# Wiki Doc Round 5 vs Oakton

## 1AC

### 1AC---China ADV

#### Advantage 1 is China:

#### Standards-Setting Organizations (SSO’s) are industry members who jointly establish standards for information tech defined by the adoption of standard-essential patents (SEP’s), which are licensed to companies who wish to implement the tech in their product, called implementers, on Fair, Reasonable, and Non-Discriminatory (FRAND) terms. Current standards promote price gouging, FRAND enforcement is critical.

Melamed & Shapiro 18, \*A. Douglas Melamed is Professor of the Practice of Law at Stanford Law School; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley; (May 2018, “How Antitrust Law Can Make FRAND Commitments More Effective”, https://www-cdn.law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf)

I. Standard Setting and the Competitive Process

The fundamental economics in the information technology sector, driven by network effects, implies that there is enormous value associated with establishing compatibility standards. Popular standards include the mobile broadband standards used in cell phones, which are established by the 3rd Generation Partnership Project (3GPP), and the Wi-Fi technology for wireless local area networks, which is enabled by the 802.11 standard established by the Institute of Electrical and Electronics Engineers (IEEE).4

There are many SSOs, and their rules and procedures differ considerably. In addition to IEEE, leading SSOs include the International Organization for Standardization (ISO), the International Telecommunication Union (ITU), the European Telecommunications Standards Institute (ETSI), the Internet Engineering Task Force (IETF), and the World Wide Web Consortium (W3C).5 SSOs generally establish standards by holding a series of committee meetings among industry participants. These meetings culminate in a vote on a technical specification that describes what features or attributes a product must have in order to comply with the standard. Most SSOs are open to all industry participants and seek to operate on a consensus basis, applying certain voting rules. SSOs do not normally engage in patent licensing, nor do they specify how patent royalties will be divided up among patent holders. They leave that to their members, which in some cases form patent pools to address these issues.6

SSOs adopt specific policies relating to intellectual property rights (IPRs).7 These IPR policies are generally intended to enable the SEP holders to obtain reasonable royalties for licensing their patents, while prohibiting them from charging excessive royalties after other industry participants have committed to the standard. At that point, firms committed to implementing the standard— which we call “implementers”—would find it very costly to avoid using the patented technology. For this purpose, most SSOs require SEP owners to license their SEPs on FRAND terms.8

FRAND policies are especially necessary because negotiations between SEP holders and implementers generally take place only after the implementers have used and infringed the technologies claimed by the SEPs. Standards involving information and communications technology can involve hundreds or even thousands of SEPs, many with uncertain boundaries for infringement. In addition, a time lag exists between patent application and patent issuance. For these and other reasons, it is impractical for implementers to enter into negotiations for patent licenses with all SEP owners prior to the establishment of a standard and to their implementation of it.9

The fact that patent negotiations generally do not take place until after implementers have used and infringed the technologies has several critical implications. First, at the time of negotiation, implementers are locked into the standard and the technologies claimed by the SEPs—that is, the cost to switch to an alternative technology or standard at that point—ex post—is much greater than it was ex ante, before the patented technology was first included in the standard. Ex post, the patent holder is no longer competing to have its technology included in the standard, nor is it competing to have implementers of the standard use its technology. Instead, because the patent holder owns an asset that is essential to the standard, implementers have no choice but to use the patented technology.

If the standard is commercially successful, implementers are willing to pay a much larger royalty for use of the patented technology than they would have paid ex ante, when the SEP holder faced competition from other technologies. In these circumstances, the SEP holder can be said to have obtained monopoly power in the market in which the patented technology is licensed for use in implementing the standard.10

Second, because of lock-in and the implementer’s ongoing infringement, the potential for litigation looms large in licensing negotiations. In effect, the parties are negotiating about how to settle an infringement suit, and that negotiation is heavily influenced by their predictions as to what the court will do if they cannot agree. This situation is not unique to SEPs; it arises frequently when firms are faced with patent infringement claims for products they have independently developed or technologies they have inadvertently infringed. Patent law addresses such instances by specifying that patent holders are entitled to “reasonable royalties,” defined as the royalties that the parties would have negotiated prior to the infringement and thus prior to lock-in.11 Those hypothetical ex ante royalties reflect the market value of the patent license. Notwithstanding the law’s embrace of this principle, however, as a practical matter, patent holders are generally able to recover more than the ex ante value of the patent when litigation occurs after the implementers are locked in. Further, negotiations in the shadow of litigation after lock-in tend to result in royalties in excess of the ex ante or market value of the patented technology.12

Third, the shadow of litigation is particularly problematic in the communications and technology sector, in which products typically include hundreds or thousands of patented technologies. A court-ordered injunction involving such products would deprive the implementer of not only the value of the technology covered by the patent-in-suit, but also the value of the entire product.13 Implementers that are forced to bear the risk of an injunction are thus induced to agree to royalties greater than those that would be appropriate if only the value of the patented technology were at stake. Those royalties systematically provide SEP holders with excessive compensation in comparison with the benchmark of ex ante royalties.

These implications of lock-in and ex post dealings are well-understood: they represent an example of the general concept of lock-in and opportunism developed by Oliver Williamson.14 The Federal Circuit has also recognized the market distortions caused by the inclusion of patented technologies in public standards and the resulting danger of patent holdup involving SEPs.15

For these and other reasons, the SEP holder has ex post monopoly power that, if left unchecked, would enable it to obtain royalties far in excess of the royalties that it could earn in a competitive market.16 To address this common problem and limit ex post opportunism by SEP holders, SSOs typically require participants that own SEPs to make certain FRAND commitments. In particular, by requiring a commitment to license on “fair and reasonable” terms, the FRAND requirement aims to prevent, or at least reduce, the extent of monopoly pricing by SEP holders. And by requiring a commitment to license on “nondiscriminatory” terms, the FRAND requirement can prevent SEP holders from extracting monopoly premiums by selective licensing or, more important, migrating their monopoly power from the FRAND-regulated market to unregulated standard-implementing product markets by licensing to only one or a few implementers or licensing to selected implementers on discriminatorily favorable terms.

#### Patent holdup is accentuated by the Ninth Circuit’s recent decision in *FTC v. Qualcomm* that permits ICT firms to engage in innovation-stifling conduct with antitrust impunity.

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Standards can enhance competition and consumer choice, but they also massively inflate the value of patents deemed essential to the standard, and give their owners the power to sue companies that implement the standard for money damages or injunctions to block them from using their SEPs. When standards cover critical features like wireless connectivity, SEP owners wield a huge amount of “hold-up” power because their patents allow them to effectively block access to the standard altogether. That lets them charge unduly large tolls to anyone who wants to implement the standard.

To minimize that risk, standard-setting organizations typically require companies that want their patented technology incorporated into a standard to promise in advance to license their SEPs to others on fair, reasonable, and non-discriminatory (FRAND) terms. But that promise strikes at a key tension between antitrust and patent law: patent owners have no obligation to let anyone use technology their patent covers, but to get those technologies incorporated into standards, patent owners usually have to promise that they will give permission to anyone who wants to implement the standard as long as they pay a reasonable license fee.

Qualcomm is one of the most important and dominant companies in the history of wireless communication standards. It is a multinational conglomerate that has owned patents on every major wireless communication standard since its first CDMA patent in 1985, and it participates in the standard-setting organizations that define those standards. Qualcomm is somewhat unique in that it not only licenses SEPs, but also supplies the modem chips used by a wide range of devices. These include chips that implement wireless communication standards, which lie at the heart of every mobile computing device.

Although Qualcomm promised to license its SEPs (including patents essential to CDMA, 3G, 4G, and 5G) on FRAND terms, its conduct has to many looked unfair, unreasonable, and highly discriminatory. In particular, Qualcomm has drawn scrutiny for bundling tens of thousands of patents together—including many that are not standard-essential—and offering portfolio-only licenses no matter what licensees actually want or need; refusing to sell modem chips to anyone without a SEP license and threatening to withhold chips from companies trying to negotiate different license terms; refusing to license anyone other than original-equipment manufacturers (OEMs); and insisting on royalties calculated as a percentage of the sale price of a handset sold to end users for hundreds of dollars, despite the minimal contribution of any particular patent to the retail value.

In 2017, the U.S. Federal Trade Commission [sued](https://www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used) Qualcomm for violating both sections of the Sherman Antitrust Act by engaging in a number of anticompetitive SEP licensing practices. In May 2019, the U.S. District Court for the Northern District of California agreed with the FTC, identifying numerous instances of Qualcomm’s unlawful, anticompetitive conduct in a comprehensive [233-page opinion](https://www.eff.org/document/ftc-v-qualcomm-district-court-opinion). We were pleased to see the FTC take action and the district court credit the overwhelming evidence that Qualcomm’s conduct is corrosive to market-based competition and threatens to cement Qualcomm’s dominance for years to come.

But this month, a panel of judges from the Court of Appeals for the Ninth Circuit unanimously [overturned](https://www.eff.org/document/ninth-circuit-opinion-ftc-v-qualcomm) the district court’s decision, reasoning that Qualcomm’s conduct was “hypercompetitive” but not “anticompetitive,” and therefore not a violation of antitrust law. To reach that result, the Ninth Circuit made the patent grant more powerful and antitrust law weaker than ever.

According to the Ninth Circuit, patent owners don’t have a duty to let anyone use what their patent covers, and therefore Qualcomm had no duty to license its SEPs to anyone. But that framing requires ignoring the promises Qualcomm made to license its SEPs on reasonable and non-discriminatory terms—promises that courts in this country and around the world have consistently enforced. It also means ignoring antitrust principles like the essential facilities doctrine, which limits the ability of a monopolist with hold-up power over an essential facility (like a port) to shut out rivals. Instead, the Ninth Circuit held rather simplistically that a duty to deal could arise only if the monopolist had provided access, and then reversed its policy.

But even when Qualcomm restricted its licensing policies in critical ways, the Ninth Circuit found reasons to approve those restrictions. For example, Qualcomm stopped licensing its patents to chip manufacturers and started licensing them only to OEMs. This had a major benefit: it let Qualcomm charge a much higher royalty rate based on the high retail price of the end user devices, like smartphones and tablets, that OEMs make and sell. If Qualcomm had continued to license to chip suppliers, its patents would be “exhausted” once the chips were sold to OEMs, extinguishing Qualcomm’s right to assert its patents and control how the chips were used.

Patent exhaustion is a century-old doctrine that protects the rights of consumers to use things they buy without getting the patent owner’s permission again and again. Patent exhaustion is important because it prevents price-gouging, but also because it protects space for innovation by letting people use things they buy freely, including to build innovations of their own. The doctrine thus helps patent law serve its underlying goal—promoting economic growth and innovation. In other words, the doctrine of exhaustion is baked into the patent grant; it is not optional. Nevertheless, the Ninth Circuit wholeheartedly approved of Qualcomm’s efforts to avoid exhaustion—even when that meant cutting off access to previous licensees (chip-makers) in ways that let Qualcomm charge far more in licensing fees than its SEPs could possibly have contributed to the retail value of the final product.

It makes no sense that Qualcomm could contract around a fundamental principle like patent exhaustion, but at the same time did not assume any antitrust duty to deal under these circumstances. Worse, it’s harmful for the economy, innovation, and consumers. Unfortunately, the kind of harm that antitrust law recognizes is limited to harm affecting “competition” or the “competitive process.” Antitrust law, at least as the Ninth Circuit interprets it, doesn’t do nearly enough to address the harm downstream consumers experience when they pay inflated prices for high-tech devices, and miss out on innovation that might have developed from fair, reasonable, and non-discriminatory licensing practices.

We hope the FTC sticks to its guns and asks the Ninth Circuit to go en banc and reconsider this decision. Otherwise, antitrust law will become an even weaker weapon against innovation-stifling conduct in technology markets.

#### Weakened antitrust enforcement emboldens firms to follow Qualcomm’s lead, which collapses FRAND integrity.

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While the FRAND process has been highly productive, it is also fragile. Firms are tempted to make commitments at the beginning when the incentive to join is large, but renege on them later when they can profit by doing so. At least in this particular case, private FRAND enforcement had not worked very well. Qualcomm had been able to violate FRAND commitments in order to exclude rivals and obtain higher royalties than FRAND would permit, largely with impunity. Other firms will very likely follow Qualcomm’s lead. If that happens the FRAND system will fall apart, doing irreparable injury to the modern wireless telecommunications network or, at the very least, diminishing the leadership role of the United States in preserving effective network competition.

While governments can be heavily involved in standard set-ting,9 the implementation of technical standards in information technologies is largely the work of private actors. Government involvement is limited mainly to enforcement of contract, intellectual property, or antitrust law. As private actors, those involved in standard setting or compliance are fully subject to the federal antitrust laws.

