some of the latter manifesting two classic symptoms of an inferiority complex: resentment or reflexive emulation. Neither of these responses is healthy. It is simply not true that expressing propositions mathematically ensures that they are clearer and more transparent than conveying them in English. Economist Paul Romer admitted that “with enough math, an author can be confident that most readers will never figure out where FWUTV [facts with unknown truth values] is buried. A discussant or referee cannot say that an identification assumption is not credible if they cannot figure out what it is and are too embarrassed to ask.”64 On the latter, one would think that the 2008 Great Recession, in which the misguided belief that quantitative models of the economy could be used to guide investment decisions on the grounds they could reveal “the truth” about what drives the market, would temper confidence that such scientific approaches could ensure effective policy.65 In a much discussed essay in the New York Times Magazine, Princeton economist Paul Krugman concluded that “the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth.. . . The central cause of the profession’s failure was the desire for an all-encompassing, intellectually elegant approach that also gave economists a chance to show off their mathematical prowess.”66 It is not even clear that natural scientists have been most influential when they have employed their most rigorous and mathematically sophisticated approaches, at least in the national security realm. Indeed, there is more evidence that they have been most influential when they have offered practical solutions to real-world problems. These solutions have often come from scientifically uncertain and incomplete data.67 These are the hallmarks of much of the best of qualitative social science. Social scientists also ought to take heart that they not only can make an important contribution using their own distinct approaches, but also that in some instances they might even be superior to those of the physical scientists. For example, many of the nuclear scientists involved in the Manhattan Project soon came to regret their role in the escalating nuclear arms race of the Cold War. Reflecting a collective sense of guilt, chemist and peace activist Linus Pauling got almost nine thousand scientists to sign a January 1958 petition to end nuclear testing as first step toward universal disarmament.68 Talcing an equally impractical tack, Hungarian physicist Leo Szilard wrote to Franldin Delano Roosevelt’s science adviser Vannevar Bush in January 1944, “This weapon is so powerful that there can be no peace if it is simultaneously in the possession of any two powers unless these two powers are bound by an indissoluble political union.”69 While not all of the atomic scientists harbored doubts—recall the famous debates between Robert Oppenheimer and Edward Teller—the majority became advocates of international control of nuclear weapons, a policy that in retrospect was politically unrealistic. In comparing the assessments and policy recommendations of the physical scientists in the Golden Age, with those of social scientists like Jacob Viner, Bernard Brodie, and William T. R Fox, it is hard to avoid the conclusion that the latter’s views of the nuclear problem (that the genie of nuclear weapons could not be stuffed back in the bottle), and their recommendations for dealing with that situation (nuclear deterrence), were far more “realistic” than those of the nuclear “one world” physical scientists. What Is to Be Done? There are, of course, some nuts-and-bolts issues that scholars should be mindful of if they want to participate in the broader policy debate. Since policymakers have short attention spans given the number and breadth of issues they have to deal with, scholarly efforts to engage them need to be brief in conveying their ideas.70 This explains why Op/Eds are particularly influential and why so many are optimistic that blogs could play a similar role. Moreover, policymakers find much current scholarly work—from across the methodological spectrum—inaccessible. The common sentiment animating their views is that scholars should cut the jargon. Policymakers don’t want scholars to write in Greek or French, but rather just plain English.71 There are also some much bigger issues undergirding the relevance question.72 To begin with, political science needs to rethink how it balances scholarly rigor with practical application. There is a middle ground between policy analysis and journalism, on one side, and scholastic irrelevance on the other.73 The best approach to balancing scholarly rigor with continuing policy relevance is methodological pluralism, which includes a commitment to using not any particular method (or all of them) but rather just the approach most appropriate for the question at hand. But methodological pluralism, by itself, is not sufficient. The latest trend in political science requiring the simultaneous use of multiple methods could, ironically, prove to be even more limiting of policy relevance. Indeed, given the need to employ all of these methods simultaneously, it is potentially even more constraining in terms of the problems it can address because it has to be limited to those which can be quantified, modeled, and studied in depth at the same time.74 Therefore, reinforcing methodological pluralism must also be a commitment to problem-, rather than method-, driven research agendas. It is only the combination of these two principles that will ensure that policy-relevant security studies can not only survive, but thrive, in political science.75 Scholars also need to think carefully about the role of theory in policyrelevant security studies scholarship. While there is no doubt that theory is important to policymakers, scholars need to be aware that as with many other things, too much of it can be a bad thing. In particular, the effort to cram the rich complexity of the social world into universal models can do intellectual violence to the phenomenon under study as well as produce suboptimal policy. Paul Nitze, then the director of the Secretary of State’s Policy Planning Staff, readily conceded policymakers’ need for theory but also noted that “there is the opposing consideration .. . that [theoretical] oversimplification presents great dangers.”76 Albert Wohlstetter advocated a balanced approach to theory, noting that the key to his success throughout his career “was the practical experience I had in working with engineers. I worked with them from two sides, so to speak, as someone who had been concerned with very abstract theory more basic than that familiar to design engineers, but on the other hand, I was also concerned with production, and therefore generally trying to get them to do things more practical than they wanted to do.”77 Theory is a powerful tool of statecraft, but when scholars embrace universal models they also risk irrelevance or worse. Likewise, the transmission belts conveying scholarly findings to the policy world must be repaired. Kennan envisioned the State Department’s Policy Planning Staff in the late 1940s serving this function, and in some respects it continues to do so to this day.78 However, there are limits to how effectively a part of the bureaucracy can serve as an honest research broker. A plethora of think tanks in Washington are also supposed to translate knowledge into action, though the trend in recent years has been toward the establishment of overtly political and advocacy organizations, rather than nonpartisan, translational research centers.79 Reinventing the role of think tanks as bridges between the Ivory Tower and the beltway is long overdue. While nonacademic transmission belts can mediate between the Ivory Tower and the Beltway, they are no substitute for the scholars who produce knowledge to themselves serve as their own translators of it into policy. To be sure, scholars should not stop writing scholarly books and monographs utilizing the most sophisticated techniques of their discipline, if appropriate. In addition to doing these things, scholars should address pressing real world problems, not just chase after disciplinary fads. No one is in a better position to highlight the policy implications of a given piece of research than the individual who conducted it. Academic social scientists, if they want to be heard by senior policymakers, and heard correctly, need to be their own policy “transmission belts.”80 The role of the Democratic Peace Theory in the recent Iraq war demonstrates the problems with scholars not specifying the concrete policy implications of their research.81 Drawing on DPT, some officials in the George W. Bush administration justified the invasion of Iraq as part of a larger strategy to bring peace to the region by spreading democracy.82 Democratic Peace proponent Bruce Russett objected to this conclusion after the fact though his voice had been largely mute in the run up to the war.83 Had he and other democracy scholars participated more actively in the prewar debate, this rationale may have been less credible. Academics also need to develop a more nuanced appreciation of the various influences on policy. Many, even in democratic political systems, tend to have an unrealistically “technocratic” attitude toward policymaking. 84 They often underestimate the role of politics in government decision making. Scholars must therefore understand that the policymaking process is inherently political and that without such an appreciation of the political considerations associated with any policy choice, even a good one may not be implemented.85