This Article addresses one question: when is an SSO participant’s violation of a FRAND commitment an antitrust violation, and if it is, of what kind and what are the implications for remedies? It warns against two extremes. One is thinking that any violation of a FRAND commitment is an antitrust violation as well. In the first instance FRAND obligations are contractual, and most breaches of contract do not violate any antitrust law. The other extreme is thinking that, because a FRAND violation is a breach of contract, it cannot also be an antitrust violation. The question of an antitrust violation does not de-pend on whether the conduct breached a particular agreement but rather on whether it caused competitive harm. This can happen because the conduct restrained trade under section 1 of the Sherman Act, was unreasonably exclusionary under section 2 of the Sherman Act, or amounted to an anticompetitive condition or understanding as defined by section 3 of the Clay-ton Act.10 The end goal is to identify practices that harm com-petition, thereby injuring consumers.

The Ninth Circuit’s Qualcomm decision will make antitrust violations in the context of FRAND licensing much more difficult to prove, even in cases where anticompetitive behavior and consumer harm seem clear.11 Indeed, in this case the court itself acknowledged the harm to consumers but appeared to think that they were not entitled to protection.12 If this decision stands, FRAND obligations will to a larger extent have to be settled through private litigation and the federal antitrust enforcement agencies will have a diminished role. Anticompetitive behavior by one firm that is not effectively disciplined will lead others to do the same thing.

#### Monopoly pricing and selective licensing undermines 5G innovation---FRAND enforcement is key.

Actonline 20, the App Association represents more than 5,000 app companies and information technology firms across the mobile economy; (August 26th, 2020, “Save Our Standards: The Ninth Circuit Court of Appeals Reverses Decision in FTC v. Qualcomm”, <https://actonline.org/2020/08/26/save-our-standards-the-ninth-circuit-court-of-appeals-reverses-decision-in-ftc-v-qualcomm/>)

* Ability edited

Moreover, the FRAND agreement is a critical tool used by standard setting organizations to ensure the process enhances competition and does not run afoul of antitrust laws. Generally, a collaboration between competitors to choose market winners or set prices raises significant questions for competition regulators. Royalty free and FRAND licensing requirements were created by standards bodies to avoid potential antitrust scrutiny by limiting the market power and the potential for abuse by those involved in developing a standard. This is why the American National Standards Institute (ANSI) will not accredit any standards developing organization (SDO) that does not require standard-essential patent holders to provide licensing terms at least as favorable as FRAND.

The most important beneficiary of open interoperability standards and FRAND licensing requirements are the entrepreneurs and small businesses that have long fueled America’s innovation engine. They don’t have giant patent portfolios, market power, or the resources to hire legions of lawyers and spend years battling SEP abusers in civil court. Without some level of certainty about their ability to obtain licenses—let alone what they may cost—entrepreneurs will have trouble justifying the pursuit of any innovation that uses a standard and will certainly struggle to raise money from investors for such innovation. And Qualcomm’s vague and toothless promise simply “not to sue” smaller companies and component makers is no substitute for a license.

The adoption of 5G technology is expected to open unprecedented opportunities for innovation and economic growth as we move toward a world where everything from cars to tractors to buildings will connect to wireless networks. At every stage of the information technology revolution, America has been the undisputed leader because of the unparalleled entrepreneurial innovation ecosystem that we have built. If 5G SEP holders are able to arbitrarily refuse licenses to smaller firms, it would ~~cripple~~ undermine America’s innovation ecosystem at the start of the next big wave of innovation. As economic tensions continue to rise with China, Chinese-based companies could use their 5G SEPs as international economic weapons to thwart U.S. competitors.

The 5G standard is supposed to be a platform for competition, innovation, and entrepreneurship, but if the Ninth Circuit decision is allowed to stand, it will become a chokepoint for snuffing out competitors and demanding monopoly rents. Open standards and FRAND licensing commitments are fundamental to competition in the modern economy, and the idea that they aren’t a subject for antitrust enforcement is patently absurd.

#### The absence of domestic 5G competition cedes leadership in technical standards to China.

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There is little doubt today that American superiority in the next generation of mobile communications, commonly called 5G, is a matter of extraordinary national concern. There is also little doubt that China is a strong competitor, already having outspent the United States by [$24 billion](https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-5g-deployment-imperative.pdf#page=3) and planning [$411 billion](https://www.scmp.com/tech/china-tech/article/2098948/china-plans-28-trillion-yuan-capital-expenditure-create-worlds) in 5G investment over the next decade. The Chinese government has also laid out multiple national plans for establishing the country as a leader in mobile technology, and the Chinese firm Huawei is poised to be the [top smartphone manufacturer](https://www.cnbc.com/2018/11/16/huawei-aims-to-overtake-samsung-as-no-1-smartphone-player-by-2020.html) by 2020.

And what are United States companies doing about this? Bickering over patents.

For years, the leading American supplier of advanced mobile communications chips has been the San Diego-based Qualcomm. The company has been an innovator of mobile technology, but it has also been a remarkable innovator of convoluted legal strategies. As an ongoing Federal Trade Commission [lawsuit alleges](https://www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used), Qualcomm has used its dominant position as a chip supplier and its extensive patent holdings to weave an intricate web of patent licensing across the mobile industry. The effect of that complex licensing scheme, the FTC claims, has been to force competitor chipmakers out of the market and to extract concessions and high patent royalties from smartphone and mobile-device makers.

Qualcomm today faces only one major U.S. competitor—Intel, whose chips Apple recently [started using](https://www.cultofmac.com/484250/intel-reaping-rewards-apples-scrap-qualcomm/) instead of Qualcomm’s. Not surprisingly, Qualcomm has leveraged its patents to force a retaliatory investigation against Apple, the effect of which could be, as an administrative judge [recently determined](http://www.fosspatents.com/2018/10/itc-judge-didnt-buy-testimony-for-which.html), to boot Intel out of the mobile-chip market and leave Qualcomm as a monopoly.

It is hard to imagine that this infighting among Apple, Intel and Qualcomm is getting the United States very far in 5G, and it is harder to imagine that Qualcomm’s desired outcome would do so, either. The best path, instead, is the obvious one: allowing competition and expanding the number of firms working on 5G.

Competition encourages companies to out-innovate each other in order to grab market share. Of particular importance to 5G, competition leads to [better cybersecurity](https://morningconsult.com/opinions/in-the-race-to-5g-monopoly-considered-harmful/) in products, making them less vulnerable to hacking or misuse.

Competition is especially crucial when it comes to the technical standards that define how 5G works. These standards are the work of 3GPP, an international consortium of technology companies in the field. Chinese players such as Huawei and ZTE are major participants in 3GPP. Ensuring that 3GPP’s standards reflect American values requires having as many American companies at the negotiating table as possible—which is harder to achieve when those companies are trying to sue each other out of business.

Certainly patents themselves, as rewards for new inventions, are a driver of innovation in areas such as 5G. The problem, though, is not the existence of a patent system but the ever-expanding power of the patent laws, which encourage companies to pour dollars into complex patent licensing and assertion schemes—as companies like Qualcomm have done—rather than to perform the hard work of building new technologies. When innovation in patent strategy is more profitable than actual innovation, we lose the race to 5G and other technologies.

But don’t take my word for it. [Multiple members of Congress](https://www.patentprogress.org/2019/01/11/congress-weighs-in-on-qualcomm-and-apple-at-the-itc/), from both sides of the aisle, have denounced the use of patents to kick companies like Intel out of 5G development, predicting that such actions would “dampen the quality, innovation, competitive pricing, and in this case the preservation of a strong U.S. presence in the development of 5G and thus the national security of the United States.”

Or look to what China itself is doing. The Chinese government is handing out rewards left and right to encourage technology research and development. Indeed, it grants subsidies and financial benefits (ranging from the [ordinary](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2818503) to the [imperfect](https://funginstitute.berkeley.edu/wp-content/uploads/2013/12/patent_subsidy_Zhen.pdf) to the [bizarre](https://www.scmp.com/news/china/article/1681850/how-get-out-jail-early-china-buy-inventors-idea-and-patent-it)) to encourage its citizens to file for patents. But while China specifically encourages filing for patents, it does little to encourage using them: Patent infringement awards in court are peanuts—often only [five figures](https://scholarship.law.berkeley.edu/btlj/vol33/iss2/2/)—and most Chinese patent owners drop their patents [within five years](https://www.bloomberg.com/news/articles/2018-09-26/china-claims-more-patents-than-any-country-most-are-worthless) of getting them. The message in China is clear: You will be rewarded for innovating, but not for quibbling over patents.

The United States should take the same tack if it wants to match China in 5G. Ever-stronger patent rights encourage counterproductive disputes that are a drag on industry, a drag on research and development, and ultimately a drag on domestic competitiveness on the global stage. If America wants to lead in 5G, then it must clear the path for strong competition among leading American technology companies.

#### Standards leadership allows China to export digital authoritarianism.

Drew et al. 21, \*Dr Alexi Drew, Research Associate, The Policy Institute, King’s College London; (May 7th, 2021, “The Critical Geopolitics of Standards Setting”, https://www.transatlantic-dialogue-on-china.rusi.org/article/the-critical-geopolitics-of-standards-setting)

However, this previously ‘western’ domain is challenged by a Chinese bloc of private industry actors with centrally directed, strategic motivations for their efforts who have managed to leverage the flaws of this system for political and economic advantage.  The market-driven self-regulation model of technical standards has proven itself unsustainable given the geopolitical power achievable through the control of these standards. The marketised approach is easily abusable by a technologically developed nation-state with geopolitical intentions firmly in mind.

Obscurity Through Complexity

Technical standards have the immediate appearance of being both apolitical and ethically neutral. This seems to set them apart from the debate over standards of state behaviour in [cyber space concerning espionage and actions below the threshold of armed conflict](https://www.cfr.org/blog/unexpectedly-all-un-countries-agreed-cybersecurity-report-so-what). Yet, technological standards are unequivocally connected to normative practices of international behaviour and ethics. The extremely complex nature of the standards under consideration in bodies such as the International Organization for Standardization, the International Electrotechnical Commission (IEC), the International Telecommunications Union (ITU), and the Third Generation Partnership Project (3GPP) obscures the very tangible real-world impact that the standards they set have. The 3GPP is responsible for standards setting for mobile telecommunications. It covers everything from 5G through to autonomous vehicles and the Internet of Things. These are the bodies defining how the modern world is constructed.

On the one hand they appear quite benign, responsible for such banalities as the use of Universal Serial Bus (USB) connectors versus proprietary standards. This hardly seems a matter of national security importance. But the same process is responsible for what ultimately shape the basic operating parameters of facial recognition technology in closed circuit television systems, the level of centralised state control at the technical foundations of the internet, and the protections of personally identifiable data. These generate profound implications for international policy and ethics.

Internal Competition vs Strategic Direction

Technical standards setting processes have, historically, been dominated by private sector actors who have had both the capacity to develop a particular technology to the point of holding a significant market share, and the ability to use that market share to advocate for the standardisation of the technology in line with their own production. The market led approach has continued to be the prevailing model by which American companies have globalised the technical standards behind US dominated technological innovation. This privatised form of self-regulation for technology companies is only partially influenced by the approach taken within the EU where [some licensing of standards are controlled by state or EU led institutions.](https://www.ui.se/globalassets/ui.se-eng/publications/ui-publications/2019/ui-brief-no.-2-2019.pdf)

In contrast to this approach the Chinese model has involved a high level of state-oriented direction, oversight, and direct engagement on the creation and signing off technical standards. Efforts to harmonise and centralise technical standards domestically have become increasingly internationalised as the CCP takes this centralised, strategic approach to technical standards setting bodies such as the ITU, 3GPP, and IEC. Technical standards have also become an increasingly central component of the Digital Silk Road with the openly expressed goal of increasing uptake of Chinese technical standards in partner countries.

The implications of this clash between a system of technical standardisation that is driven by the market versus one driven by an authoritarian government subsidised model are a direct challenge to the development of free, open, and ethical technology. Standardisation mechanisms have become political, or rather there has been a gradual realisation of the political power to be gained from the control of technical standards. While the PRC might have come to this awareness first, the US and Europe have since had a rude awakening about the missed opportunity. The privatised model of technical standards setting favoured by European and US markets relies upon the dynamics of financial competition to regulate behaviour. This is in stark contrast to the statist Chinese model.

#### Causes global backsliding.

Kendall-Taylor et. al 20 \*Andrea Kendall-Taylor, senior fellow and director of the Transatlantic Security Program at the Center for a New American Security, co-author of Democracies and Authoritarian Regimes; Erica Frantz is Assistant Professor of Political Science at Michigan State University; Joseph Wright is Professor of Political Science at Pennsylvania State University; (March/April 2020, “The Digital Dictators,” Foreign Affairs, <https://www.foreignaffairs.com/articles/china/2020-02-06/digital-dictators>)

The risk that technology will usher in a wave of authoritarianism is all the more concerning because our own empirical research has indicated that beyond buttressing autocracies, digital tools are associated with an increased risk of democratic backsliding in fragile democracies. New technologies are particularly dangerous for weak democracies because many of these digital tools are dual use: technology can enhance government efficiency and provide the capacity to address challenges such as crime and terrorism, but no matter the intentions with which governments initially acquire such technology, they can also use these tools to muzzle and restrict the activities of their opponents.

#### Democracy solves a litany of existential threats.

Diamond 19, Professor of Political Science and Sociology at Stanford University, Senior Fellow at the Hoover Institution, Senior Fellow at the Freeman Spogli Institute for International Studies, PhD in Sociology from Stanford University, (Dr. Larry, Ill Winds: Saving Democracy from Russian Rage, Chinese Ambition, and American Complacency, p. 199-202)

The most obvious response to the ill winds blowing from the world’s autocracies is to help the winds of freedom blowing in the other direction. The democracies of the West cannot save themselves if they do not stand with democrats around the world. This is truer now than ever, for several reasons. We live in a globalized world, one in which models, trends, and ideas cascade across borders. Any wind of change may gather quickly and blow with gale force. People everywhere form ideas about how to govern—or simply about which forms of government and sources of power may be irresistible—based on what they see happening elsewhere. We are now immersed in a fierce global contest of ideas, information, and norms. In the digital age, that contest is moving at lightning speed, shaping how people think about their political systems and the way the world runs. As doubts about and threats to democracy are mounting in the West, this is not a contest that the democracies can afford to lose. Globalization, with its flows of trade and information, raises the stakes for us in another way. Authoritarian and badly governed regimes increasingly pose a direct threat to popular sovereignty and the rule of law in our own democracies. Covert flows of money and influence are subverting and corrupting our democratic processes and institutions. They will not stop just because Americans and others pretend that we have no stake in the future of freedom in the world. If we want to defend the core principles of self-government, transparency, and accountability in our own democracies, we have no choice but to promote them globally. It is not enough to say that dictatorship is bad and that democracy, however flawed, is still better. Popular enthusiasm for a lesser evil cannot be sustained indefinitely. People need the inspiration of a positive vision. Democracy must demonstrate that it is a just and fair political system that advances humane values and the common good. To make our republics more perfect, established democracies must not only adopt reforms to more fully include and empower their own citizens. They must also support people, groups, and institutions struggling to achieve democratic values elsewhere. The best way to counter Russian rage and Chinese ambition is to show that Moscow and Beijing are on the wrong side of history; that people everywhere yearn to be free; and that they can make freedom work to achieve a more just, sustainable, and prosperous society. In our networked age, both idealism and the harder imperatives of global power and security argue for more democracy, not less. For one thing, if we do not worry about the quality of governance in lower-income countries, we will face more and more troubled and failing states. Famine and genocide are the curse of authoritarian states, not democratic ones. Outright state collapse is the ultimate, bitter fruit of tyranny. When countries like Syria, Libya, and Afghanistan descend into civil war; when poor states in Africa cannot generate jobs and improve their citizens’ lives due to rule by corrupt and callous strongmen; when Central American societies are held hostage by brutal gangs and kleptocratic rulers, people flee—and wash up on the shores of the democracies. Europe and the United States cannot withstand the rising pressures of immigration unless they work to support better, more stable and accountable government in troubled countries. The world has simply grown too small, too flat, and too fast to wall off rotten states and pretend they are on some other planet. Hard security interests are at stake. As even the Trump administration’s 2017 National Security Strategy makes clear, the main threats to U.S. national security all stem from authoritarianism, whether in the form of tyrannies from Russia and China to Iran and North Korea or in the guise of antidemocratic terrorist movements such as ISIS.1 By supporting the development of democracy around the world, we can deny these authoritarian adversaries the geopolitical running room they seek. Just as Russia, China, and Iran are trying to undermine democracies to bend other countries to their will, so too can we contain these autocrats’ ambitions by helping other countries build effective, resilient democracies that can withstand the dictators’ malevolence. Of course, democratically elected governments with open societies will not support the American line on every issue. But no free society wants to mortgage its future to another country. The American national interest would best be secured by a pluralistic world of free countries—one in which autocrats can no longer use corruption and coercion to gobble up resources, alliances, and territory. If you look back over our history to see who has posed a threat to the United States and our allies, it has always been authoritarian regimes and empires. As political scientists have long noted, no two democracies have ever gone to war with each other—ever. It is not the democracies of the world that are supporting international terrorism, proliferating weapons of mass destruction, or threatening the territory of their neighbors.

#### China 5G leadership compromise US military superiority

Borghard et al. 19, \*Erica D. Borghard is an Assistant Professor at the Army Cyber Institute at West Point. Shawn W. \*Lonergan is a U.S. Army Reserve officer assigned to 75th Innovation Command and a Research Scholar at the Army Cyber Institute. (April 25th, 2019, “The Overlooked Military Implications of the 5G Debate”, https://www.cfr.org/blog/overlooked-military-implications-5g-debate)

There are economic implications for which entities can secure the [greatest global market share](https://www.reuters.com/brandfeatures/venture-capital/article?id=61837) of 5G technology. Technological innovation drives economic growth, job creation, and global economic influence. Huawei may have a long-term market advantage over U.S and Western telecoms because the former has been able to offer 5G products at [far cheaper](https://www.nytimes.com/2019/01/26/us/politics/huawei-china-us-5g-technology.html) rates than the latter. Furthermore, there are also concerns that Chinese-built 5G technology is likely to [contain backdoors](https://www.wired.com/story/huawei-case-signals-new-us-china-cold-war-tech/) that could be used to enable [Chinese economic or national security espionage](https://www.cnbc.com/2019/03/05/huawei-would-have-to-give-data-to-china-government-if-asked-experts.html). It is unlikely that Beijing would actively monitor all of the content of the data that comes across Huawei owned or operated infrastructure (although it may collect and analyze metadata). However, it is conceivable that Huawei would get a proverbial “tap on the shoulder” from Beijing to share pertinent information in specific instances. This may include individually targeting senior corporate executives, which is enabled by the millimeter wave frequency that 5G networks employ.

The military applications of 5G technology have vital strategic and battlefield implications for the U.S. Historically, the U.S. military has reaped enormous advantages from employing cutting edge technology on the battlefield. 5G technology holds similar innovative potential. Perhaps most obviously, the next generation of telecommunications infrastructure will have a direct impact on improving military communications. However, it will also produce cascading effects on the development of other kinds of military technologies, such as robotics and artificial intelligence. For instance, artificial intelligence and machine learning capabilities, such as those used in the Department of Defense’s [Project Maven](https://dod.defense.gov/News/Article/Article/1254719/project-maven-to-deploy-computer-algorithms-to-war-zone-by-years-end/), could be greatly enhanced when leveraging the data processing speeds made possible through 5G infrastructure. As an [era of great power competition](https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf) emerges between the United States and China, the United States has a compelling strategic interest in being at the forefront of these new technologies.

The United States and its allies must also consider the tactical and operational implications on the battlefield of conducting conventional or counterinsurgency operations in an area with Chinese owned or operated 5G infrastructure. This concern stems from the nature of the relationship between Huawei, an [ostensibly private company](https://www.itnews.com.au/news/analysis-who-really-owns-huawei-175946), and the Chinese Communist Party (CCP). While Huawei’s founder and CEO, Ren Zhengfei proclaimed in a February 2019 interview on [CBS This Morning](https://www.cbsnews.com/news/ren-zhengfei-huawei-ceo-says-we-will-never-provide-chinese-government-with-any-information/)that the company never has and never would provide information to the Chinese government, many experts are [skeptical](https://www.cnbc.com/2019/03/05/huawei-would-have-to-give-data-to-china-government-if-asked-experts.html). Under China’s [2017 National Intelligence Law](https://www.reuters.com/article/us-china-security-lawmaking-idUSKBN19I1FW), the CCP has the authority to monitor and investigate domestic and international companies as well as direct organizations to assist with government espionage efforts. As such, it is conceivable that Huawei will be required to hand over its data to the Chinese government for collection and analysis.

Due to this reality, the United States must consider and be prepared to conduct overseas contingency or counterterrorism operations in areas where Chinese telecommunications infrastructure is widely proliferated, thus restricting the United States’ ability to rely on indigenous telecoms. As [noted](https://www.africom.mil/media-room/transcript/31604/gen-joseph-votel-gen-thomas-waldhauser-and-acting-asd-for-international-security-affairs-kathryn) by US AFRICOM Commander General Thomas Waldhauser, this has already become an issue in Africa where Chinese telecommunications companies are poised to dominate. The integrity of U.S. military communications systems that rely on 5G networks could be undermined at key phases of an operation. For example, if the United States is conducting a military operation in an area of interest to China, it is plausible that the Chinese government could leverage Huawei to intercept or even deny military communications. Furthermore, Chinese telecom infrastructure dominance in a theater of operations may limit the U.S. military’s ability to conduct precision targeting that leverages signals intelligence collection on 5G telecommunications networks.

The strategic and battlefield implications of who owns and operates 5G infrastructure around the world underscores the national security importance of 5G. The U.S. government and its allies should more systematically assess both the opportunities and risks associated with conducting future military operations in environments that rely on Chinese technology.

To date, the U.S. government has devoted significant energy to persuading its allies and partners to follow the United States in prohibiting Chinese telecoms, particularly Huawei, from building and/or operating 5G infrastructure. However, its diplomatic approach has been met with varying degrees of success. While some countries such as [Australia](https://www.ft.com/content/e90c3800-aad3-11e8-94bd-cba20d67390c) and [Japan](https://www.reuters.com/article/us-usa-china-huawei-japan/japans-top-three-telcos-to-exclude-huawei-zte-network-equipment-kyodo-idUSKBN1O90JW) have fallen in line with the U.S. stance on Huawei, many others have not. The European Commission’s recent 5G [recommendations](https://www.cyberscoop.com/5g-eu-huawei-cybersecurity-recommendations/) for member states dismissed a ban on Chinese telecoms. British intelligence has reportedly maintained that the security risks associated with Huawei can be [sufficiently managed](https://www.ft.com/content/619f9df4-32c2-11e9-bd3a-8b2a211d90d5), and New Zealand, after [initially bandwagoning](https://www.nytimes.com/2018/11/28/business/huawei-new-zealand-papua-new-guinea.html) with the United States in December 2018, abruptly [reversed course](https://www.bloomberg.com/news/articles/2019-02-18/new-zealand-says-china-s-huawei-hasn-t-been-ruled-out-of-5g-role) in February 2019. This is concerning for the United States because New Zealand and the UK are members of the Five Eyes intelligence-sharing alliance. Many allies have refused an outright ban of Huawei because of the company’s ability to offer 5G products at far cheaper rates than Western telecoms.

It is clear that U.S. diplomatic efforts are not working. The reality is that the bottom line is largely driving decision-making. Therefore, rather than take a purely negative approach, the United States should consider using positive inducements to make its 5G products more appealing. While the United States should not strive to mirror China’s top-down approach to innovation, it should work with allies to use market incentives to make U.S.- and Western-developed 5G infrastructure and products more competitive. Furthermore, the U.S. military needs to anticipate that its use of native telecommunications infrastructure in a future operating environment may be compromised, limited, or denied. The U.S. military will inevitably need greater bandwidth on the tactical edge and this should be an imperative that drives investment in research and development to address this challenge.

Technological innovation was at the crux of the United States’ comparative military and economic advantage in the twentieth century. In this contemporary great power competition, U.S. failure to innovate at the scientific and technological frontier will have direct (and deleterious) effects for the United States on the distribution of power in the international system over the long term.

#### Chinese tech superiority upends deterrence and emboldens them to risk conflict over Taiwan---extinction.

Kroenig 18, Deputy Director for Strategy, Scowcroft Center for Strategy and Security Associate Professor of Government and Foreign Service, Georgetown University (Matthew, Nov 12, 2018, “Will disruptive technology cause nuclear war?” *BAS*, <https://thebulletin.org/2018/11/will-disruptive-technology-cause-nuclear-war>)

Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. The dominant theory of the causes of war in the academy is the “bargaining model of war.” This theory identifies rapid shifts in the balance of power as a primary cause of conflict.

International politics often presents states with conflicts that they can settle through peaceful bargaining, but when bargaining breaks down, war results. Shifts in the balance of power are problematic because they undermine effective bargaining. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But shifts in the balance of power muddy understandings of which states have the advantage.

You may see where this is going. New technologies threaten to create potentially destabilizing shifts in the balance of power.

For decades, stability in Europe and Asia has been supported by US military power. In recent years, however, the balance of power in Asia has begun to shift, as China has increased its military capabilities. Already, Beijing has become more assertive in the region, claiming contested territory in the South China Sea. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine.

Moreover, China may have the lead over the United States in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles, quantum computing, 5G wireless connectivity, and artificial intelligence (AI). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “Whoever leads in AI will rule the world.”

If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid shift in the balance of power that often causes war. If Beijing believes emerging technologies provide it with a newfound, local military advantage over the United States, for example, it may be more willing than previously to initiate conflict over Taiwan. And if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member.

Either scenario could bring these nuclear powers into direct conflict with the United States, and once nuclear armed states are at war, there is an inherent risk of nuclear conflict through limited nuclear war strategies, nuclear brinkmanship, or simple accident or inadvertent escalation.

This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to undermine nuclear second-strike capabilities directly, but, rather, any technologies that can result in a meaningful shift in the broader balance of power. And the solution is not to preserve second-strike capabilities, but to preserve prevailing power balances more broadly.

When it comes to new technology, this means that the United States should seek to maintain an innovation edge. Washington should also work with other states, including its nuclear-armed rivals, to develop a new set of arms control and nonproliferation agreements and export controls to deny these newer and potentially destabilizing technologies to potentially hostile states.

These are no easy tasks, but the consequences of Washington losing the race for technological superiority to its autocratic challengers just might mean nuclear Armageddon.

### 1AC---Cybersecurity ADV

#### Advantage 2 is Cybersecurity:

#### Aggressive patent strategies create structural flaws in 5G standardization that imperils domestic cybersecurity---market competition reduces the incidence of vulnerability and severity of attacks.

Duan 20, \*Charles Duan is a senior fellow and associate director of tech & innovation policy at the R Street Institute, where he focuses his research on intellectual property issues; (2020, “OF MONOPOLIES AND MONOCULTURES: THE INTERSECTION OF PATENTS AND NATIONAL SECURITY”, Santa Clara High Technology Law Journal, 36(4), 369-405. Retrieved from <https://www2.lib.ku.edu/login?url=https://www.proquest.com/scholarly-journals/monopolies-monocultures-intersection-patents/docview/2442966690/se-2?accountid=14556>)

III. COMPETITION AND CYBERSECURITY

In addition to the historical review done so far, another approach to understanding the relationship among patents, competition, and national security is to consider the role of cybersecurity. There is little doubt that computer system vulnerabilities that enable hacking and spread of computer exploits are a threat to the nation’s defenses, so better cybersecurity is a key part of national security strategy.155

Strong competition can thus complement national security by enhancing domestic cybersecurity, and patent assertion that unduly weakens competition detracts from cybersecurity.156 Competition promotes better cybersecurity in at least two ways. First, multiple studies show that competition encourages firms to improve their products on multiple vectors including cybersecurity. Second, competition avoids a situation that security experts call a “monoculture,” which increases vulnerability to severe cyberattacks. As former Secretary of Homeland Security Michael Chertoff wrote recently, “We need competition and multiple providers, not a potentially vulnerable technological monoculture,” to guarantee national security.157 Thus, cybersecurity provides a useful lens for understanding how unfettered patent assertion and licensing can detract from national security.

A. Cybersecurity as Competitive Value-Add

Competition enhances national security by reducing the incidence of technical vulnerabilities. That effect is especially important for security sensitive systems such as mobile telecommunications.

Intuitively, a causal chain from competition to cybersecurity makes logical sense. Computer security is a value-added benefit to consumers, so firms in competitive markets are likely to use security to gain an edge over their competitors.158 In monopolized markets, though, there may be less external impetus to test products for flaws, and the monopolist may choose to focus less on security and more on new product features or increased product quality.

Economic research confirms these hypotheses about competition leading to better cybersecurity. A 2009 empirical study of web browsers considered the impact of market concentration on the amount of time that vendors took to fix security vulnerabilities as they were discovered.159 The study found that the presence of more competitors correlated with faster cybersecurity response—a reduction of 8–10 days in response time per additional market rival.160 Similarly, business researchers in 2005 modeled incentives for firms to engage in sharing of cybersecurity information, and concluded that the “inclination to share information and invest in security technologies increases as the degree of competitiveness in an industry increases.”161 Another study found that, where two software firms are in competition, at least one will be willing to take on some degree of risk and responsibility for cybersecurity, whereas a monopoly software firm will consistently fail to accept such responsibility.162 To be sure, an unpublished study from 2017 found that some market concentration can make firms more responsive to cybersecurity issues, but only to a point: “being in a dominant position reduces the positive effect of having less competitors on the responsiveness of the vendor,” and indeed the “more dominant the firm is, the less rapid it is in releasing security patches.”163 This research confirms that competition is more conducive to cybersecurity.

It is not hard to see how this applies to emerging communication technologies markets. In the absence of competition, the above research suggests that device manufacturers, chip makers, and software developers will lack incentives to respond to vulnerabilities, to share information about cybersecurity practices and issues, and to take responsibility for security matters. Mobile phone chips have had their share of cybersecurity failures already.164 The best way to flush out ongoing and future cybersecurity issues is to maintain competitive pressure at all levels of the supply chain.

B. Vulnerabilities of “Monocultures”

A second reason why monopoly undermines cybersecurity is that monopoly leads to a “monoculture” of single-vendor products, opening the door to massive systemic failure in the case of a cyberattack. Computer researchers developed the theory of software monocultures in the early 2000s, in response to the regular phenomenon of computer viruses and other attacks spreading rapidly by exploiting flaws in the dominant operating system at the time, Microsoft Windows.165 Where a computer system such as Windows has a commanding share of users, a virus that exploits a flaw in that system can quickly spread to infect a whole interconnected ecosystem. An operating system monopoly thus enables fast and easy spread of cyberattacks, and better cybersecurity would be achieved through greater diversity in online systems.166 As one research group posited, “a network architecture that supports a collection of heterogeneous network elements for the same functional capability offers a greater possibility of surviving security attacks as compared to homogeneous networks.”167

There has been considerable study of the theory that computer monocultures are naturally more vulnerable to attacks.168 In one study, computer science researchers reviewed a catalog of 6,340 software vulnerabilities recorded in 2007, to compare whether comparable software would share the same flaws.169 Of the 2,627 vulnerabilities applicable to application software (as opposed to operating systems, web scripts, and other software components), only 29 (1.1%) applied to substitute products from different vendors but providing the same functionality.170 By contrast, different versions of a single software product were found to share vulnerabilities 84.7% of the time.171 Thus, software monocultures share exploitable flaws even when there is some variation in versions across the monoculture; by contrast, diversity in software is almost guaranteed to prevent a single flaw from affecting all users.

In the case of 5G and wireless mobile communications, a monoculture is an especially concerning possibility. To the extent that systems such as smart city sensors or communication networks are widely deployed in a monoculture fashion, a widespread attack could have devastating consequences, potentially blacking out a region and affecting essential services such as 911.172 A monoculture that is vulnerable to so-called “rootkits” or “backdoors”—maliciously installed software that enable bad actors to commandeer systems—could also enable mass surveillance or spying by private hackers or foreign governments.173 The presence of systems from multiple vendors would mitigate these possibilities.

#### Actors have the means and motivations to strike critical infrastructure.

Wintch 21, \*Timothy M. Wintch, an active-duty Major in the United States Air Force. He is currently a graduate student at the Oettinger School of Science & Technology Intelligence, National Intelligence University, in Bethesda, Maryland. Mr. Wintch has over 11 years of experience in command-and-control operations as an Air Battle Manager. He holds a Bachelor of Arts in Politics from the University of California, Santa Cruz, and a Master of Arts in Military Studies from American Military University. (April 20th, 2021, “PERSPECTIVE: Cyber and Physical Threats to the U.S. Power Grid and Keeping the Lights on”, https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/)

Among critical infrastructure sectors in the U.S., energy is perhaps the most crucial of the 16 sectors defined by the Department of Homeland Security. This sector is so vital because it provides the energy necessary to run every other critical infrastructure sector. However, the U.S. power grid, the backbone of the energy sector, is built upon an aging skeleton that is becoming increasingly vulnerable every day. Whether from terrorists or nation-states like Russia and China, the power grid is susceptible to not just physical attacks, but also to cyber intrusion as well. However, much of this threat can be mitigated if the U.S. takes the appropriate steps to safeguard the power grid and avoid a potential catastrophe in the future.

Since Sept. 11, 2001, terrorism on U.S. soil has been at the forefront of American consciousness. Critical infrastructure provides an appealing target because of the disproportionally large impact even a small attack can have on the sectors. In particular, the power grid represents a particularly lucrative target, both in terms of the ease of access and the large impact it can make. The National Research Council stated that the U.S. power grid is “vulnerable to intelligent multi-site attacks by knowledgeable attackers intent on causing maximum physical damage to key components on a wide geographical scale.”[[1]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn1) Additionally, the physical security of transmission and distribution systems is difficult due to the dispersed nature of these key components, which in turn is advantageous to attackers as it reduces the likelihood of their capture.[[2]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn2) From 2002-2012, approximately 2,500 physical attacks occurred against transmission lines and towers worldwide and approximately 500 attacks against transformer substations.[[3]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn3) Terrorists have the motivation to attack the U.S. power grid but the very nature of the grid makes it highly vulnerable. The power grid is not only at risk from physical attacks, but also nation-state cyberattacks.

One nation that has shown both the capability and intent to use attacks against critical energy infrastructure is Russia, as demonstrated in their 2015 annexation of Crimea from Ukraine. A Russian cyber threat group known as Sandworm, which used its BlackEnergy malware, attacked Ukrainian computer systems that provide remote control of the Ukraine power grid.[[4]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn4) This attack, and another in 2016, each left the capital Kiev without power, prompting cyber experts to raise concern about the same malware already existing in NATO and the U.S. power grids.[[5]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn5) In any conflict between Russia and NATO, not only would similar cyberattacks pose a threat, but so would potential physical attacks severing fuel oil and natural gas lines to Western Europe. Russia has both the capability and intent to attack critical infrastructure, particularly power grids, during future conflicts in their “hybrid warfare” approach.

Another nation that has the capability to attack critical energy infrastructure is China, representing a threat to not just the U.S. energy infrastructure but also that of our allies whose support would be vital in a major conflict. A recent NATO report highlighted this threat from China’s Belt and Road Initiative, stating that “[China’s] foreign direct investment in strategic sectors [such as energy generation and distribution] …raises questions about whether access and control over such infrastructure can be maintained, particularly in crisis when it would be required to support the military.”[[6]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn6) Like Russia, China has been active with cyber intrusions in U.S. energy infrastructure. The Mission Support Center at Idaho National Laboratory characterized these as attacks as “multiple intrusions into US ICS/SCADA [Industrial Control Systems/Supervisory Control and Data Acquisition] and smart grid tools [that] may be aimed more at intellectual property theft and gathering intelligence to bolster their own infrastructure, but it is likely that they are also using these intrusions to develop capabilities to attack the [bulk electric system], as well.”[[7]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn7) China, therefore, has both the capability and intent to conduct cyber intrusions and attacks for myriad reasons.

Another arm of this threat is the reliance the U.S. energy industry has on imports from China, especially transformers. In early 2020, federal officials seized a transformer in the port of Houston that had been imported by the Jiangsu Huapeng Transformer Company before sending it to Sandia National Laboratory in Albuquerque. Sandia is contracted by the U.S. Department of Energy for mitigating national security threats.[[8]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn8) The Wall Street Journal reported that “Mike Howard, chief executive of the Electric Power Research Institute, a utility-funded technical organization, said that the diversion of a huge, expensive transformer is so unusual – in his experience, unprecedented – that it suggests officials had significant security concerns.”[[9]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn9) Previously destined for the Washington Area Power Administration’s Ault, Colo., substation, the transformer is believed to have been seized due to “backdoor” exploitable hardware emplaced by the Chinese prior to shipment.[[10]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn10) Shortly after these events, President Trump issued Executive Order 13920, “[Securing the United States Bulk-Power System](https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-securing-united-states-bulk-power-system/),” essentially limiting the import of Chinese-built critical energy infrastructure components due to concerns about cybersecurity.[[11]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn11) Interestingly, Jiangsu Huapeng “boasted that it supported 10 percent of New York City’s electricity load.”[[12]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn12)

Franklin Kramer, the former Assistant Secretary of Defense for International Security Affairs, testified before a U.S. House of Representatives Energy and Commerce subcommittee during an energy and power hearing in 2011 and said that a “highly-coordinated and structured cyber, physical, or blended attack on the bulk power system, however, could result in long-term (irreparable) damage to key system components in multiple simultaneous or near-simultaneous strikes.” He added that “an outage could result with the potential to affect a wide geographic area and cause large population centers to lose power for extended periods.”[[13]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn13) Even the inclusion of features such as smart grids to the overall grid structure poses new vulnerabilities through their connectivity. Kramer stated that “such connectivity means that the distribution system could be a key vector for a national security attack on the grid.”[[14]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn14)

#### Those attacks cause accidental nuclear escalation.

Klare 19, \*Michael T. Klare is a professor emeritus of peace and world security studies at Hampshire College and senior visiting fellow at the Arms Control Association; (November 19th, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation”, https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation)

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.[12](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote12) The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.[13](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote12)

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”[14](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote14)

These are by no means the only pathways to escalation resulting from the offensive use of cyberweapons. Others include efforts by third parties, such as proxy states or terrorist organizations, to provoke a global nuclear crisis by causing early-warning systems to generate false readings (“spoofing”) of missile launches. Yet, they do provide a clear indication of the severity of the threat. As states’ reliance on cyberspace grows and cyberweapons become more powerful, the dangers of unintended or accidental escalation can only grow more severe.

#### Cyber-compromised NC3 causes nuclear war.

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The Nuclear-Cyber Connection

These links exist because the NC3 systems of the United States and other nuclear-armed states are heavily dependent on computers and other digital processors for virtually every aspect of their operation and because those systems are highly vulnerable to cyberattack. Every nuclear force is composed, most basically, of weapons, early-warning radars, launch facilities, and the top officials, usually presidents or prime ministers, empowered to initiate a nuclear exchange. Connecting them all, however, is an extended network of communications and data-processing systems, all reliant on cyberspace. Warning systems, ground- and space-based, must constantly watch for and analyze possible enemy missile launches. Data on actual threats must rapidly be communicated to decision-makers, who must then weigh possible responses and communicate chosen outcomes to launch facilities, which in turn must provide attack vectors to delivery systems. All of this involves operations in cyberspace, and it is in this domain that great power rivals seek vulnerabilities to exploit in a constant struggle for advantage.

The use of cyberspace to gain an advantage over adversaries takes many forms and is not always aimed at nuclear systems. China has been accused of engaging in widespread cyberespionage to steal technical secrets from U.S. firms for economic and military advantages. Russia has been accused, most extensively in the Robert Mueller report, of exploiting cyberspace to interfere in the 2016 U.S. presidential election. Nonstate actors, including terrorist groups such as al Qaeda and the Islamic State group, have used the internet for recruiting combatants and spreading fear. Criminal groups, including some thought to be allied with state actors, such as North Korea, have used cyberspace to extort money from banks, municipalities, and individuals.[4](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote04) Attacks such as these occupy most of the time and attention of civilian and military cybersecurity organizations that attempt to thwart such attacks. Yet for those who worry about strategic stability and the risks of nuclear escalation, it is the threat of cyberattacks on NC3 systems that provokes the greatest concern.

This concern stems from the fact that, despite the immense effort devoted to protecting NC3 systems from cyberattack, no enterprise that relies so extensively on computers and cyberspace can be made 100 percent invulnerable to attack. This is so because such systems employ many devices and operating systems of various origins and vintages, most incorporating numerous software updates and “patches” over time, offering multiple vectors for attack. Electronic components can also be modified by hostile actors during production, transit, or insertion; and the whole system itself is dependent to a considerable degree on the electrical grid, which itself is vulnerable to cyberattack and is far less protected. Experienced “cyberwarriors” of every major power have been working for years to probe for weaknesses in these systems and in many cases have devised cyberweapons, typically, malicious software (malware) and computer viruses, to exploit those weaknesses for military advantage.[5](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote05)

Although activity in cyberspace is much more difficult to detect and track than conventional military operations, enough information has become public to indicate that the major nuclear powers, notably China, Russia, and the United States, along with such secondary powers as Iran and North Korea, have established extensive cyberwarfare capabilities and engage in offensive cyberoperations on a regular basis, often aimed at critical military infrastructure. “Cyberspace is a contested environment where we are in constant contact with adversaries,” General Paul M. Nakasone, commander of the U.S. Cyber Command (Cybercom), told the Senate Armed Services Committee in February 2019. “We see near-peer competitors [China and Russia] conducting sustained campaigns below the level of armed conflict to erode American strength and gain strategic advantage.”

Although eager to speak of adversary threats to U.S. interests, Nakasone was noticeably but not surprisingly reluctant to say much about U.S. offensive operations in cyberspace. He acknowledged, however, that Cybercom took such action to disrupt possible Russian interference in the 2018 midterm elections. “We created a persistent presence in cyberspace to monitor adversary actions and crafted tools and tactics to frustrate their efforts,” he testified in February. According to press accounts, this included a cyberattack aimed at paralyzing the Internet Research Agency, a “troll farm” in St. Petersburg said to have been deeply involved in generating disruptive propaganda during the 2016 presidential elections.[6](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote06)

Other press investigations have disclosed two other offensive operations undertaken by the United States. One called “Olympic Games” was intended to disrupt Iran’s drive to increase its uranium-enrichment capacity by sabotaging the centrifuges used in the process by infecting them with the so-called Stuxnet virus. Another left of launch effort was intended to cause malfunctions in North Korean missile tests.[7](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote07) Although not aimed at either of the U.S. principal nuclear adversaries, those two attacks demonstrated a willingness and capacity to conduct cyberattacks on the nuclear infrastructure of other states.

Efforts by strategic rivals of the United States to infiltrate and eventually degrade U.S. nuclear infrastructure are far less documented but thought to be no less prevalent. Russia, for example, is believed to have planted malware in the U.S. electrical utility grid, possibly with the intent of cutting off the flow of electricity to critical NC3 facilities in the event of a major crisis.[8](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote08) Indeed, every major power, including the United States, is believed to have crafted cyberweapons aimed at critical NC3 components and to have implanted malware in enemy systems for potential use in some future confrontation.

Pathways to Escalation

Knowing that the NC3 systems of the major powers are constantly being probed for weaknesses and probably infested with malware designed to be activated in a crisis, what does this say about the risks of escalation from a nonkinetic battle, that is, one fought without traditional weaponry, to a kinetic one, at first using conventional weapons and then, potentially, nuclear ones? None of this can be predicted in advance, but those analysts who have studied the subject worry about the emergence of dangerous new pathways for escalation. Indeed, several such scenarios have been identified.[9](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote09)

The first and possibly most dangerous path to escalation would arise from the early use of cyberweapons in a great power crisis to ~~paralyze~~ undermine the vital command, control, and communications capabilities of an adversary, many of which serve nuclear and conventional forces. In the “fog of war” that would naturally ensue from such an encounter, the recipient of such an attack might fear more punishing follow-up kinetic attacks, possibly including the use of nuclear weapons, and, fearing the loss of its own arsenal, launch its weapons immediately. This might occur, for example, in a confrontation between NATO and Russian forces in east and central Europe or between U.S. and Chinese forces in the Asia-Pacific region.

Speaking of a possible confrontation in Europe, for example, James N. Miller Jr. and Richard Fontaine wrote that “both sides would have overwhelming incentives to go early with offensive cyber and counter-space capabilities to negate the other side’s military capabilities or advantages.” If these early attacks succeeded, “it could result in huge military and coercive advantage for the attacker.” This might induce the recipient of such attacks to back down, affording its rival a major victory at very low cost. Alternatively, however, the recipient might view the attacks on its critical command, control, and communications infrastructure as the prelude to a full-scale attack aimed at neutralizing its nuclear capabilities and choose to strike first. “It is worth considering,” Miller and Fontaine concluded, “how even a very limited attack or incident could set both sides on a slippery slope to rapid escalation.”[10](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote10)

What makes the insertion of latent malware in an adversary’s NC3 systems so dangerous is that it may not even need to be activated to increase the risk of nuclear escalation. If a nuclear-armed state comes to believe that its critical systems are infested with enemy malware, its leaders might not trust the information provided by its early-warning systems in a crisis and might misconstrue the nature of an enemy attack, leading them to overreact and possibly launch their nuclear weapons out of fear they are at risk of a preemptive strike.

“The uncertainty caused by the unique character of a cyber threat could jeopardize the credibility of the nuclear deterrent and undermine strategic stability in ways that advances in nuclear and conventional weapons do not,” Page O. Stoutland and Samantha Pitts-Kiefer wrote in 2018 paper for the Nuclear Threat Initiative. “[T]he introduction of a flaw or malicious code into nuclear weapons through the supply chain that compromises the effectiveness of those weapons could lead to a lack of confidence in the nuclear deterrent,” undermining strategic stability.[11](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote11) Without confidence in the reliability of its nuclear weapons infrastructure, a nuclear-armed state may misinterpret confusing signals from its early-warning systems and, fearing the worst, launch its own nuclear weapons rather than lose them to an enemy’s first strike. This makes the scenario proffered in the 2018 NPR report, of a nuclear response to an enemy cyberattack, that much more alarming.

### 1AC---Solvency

#### Plan: The United States federal government should substantially increase prohibitions on private sector conduct that is more restrictive of competition than reasonably necessary to enable creation of information technology standards.

#### The plan requires SSO’s to administer reasonable action to prohibit ex post opportunism---that strengthens FRAND effectiveness while enabling SEP holders to capture appropriate royalties---which is the best competition-innovation balance.

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3. Application of the Basic Legal Principles

The antitrust principle is straightforward: industry-wide collaboration through SSOs to establish procompetitive standards is permitted only if it is no more restrictive of competition than reasonably necessary to enable creation of the standards. When standard setting predictably creates technology monopolies that, if unrestrained, will enable anticompetitive ex post opportunism that would otherwise not occur, an SSO that does not take effective measures to prevent or minimize such ex post opportunism engages in conduct that is more restrictive of competition than necessary. In that case, the SSO and, in appropriate cases, its members, may well violate Section 1 of the Sherman Act.

Under this principle, SSO procedures and FRAND rules should be evaluated based on whether they lead to reasonable SEP royalties, using the competitive ex ante licensing standard discussed above, which has been adopted by the courts in patent law. Put differently, FRAND rules should be evaluated based on their ability to prevent SEP holders from obtaining more than the ex ante value of their technology from implementers.

This limitation would not prevent a SEP holder from proﬁting, perhaps greatly, from participating in the SSO and having its patented technology included in the standard. The SEP holder continues to be rewarded for its technology because the inclusion of its technology in the standard can still greatly increase the volume of licensing opportunities available to the SEP holder.

Whether a particular set of FRAND rules are sufficiently effective in preventing ex post opportunism will depend on the particular circumstances. The procedural unfolding of the case will also depend upon the circumstances. As a general matter, the case would probably be structured as an ordinary Rule of Reason case.82

First, the plaintiff would have to demonstrate harm to competition as a result of the collaboration of the SSO’s members, many of which compete with one another. In this case, the harm to competition would stem from the ability of the SEP holder to exercise monopoly power by obtaining royalties in excess of the competitive, ex ante level. The decision to include patented technologies in the standard would be the allegedly unlawful agreement. Notably, the court need not determine what a FRAND royalty is; it would suffice to determine that market power has been created or exercised, and that existing SSO rules and policies were not adequate to prevent the competitive harm. The defendant, which could be the SSO or perhaps one or more SSO members, would win at this point if the plaintiff failed to show harm to competition. If might fail if the standard faces substantial competition and the court concludes that the SEP holder therefore does not have market power or if the SSO’s rules and policies are found to be effective in preventing ex post opportunism, even if the plaintiff or even the court thinks that other rules and policies would be preferable.

Second, if the plaintiff makes the requisite showing of harm to competition, the defendant(s) would then have to show some procompetitive justiﬁcation— in this case, the beneﬁts of the standard. These two initial steps should be straightforward.

Third, if as is likely the defendant is able to show a procompetitive justiﬁcation, the plaintiff would have to show that the SSO could have used available, reasonable alternatives to realize the efficiency beneﬁts with less or none of the competitive harms. The plaintiff might identify reasonable alternatives that would have led to a different standard, based on including unpatented technology in the standard or perhaps involving fewer SEPs or fewer owners of SEPs, which would be less subject to patent holdup. More likely, the plaintiff could suggest alternative SSO rules that would not change the standard, but would reduce the likelihood or extent of ex post opportunism. For example, the plaintiff might suggest more rigorous FRAND-type rules, such as rules that set forth more precise principles on which FRAND royalties are to be determined and the circumstances under which SEP holders might seek injunctions.

Fourth, the burden would then shift to the defendant(s) to show that the beneﬁts of the standard could not have been realized if the SSO had adopted any of the proffered alternatives or that those alternatives were unrealistic.83 The plaintiff would be entitled to judgment if the court concludes that those beneﬁts could have been realized with less competitive harm if the SSO had adopted the standard with different IPR rules or policies.

Our overall sense, based on experience and the empirical literature, is that the extant FRAND rules are generally useful, but tend to be inadequate because they are imprecise and leave unresolved such critical issues as (a) the meaning of a reasonable royalty, even conceptually; (b) the meaning of “non-discriminatory;” (c) to whom licenses must be offered; and (d) under what circumstances may a SEP holder obtain an injunction.84 These imprecise FRAND commitments are therefore not sufficient to adequately prevent ex post opportunism. The recent revisions to IEEE’s FRAND policy represent a signiﬁcant step in the right direction, but even this advance leaves important questions unanswered.85 If FRAND rules are inadequate in these ways, litigation involving extant FRAND rules would likely be resolved only at the ﬁnal, fourth step. The defendant would be able to demonstrate the beneﬁts created by the standard; the plaintiff would be able to demonstrate the creation of market power and that other reasonable and practical rules or policies would ameliorate the problem. The case would thus turn on whether the defendant is able to demonstrate that signiﬁcant beneﬁts associated with standardization could not have been realized if the SSO had adopted those other rules or policies.

The court would have available a variety of possible remedies if the plaintiff prevails. Implementers that paid supracompetitive royalties or were unlawfully excluded in whole or in part from product markets as a result of the inadequate FRAND policies would be entitled to damages and, in some cases, to treble damages.86 If the unlawful SSO conduct is regarded as the collective action of the SSO and its members, which is likely to be the case in most instances, SSO members would be jointly and severally liable for the damages. Forward-looking injunctive relief aimed at restoring competition would need to be fashioned to the requirements of the individual case. For example, a court could order the SSO to adopt a new rule or policy proposed by the plaintiff. If the court is reluctant to take on that governance role, it might give the SSO a period of time—maybe ninety days—to develop a rule, subject to the court’s ultimate approval, which would adequately ameliorate the competitive problem created by the SSO. Alternatively or in addition, the court might order the parties to attempt to negotiate a rule or policy on which they can agree. And, depending on the circumstances, the court might order SEP holders, including at least those that were defendants in the case, to comply with the new SSO rules and policies.

#### Alleviating patent holdup begins by permitting consumer challenges to SSO misconduct, which necessitates antitrust. SSO’s cannot be counted on to self execute FRAND.

Melamed & Shapiro 18, \*A. Douglas Melamed is Professor of the Practice of Law at Stanford Law School; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley; (May 2018, “How Antitrust Law Can Make FRAND Commitments More Effective”, <https://www-cdn.law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf>)

2. Why Antitrust Enforcement Is Necessary

Some SSO members have an interest in ensuring that the SSO takes steps to minimize the potential harms from the SEP holders’ monopoly power, and this undoubtedly explains in part why most SSOs have adopted FRAND policies or similar requirements. But, as shown in the economic model in the Appendix,73 SSOs cannot in general be counted on to adopt effective FRAND policies. The bases for this conclusion, which is central to our argument for the applicability of Section 1 to SSO FRAND rules, can be summarized as follows.74

First, the SSO members collectively have an interest in permitting SEP holders to charge supracompetitive royalties that elevate the downstream price of compliant devices to the monopoly level. Doing so will enable the members in aggregate to collect increased revenues from consumers, and thus to generate increased profits that in theory could be shared by all the members. In other words, supracompetitive royalties can enrich industry participants as a group at the expense of final consumers. This fact alone should serve as a clear and strong signal regarding the dangers of counting on SSOs to implement effective FRAND policies: if the SSO members negotiate efficiently, the outcome will be just as bad for consumers as if the members agreed to fix downstream prices.75 The fundamental problem is that final consumers are not at the table when the SSO rules are negotiated.

Second, SSO members that own SEPs but earn little or no profits as implementers have a powerful self-interest in being able to exercise the ex post monopoly power associated with their SEPs. Because SSO policies are usually determined by a consensus process, these members will likely be able to block the adoption of fully effective FRAND policies. Moreover, these SSO members often have the greatest interest in SSO patent policies. Since much of their income may be attributable to patent licensing, they can be expected to devote substantial resources to block the adoption of FRAND policies that effectively prevent patent holdup.

Third, even SSO members that earn significant profits as implementers may have mixed incentives if they also own SEPs, which can also lead to weak or in-effective FRAND rules. In the Appendix, we show that, if the requisite share of votes in the SSO are cast by firms whose share of SEP royalties is at least as large as their share of downstream profits, and if these firms can coordinate their voting over the FRAND rules, then an SSO unconstrained by antitrust laws will establish FRAND rules leading to an outcome no better for consumers than would result from an integrated monopolist controlling all SEPs and all downstream sales.76

Fourth, even SSO members that are downstream implementers and own few, if any, SEPs may have only a modest interest in promoting effective policies to restrict ex post opportunism. Because all implementers will be subject to the opportunism, all of them will face increased licensing costs, and therefore will likely be able to pass on most or all of the increased costs to their customers.77 Furthermore, these implementers might not be especially active or effective in the standard-setting process for free-riding or public-good reasons, especially if SEP royalties constitute only a relatively small portion of the costs of their standard-implementing products. Public choice theory predicts that the highly motivated SEP holders are likely to have the greatest influence over patent policies.

Empirical evidence bears out these concerns. As a starting point, we find it striking that SSO FRAND rules are almost always quite vague.78 Notably, SSOs in which SEP holders are more prevalent tend to have weaker FRAND rules.79 Further, to our knowledge, SSOs have made almost no effort to enforce their FRAND rules and have, instead, left enforcement efforts to others.80 This evidence raises serious doubts about the effectiveness of the existing FRAND rules in preventing ex post opportunism.

The problem is exacerbated by the fact that most SSOs put IPR rules in place long ago, when SEP-holder opportunism was much less of a problem. Proponents of new, stricter IPR rules to prevent SEP-holder opportunism thus face the daunting task of persuading an SSO that makes decisions by consensus to change an existing policy over the often-intense opposition of SEP holders. The dispute over the recent changes to the IPR rules at the Institute of Electrical and Electronics Engineers (IEEE) illustrates how difficult and contentious that process can be.81

Thus, effective prevention of ex post opportunism by SEP holders requires antitrust enforcement to overcome the SSO problems associated with (a) attenuated incentives (implementers that also own SEPs); (b) the public good aspect of stronger FRAND rules (the danger that implementers will free ride on others rather than expend resources to implement strong FRAND rules); and (c) externalities (the harm to consumers that results when implementers pass through higher royalties in the form of higher prices).

#### Indicting systemic holdup is a fruitless academic exercise. Be cautious of neg studies---they rely on deeply flawed methodologies, don’t address relevant hypotheses, and in all likelihood are funded by Qualcomm.

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C. Actual Patent Holdups Are Very Difficult to Measure

As with holdup in general, quantifying the frequency and magnitude of actual patent holdups is very difficult as a practical matter and not a useful way of assessing the importance of the patent holdup problem. Rarely can researchers observe the ex post price, because patent licensing terms are normally confidential. Even when researchers can observe the license fees, they are often embedded in a complex agreement. And even in those rare cases where researchers can accurately observe the ex post price, they are unlikely to observe the ex ante price, making it difficult if not impossible to measure the magnitude of the holdup.

Litigated cases also are problematic as a source of data to quantify the magnitude of actual patent holdups. A litigated case resulting in an award of reasonable royalties may well involve attempted holdup, but by definition it cannot provide smoking-gun evidence of actual holdup, at least if one accepts that the royalties awarded by the court are reasonable.64 Rather, at least since the Supreme Court eliminated the automatic entitlement to an injunction, litigation to judgment (which is rare) often reflects a refusal to give in to holdup by a defendant willing to take its chances in court. And the vast majority of patent cases settle. The terms of a settlement are rarely observable, so it is impossible to know whether those settlements reflected the value of holdup.

Notwithstanding these points, a number of authors have pointed to a lack of empirical evidence to argue that patent holdup either does not exist or is not a significant problem.65 Even taken on their own terms, many of these papers are deeply flawed. One such paper, which has often been cited by those who downplay the importance of patent holdup, purports to offer empirical evidence inconsistent with the hypothesis that SEP holdup has slowed innovation or harmed consumers.66 The conclusion to this Qualcomm-funded paper states, “[w]e cannot reject the hypothesis of no SEP holdup.”67 How do these authors reach this conclusion? They compare rates of change of quality-adjusted prices in “SEP- reliant” industries with “similar” non-SEP-reliant industries, primarily over the 1997-2013 period.68 For example, they show that quality-adjusted prices of cellular phones have fallen faster than the quality-adjusted prices of automobiles.69 This exercise does not address the relevant hypothesis: whether SEP holdup increased the price of cellular phones from what it otherwise would have been.70 The quality- adjusted prices of pharmaceuticals have risen much faster than automobiles over the same period of time, but that similarly is not proof that pharmaceuticals are subject to a patent holdup problem.

Beyond the obvious and fatal flaws in this empirical work,71 the whole line of inquiry is of limited relevance for the purpose of measuring the social costs of holdup or designing institutions to limit patent holdup, because it only looks for instances of actual patent holdup. As explained above, these instances are very difficult to detect and are only the tip of the iceberg in terms of the social costs of patent holdup.72 So far as we can tell, the vast majority of these papers have been funded by Qualcomm and other patent holders seeking to weaken the institutions designed to control patent holdup, increase their leverage in licensing negotiations, and thus increase their ability to monetize their patents.73

Despite the difficulties of observing the incidence and magnitude of actual patent holdups, we are able to observe the telltale signs of actual patent holdup. Transaction cost economics, and simple bargaining theory for that matter, tell us that actual patent holdup can be expected to occur when three conditions are present: (1) a firm has developed a new product independently; (2) that firm has made significant investments that are specific to one or more patents asserted against that product; and (3) the firm is not protected from patent holdup.74 As discussed above, conditions (1) and (2) are common in the high-tech sector, placing considerable weight on the institutions that protect firms from patent holdup.

The presence of those institutions is itself evidence that the patent holdup problem is real and significant. As we noted in Part I, companies try to structure their transactions to avoid holdup, developing institutions for that purpose. As we have seen, the traditional market solutions do not work well for patents. In most industries, the central mechanisms limiting patent holdup come from patent law, namely the rules governing injunctions and patent damages. In the high-tech sector, companies have overwhelmingly turned to SSOs in an effort to obtain global commitments to an ex ante royalty, which appear in the form of FRAND commitments. The near-universal recognition in the industry of the need for such a mechanism is strong evidence that companies view holdup as a problem they must build institutions to avoid.

#### Patent holdup is real and necessitates intervention, even if it can’t be systemically proven.

Contreras 19, \*Jorge Contreras, Professor, University of Utah S.J. Quinney College of Law; (2019, “MUCH ADO ABOUT HOLD-UP”, <https://www.illinoislawreview.org/wp-content/uploads/2019/08/Contreras.pdf>)

B. Protective Measures May Already Be Working to Reduce Hold-Up

Another important factor that should be considered regarding the purported lack of empirical evidence of systemic hold-up is the effect that existing policy measures have already had in reducing hold-up. As noted above, the threat of patent hold-up was a primary motivating factor for many SDOs to adopt policies requiring the disclosure and licensing of SEPs. These policies have been in place for decades. In the United States, the first such policy was adopted in 1959 by the American Standards Association (the predecessor to today’s American National Standards Institute (ANSI).102 Today, every one of the more than 200 ANSI-accredited developers of American National Standards must adhere to ANSI’s essential requirements, including the adoption of such a licensing policy for SEPs. Similar policies have existed in European and international standards organizations since at least the 1980s.103 These policies, which were developed by SDOs in large part to reduce the likelihood of hold-up within standard-setting systems, have had several decades to work, and it is likely that the lack of observed hold-up in some studies can be attributed to the successful operation of these policies.

Similarly, antitrust and competition enforcement agencies in the U.S. and Europe have been aware of the potential for hold-up connected with standardization for many years. Accordingly, they have brought enforcement actions when it has been alleged that hold-up behavior has resulted in a violation of the antitrust laws. High-profile enforcement actions against patent holders such as Rambus, 104 Google 105 and Qualcomm106 send powerful deterrent signals to the market and warn others not to engage in similar behavior lest they, too, become the subject of agency enforcement. Like SDO policies, it is likely that the general market awareness of agency interest in standard-setting and hold-up has, to a degree, limited the amount of hold-up that is actually attempted in the marketplace, thereby limiting the direct evidence of hold-up as a systemic problem.

But do the deterrent effects of SDO and agency efforts to reduce hold-up signify that hold-up is not a problem? Certainly not. To reach such a conclusion would be perverse: akin to claiming that burglary is not a problem in a neighborhood that experiences reduced burglary rates after it has implemented an active neighborhood watch program and enhanced policing.

C. Indicia of Healthy Markets do not Prove the Absence of Anticompetitive Conduct

As noted above, one of the principal arguments advanced by commentators seeking to refute the “hold-up theory” is that markets for telecommunications products, namely smart phones, are robust – evidenced by increasing product functionality, decreasing consumer prices and rapid innovation -- and that this degree of robustness indicates that hold-up cannot be a problem in these markets.107 If hold-up were a problem in these markets, they reason, we would see product stagnation, stable (but high) prices, and a lack of competition – features associated with classic examples of hold-up in markets for products such as natural resources and agricultural goods.108

But this argument relies on a false syllogism: hold-up results in market dysfunction; if a market functions well, then it cannot be subject to hold-up. The weaknesses in this argument are multifold. First, hold-up may exist in individual instances without sufficient weight to affect overall market characteristics, particularly in a large global market such as mobile telecommunications. Thus hold-up may exist, even in a market that outwardly appears to be functioning well. Second, there is no valid counterfactual to use to compare the health and robustness of the market for mobile telecommunications products.109 Other consumer electronics devices, such as televisions and DVD players, do not compare well with mobile telecommunications devices, which have taken on a unique character in the modern networked economy. Thus, observing the strength of the market fails to answer the critical questions “compared to what?” and how much stronger the market might be (through more product diversity, functionality, price reduction) without hold-up?

A simple historical illustration is useful in this context. During the decade leading up to the enactment of the Sherman Antitrust Act of 1890, several major U.S. commodity markets (e.g., steel, salt, petroleum, coal, sugar, lead, and others) came under intense scrutiny for a variety of allegedly anticompetitive industrial arrangements. One might have argued that these markets, had they been subject to the sorts of anticompetitive collusion that the Sherman Act sought to address, should have seen reductions of output and increases in price. Yet, between 1880 and 1890, U.S. output of salt, petroleum, steel, and coal all increased significantly, and prices of steel, sugar and lead all dropped significantly.110 Do these positive market indicia demonstrate that the subject markets were not subject to anticompetitive collusion, and that the Sherman Act was not necessary? Certainly, investigations of these industries revealed significant cartel behavior. I would suggest that few commentators today would argue that the coal, steel, sugar and other major industrial producers of the late nineteenth century were innocent of collusive and anticompetitive conduct, or that the Sherman Act was not a necessary and beneficial measure for the U.S. economy.111 Yet, had we relied solely on the positive characteristics exhibited by these markets as proof that anticompetitive conduct did not exist, then perhaps the Sherman Act never would have been enacted.

By the same token, the fact that global markets for standardized products such as computers and smart phones appear to be thriving does not itself refute the possibility of hold-up nor the existence of anticompetitive conduct in these markets. Nor does it allow regulators and policy makers to drop their guard or cease to monitor these important industries.

## 2AC

### Economic Mastery K

#### Use consequentialism---evaluating causal outcomes is most ethical. “You link, you lose” diverts political responsibility for atrocity---which turns the alternative.

Zanotti 17, \*Laura Zanotti, Associate Professor Department of Political Science, Virginia Tech, (January 13th, 2017, “Reorienting IR: Ontological Entanglement, Agency, and Ethics,” International Studies Review)

Furthermore, if we accept Barad’s position that we are “of the world” and not above the world, theorizing looks more like a practice endowed with performative political effects than a quest for the discovery of the “true nature” of what exists. Therefore, intellectual undertakings are a form of political agency and come with great responsibility. Such responsibility requires the need for exercising prudence in making truth statements about what is universally good or naturally inevitable. Assumptions about linearity of causal relations, universal laws of history, or ontological properties of entities yield two problematic effects. On the one hand, they may stifle political imagination; on the other hand, they could encourage actions based upon abstract prescriptions rather than upon careful diagnosis of the forces that obtain in the situation at hand. In an entangled world, there are no externalities. Arguments that divert responsibility by basing political choices upon abstract principles or aspirations and, as a result, that treat what happens on the ground as “unintended consequences” or “collateral damage,” are ethically thin and politically dangerous.

In fact, unintended consequences may well be the result of irresponsible political decision-making that does not include a competent assessment of the practical configurations that constitute the context of action and the means necessary to achieve stated goals. Such attitudes, Amoureux and Steele (2014) have suggested, have led to disastrous initiatives, such as the Bush administration’s invasion of Iraq. Likewise, Kennedy (2006) has shown that the bland rhetoric of jus in bello that provides standardized criteria regarding the number of acceptable civilian casualties (conveniently called collateral damage) produces the effect of diverting responsibility from those who conduct war while assuaging their consciences concerning the injuries and deaths their choices are inflicting. Kennedy (2004) has also shown that as a result of the preference for universal normativity, the human rights profession (which he calls “the invisible college”) is more concerned with protecting abstract norms than with acting politically so as to devise viable solutions to specific problems.

Universal norms and bureaucratic routines play a major role in prescribing and justifying UN peacekeeping interventions. As Jean Marie Guehe ́nno argued more than a decade ago, strategies of international intervention based upon assumptions of causal linearity and invariance may amount to hubris. Norms and rules can also offer grounds for appeasement. The massacres that occurred in Rwanda and Srebrenica in the 1990s provide examples of how, by uncritically following institutionalized rules, United Nations peacekeepers permitted atrocities. UN employees are not cold-blooded monsters or extremely callous individuals. They follow norms and rules, key examples of which include the principle of “impartiality,” Security Council mandates, and “rules of engagement.” By doing so, however, they have often fallen short of considering the possible consequences of decisions in specific situations. The United Nations’ failure to take action to prevent the Rwanda and Srebrenica genocide testifies to the fact that following universal norms (i.e., the imperative to preserve impartiality) and bureaucratic reasoning (i.e., the rules of engagement prescribing not to intervene to disarm any party of the conflict) set the stage for avoiding a careful assessment of what was at stake on the eve of the massacres. These ways of reasoning also appeased consciences for not making decisions accountable to the people in danger (Zanotti 2014).

#### Weigh impacts using expected value, or magnitude times probability---it’s the only to ethically account for the underappreciated risk of high-magnitude threats.

Harris 17, \*John Harris is Politico’s editor-in-chief and author of The Survivor: Bill Clinton in the White House; \*Bryan Bender is Politico’s national security editor and author of You Are Not Forgotten. Both Harris and Bender covered the Pentagon during the tenure of Secretary of Defense William J. Perry; (January 6th, 2017, “Bill Perry Is Terrified. Why Aren’t You?”, https://www.politico.com/magazine/story/2017/01/william-perry-nuclear-weapons-proliferation-214604/)

And there’s one other difference from the Cold War: Americans no longer think about the threat every day.

Nuclear war isn’t the subtext of popular movies, or novels; disarmament has fallen far from the top of the policy priority list. The largest upcoming generation, the millennials, were raised in a time when the problem felt largely solved, and it’s easy for them to imagine it’s still quietly fading into history. The problem is, it’s no longer fading. “Today, the danger of some sort of a nuclear catastrophe is greater than it was during the Cold War,” Perry said in an interview in his Stanford office, “and most people are blissfully unaware of this danger.”

It is a turn of events that has an old man newly obsessed with a question: Why isn’t everyone as terrified as he is?

Perry’s hypothesis for the disconnect is that much of the population, especially that rising portion with no clear memories of the first Cold War, is suffering from a deficit of comprehension. Even a single nuclear explosion in a major city would represent an abrupt and possibly irreversible turn in modern life, upending the global economy, forcing every open society to suspend traditional liberties and remake itself into a security state. “The political, economic and social consequences are beyond what people understand,” Perry says. And yet many people place this scenario in roughly the same category as the meteor strike that supposedly wiped out the dinosaurs—frightening, to be sure, but something of an abstraction.

So Perry regards his last great contribution of a 65-year career as a crusade to stimulate the public imagination—to share the vivid details of his own nightmares. He is doing so in a recent memoir, in a busy public speaking schedule, in half-empty hearing rooms on Capitol Hill, and increasingly with an online presence aimed especially at young people. He has enlisted the help of his 28-year-old granddaughter to figure out how to engage a new generation, including [through a series of virtual lectures](https://lagunita.stanford.edu/courses/course-v1:Engineering+NuclearBrink+Fall2016/about) known as a MOOC, or massive open online course. He is eagerly signing up for “Ask Me Anything” chats on Reddit, in which some people still confuse him with William “The Refrigerator” Perry of NFL fame. He posts his ruminations on YouTube, where they give Katy Perry no run for her money, even as the most popular are closing in on 100,000 views. One of the nightmare scenarios Perry invokes most often is designed to roust policymakers who live and work in the nation’s capital. The terrorists would need enriched uranium. Due to the elaborate and highly industrial nature of production, hard to conceal from surveillance, fissile material is still hard to come by—but, alas, far from impossible. Once it is procured, with help from conspirators in a poorly secured overseas commercial power centrifuge facility, the rest of the plot as Perry imagines it is no great technological or logistical feat. The mechanics of building a crude nuclear device are easily within the reach of well-educated and well-funded militants. The crate would arrive at Dulles International Airport, disguised as agricultural freight. The truck bomb that detonates on Pennsylvania Avenue between the White House and Capitol instantly kills the president, vice president, House speaker, and 80,000 others. Where exactly is your office? Your house? And then, as Perry spins it forward, how credible would you find the warnings, soon delivered to news networks, that five more bombs are set to explode in unnamed U.S. cities, once a week for the next month, unless all U.S. military personnel overseas are withdrawn immediately? If this particular scenario does not resonate with you, Perry can easily rattle off a long roster of others—a regional war that escalates into a nuclear exchange, a miscalculation between Moscow and Washington, a computer glitch at the exact wrong moment. They are all ilks of the same theme—the dimly understood threat that the science of the 20th century is set to collide with the destructive passions of the 21st. “We’re going back to the kind of dangers we had during the Cold War,” Perry said. “I really thought in 1990, 1991, 1992, that we left those behind us. We’re starting to re-invent them. We and the Russians and others don’t understand that what we’re doing is re-creating those dangers—or maybe they don’t remember the dangers. For younger people, they didn’t live through those dangers. But when you live through a Cuban Missile Crisis up close and you live through a false alarm up close, you do understand how dangerous it is, and you believe you should do everything you could possibly do to [avoid] going back.” For people who follow the national security priesthood, the dire scenarios are all the more alarming for who is delivering them. Through his long years in government Perry invariably impressed colleagues as the calmest person in the room, relentlessly rational, such that people who did not know him well—his love of music and literature and travel—regarded his as a purely analytical mind, emotion subordinated to logic and duty. Starting in the 1950s as a technology executive and entrepreneur in some of the most secretive precincts of the defense industry, he gradually took on a series of high-level government assignments that gave him one of the most quietly influential careers of the Cold War and its aftermath. Fifteen years before serving as Bill Clinton’s secretary of defense, Perry was the Pentagon official in charge of weapons research during the Carter administration. It was from this perch that he may have had his most far-reaching impact, and left him in some circles as a legendary figure. He used his office to give an essential push to two ideas that transformed warfare over the next generation decisively to American advantage. One idea was stealth technology, which allowed U.S. warplanes to fly over enemy territory undetected. The other was precision-guided munitions, which allowed U.S. bombs to land with near-perfect accuracy. During the Clinton years, Perry so prized his privacy that he initially turned down the job of Defense secretary—changing his mind only after Clinton and Al Gore pleaded with him that the news media scrutiny wouldn’t be so bad. The reputation he built over a life in the public sphere is starkly at odds with this latest highly impassioned chapter of Perry’s career. Harold Brown, who also is 89, first recruited Perry into government, and was Perry’s boss while serving as Defense secretary in the Carter years. “No one would have thought of Bill Perry as a crusader,” he says. “But he is on a crusade.” Lee Perry, his wife of nearly 70 years, is living in an elder care facility, her once buoyant presence now lost to dementia. Perry himself, lucid as ever, has seen his physical frame become frail and stooped. Rather than slowing his schedule, he has accelerated his travels to plead with people to awaken to the danger. A trip to Washington includes a dinner with national security reporters and testimony on Capitol Hill. Back home in California, he’s at the Google campus to prod engineers to contemplate that their world may not last long enough for their dreams of technology riches to come true. He’s created an advocacy group, [the William J. Perry project](http://www.wjperryproject.org/), devoted to public education about nuclear weapons. He’s enlisted both his granddaughter and his 64-year-old daughter, Robin Perry, in the cause. But if his profile is rising, his style is essentially unchanged. He is a man known for self-effacement, trying to shape an era known for relentless self-promotion, a voice of quiet precision in a time of devil-take-the-hindmost bombast. The rational approach to problem-solving that propelled his career and won him adherents and friends in both political parties and even among some of America’s erstwhile enemies remains his guide—in this case, by endeavoring to calculate the possibilities and probabilities of a terrorist attack, regional nuclear war, or horrible miscalculation with Russia. “I want to be very clear,” he said. “I do not think it is a probability this year or next year or anytime in the foreseeable future. But the consequence is so great, we have to take it seriously. And there are things to greatly lower those possibilities that we’re simply not doing.” \*\*\* Perry really did not expect he would have to write this chapter of his public life. His official career closed with what seemed then an unambiguous sense of mission accomplished. By the time he arrived in the Pentagon’s top job in 1994, the Cold War was over, and the main item on the nuclear agenda seemed to be cleaning up no-longer-needed arsenals. As defense secretary, Perry stood with his Russian counterpart, Pavel Grachev, as they jointly blew up missile silos in the former Soviet Union and tilled sunflower seeds in the dirt. “I finally thought by the end of the ‘80s we lived through this horrible experience and it’s behind us,” Perry said. “When I was secretary, I fully believed it was behind us.” After leaving the Pentagon, he accepted an assignment from Clinton to negotiate an end to North Korea’s nuclear development program—and seemed agonizingly close to a breakthrough as the last days of the president’s term expired. Now, he sees his grandchildren inheriting a planet possibly more dangerous than it was during his public career. No one could doubt that the Sept. 11 terrorists would have gladly used nuclear bombs instead of airplanes if they had had them, and it seems only a matter of time until they try. Instead of a retreating threat in North Korea, that fanatical regime now possesses as many as eight nuclear bombs, and is just one member of a growing nuclear club. Far from a new partnership with Russia, Vladimir Putin has given old antagonisms a malevolent new face. American policymakers talk of spending up to $1 trillion to modernize the nuclear arsenal. And now comes Donald Trump with a long trail of statements effectively shrugging his shoulders about a world newly bristling with bombs and people with reasons to use them. Perry knew Hillary Clinton well professionally, and says he admired both her and Bill Clinton for their professional judgment though he was never a personal intimate of either. He was prescient before the election in expressing skepticism about how voters would respond to the dynastic premise of the Clinton campaign—a healthy democracy should grow new voices—but was as surprised as everyone else on Election Day. Donald Trump was not the voice he was looking for, to put it mildly, but he has responded to the Trump cyclone with modulated restraint. Perry said he assumes his most truculent rhetoric isn’t serious, the utterances of a man who assumed his words were for political effect only and had no real consequences. Now that they do, Perry is hoping to serve as a kind of ambassador to rationality. He said he is hoping for audiences soon, with Trump if the incoming president will see him, and certainly Trump’s national security team, which includes several people Perry knows, including Defense Secretary nominee James Mattis. There is little doubt the message if the meeting comes. “We are starting a new Cold War,” he says. “We seem to be sleepwalking into this new nuclear arms race. … We and the Russians and others don’t understand what we are doing.” “I am not suggesting that this Cold War and this arms race is identical to the old one,” Perry added. “But in many ways, it is just as bad, just as dangerous. And totally unnecessary.” \*\*\* Perry had been brooding over the question for a year. It was in the early 1950s, he was still in his 20s, and the subject was partial differential equations—the topic of his Ph.D. thesis. A particular problem had been absorbing him, day in and day out, hours and hours on end. Then, out of nowhere, a light came on. Math for Perry represented analytical discipline, a way of achieving mastery not only over numerical problems but any hard problem, by breaking it down into essential parts, distilling complexity into simplicity. | Photo via the William J. Perry Project “I woke up in the middle of the night, and it was all there,” Perry recalled. “It was all there, and I got out of bed and sat down. The next two or three hours, I wrote my thesis, and from the first word I wrote down, I never doubted what the last word was going to be: It was a magic moment.” The story is a reminder of something definitional about Bill Perry. Before he became in recent years an apostle of disarmament, before he sat atop the nation’s war-making apparatus in the 1990s, before he was the executive of a defense contractor specializing in the most complex arenas of Cold War surveillance in the 1960s, he was a young man in love with mathematics. In those days, Perry had planned on a career as a math professor. His attraction to math was not merely practical, in the way that engineers or architects rely on math. The appeal was just as much aesthetic, in ways that people who are not numbers people—political life tends to be dominated by word people—cannot easily comprehend. To Perry’s mind, there was a purity to math, a beauty to the patterns and relationships, that was not unlike music. Math for Perry represented analytical discipline, a way of achieving mastery not only over numerical problems but any hard problem, by breaking it down into essential parts, distilling complexity into simplicity. This trait was why Pentagon reporters in the 1990s liked spending time around Perry. When most public officials are asked a question, one studies the transcript later to decipher a succession of starts and stalls, sentence fragments and ellipses, that cumulatively convey an impressionistic sense of mind but no clear fixed meaning. Perry’s sentences, by contrast, always cut with surgical precision. It was one reason Clinton White House officials often held their breath when he gave interviews—Perry might make news by being clear on subjects, such as ethnic warfare in the Balkans or a nuclear showdown in North Korea, that the West Wing preferred to try to fog over.

“I’ve never been able to attack a policy problem with a mathematical formula,” he recalled, “but I have always believed that the rigorous way of thinking about a problem was good. It separated the fact from the bullshit, and that’s very important sometimes, to separate what you can from what you would hope you can do.”

Just how high is the risk? The answer is ultimately unknowable. Perry’s point, though, is that it’s a hell of a lot higher than you think. | M. Scott Mahaskey/POLITICO

Perry wishes more people were familiar with the concept of “expected value.” That is a statistical way of understanding events of very large magnitude that have a low probability. The large magnitude event could be something good, like winning a lottery ticket. Or it could be something bad, like a nuclear bomb exploding. Because the odds of winning the lottery are so low, the rational thing is to save your money and not buy the ticket. As for a nuclear explosion, by Perry’s lights, the consequences are so grave that the rational thing would be for people in the United States and everywhere to be in a state of peak alarm about their vulnerability, and for political debate to be dominated by discussion of how to reduce the risk.

And just how high is the risk? The answer of course is ultimately unknowable. Perry’s point, though, is that it’s a hell of a lot higher than you think.

Perry invites his listeners to consider all the various scenarios that might lead to a nuclear event. “Mathematically speaking, you add those all together in one year it is still just a possibility, not a probability,” he reckons. “But then you go out ten, twenty years and each time this possibility repeats itself, and then it starts to become a probability. How much time we have to get those possibility numbers lower, I don’t know. But sooner or later the odds are going to get us, I am afraid.”

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Almost uniquely among living Americans, Bill Perry has actually faced down the prospect of nuclear war before—twice. In the fall of 1962, Bill Perry was 35, father of five young children, living in the Bay Area and serving as director of Sylvania’s Electronic Defense Laboratories—driving his station wagon to recitals in between studying missile trajectories and the radius of nuclear detonations. Where he resided was not then called Silicon Valley, but the exuberance and spirit of creative possibility we now associate with the region was already evident. The giants then were Bill Hewlett and David Packard, men Perry deeply admired and wished to emulate in his own business career. The innovation engine at that time, however, was not consumer technology; it was the government’s appetite for advantage in a mortal struggle against a powerful Soviet foe. Perry was known as a star in the highly complex field of weapons surveillance and interpretation. So it was not a surprise, one bright October day, for Perry to get a call from Albert “Bud” Wheelon, a friend at the Central Intelligence Agency. Wheelon said he wanted Perry in Washington for a consultation. Perry said he’d juggle his schedule and be there the next week. “No,” Wheelon responded. “I need to see you right away.” Perry caught the red-eye from San Francisco, and went straight to the CIA, where he was handed photographs whose meaning was instantly clear to him. They were of Soviet missiles stationed in Cuba. For the next couple weeks, Perry would stay up past midnight each evening poring over the latest reconnaissance photos and help write the analysis that senior officials would present the next morning to President Kennedy. Perry experienced the crisis partly as ordinary citizen, hearing Kennedy on television draw an unambiguous line against Soviet missiles in this hemisphere and promising that any attack would be met with “a full retaliatory response.” But he possessed context, about the capabilities of weapons and the daily state of play in the crisis, that gave him a vantage point superior to that of all but perhaps a few dozen people. “I was part of a small team—six or eight people,” he recounted of those days 54 years earlier. “Half of them technical experts, half of them intelligence analysts, or photo interpreters. It was a minor role but I was seeing all the information coming in. I thought every day when I went back to the hotel it was the last day of my life because I knew exactly what nuclear weapons could do. I knew it was not just a lot of people getting killed. It was the end of civilization and I thought it was about to happen.” Left: A January 1963 aerial photo showing that the Soviets had disbanded medium- and intermediate-range ballistic missile sites in Cuba. Right: Soviet freighter Polzunov (top) loaded with nuclear missiles removed from Cuba, is escorted by American destroyer Vesole outside Cuban waters on trek back to Russia near end of Cuban Missile Crisis. | Defense Department; Carl Mydans/The LIFE Picture Collection/Getty Images It was years later that Perry, like other more senior participants in the crisis, learned how right that appraisal was. Nuclear bombs weren’t only heading toward Cuba on Soviet ships, as Kennedy believed and announced to Americans at the time. Some of them were already there, and local commanders had been given authority to use them if Americans launched a preemptive raid on Cuba, as Kennedy was being urged, goaded even, by Air Force Gen. Curtis LeMay and other military commanders. At the same time, Soviet submarines were armed and one commander had been on the verge of launching them until other officers on the vessel talked him out of it. Either event would have in turn sent U.S. missiles flying. The Cuban Missile Crisis recounting is one of the dramatic peaks in “My Journey on the Nuclear Brink,” the memoir Perry published last fall. It is a book laced with other close calls—like November 9, 1979, when Perry was awakened in the middle of the night by a watch officer at the North American Aerospace and Defense Command (NORAD) reporting that his computers showed 200 Soviet missiles in flight toward the United States. For a frozen moment, Perry thought: This is it—This is how it ends. The watch officer soon set him at ease. It was a computer error, and he was calling to see whether Perry, the technology expert, had any explanation. It took a couple days to discover the low-tech answer: Someone had carelessly left a crisis-simulation training tape in the computer. All was well. But what if this blunder had happened in the middle of a real crisis, with leaders in Washington and Moscow already on high alert? The inescapable conclusion was the same as it was in 1962: The world skirting nuclear Armageddon as much by good luck as by skilled crisis management. Perry is part of a distinct cohort in American history, one that didn’t come home with the large-living ethos of the World War II generation, but took responsibility for cleaning up the world that the war bequeathed. He was a 14-year-old in Butler, Pennsylvania when he heard the news of the Pearl Harbor attack in a friend’s living room, and had the disappointed realization that the war might be over by the time he was old enough to fight in it. That turned out to be true—he was just shy of 18 at war’s end—a fact that places Perry in what demographers have called the “Silent Generation,” too young for one war but already middle-aged by the time college campuses erupted over Vietnam. Like many in his generation, Perry was not so much silent as deeply dutiful, with an understated style that served as a genial, dry-witted exterior to a life in which success was defined by how faithfully one met his responsibilities. Perry said he became aware, first gradually and over time profoundly, of the surreal contradictions of his professional life. His work—first at Sylvania and then at ESL, a highly successful defense contracting firm he co-founded in 1963—was relentlessly logical, analyzing Soviet threats and intentions and coming up with rational responses to deter them. But each rational move was part of a supremely irrational dynamic—“mutually assured destruction”—that placed the threat of massive casualties at the heart of America’s basic strategic thinking. It was the kind of framework in which policymakers could accept that a mere 25 million people dead was good news. Also the kind that in one year alone led the United States to produce 8,000 nuclear bombs. By the end, the Cold War left the planet with about 70,000 bombs ([a total that](https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat) is now down to about 15,500). “I think probably everybody who was involved in nuclear weapons in those days would see the two sides of it,” Perry recalls, “the logic of deterrence and the madness of deterrence, and there was no mistake, I think, that the acronym was MAD.” \*\*\* Perry has been at the forefront of a movement that he considers the sane and only alternative, and he has joined forces with other leading Cold Warriors who in another era would likely have derided their vision as naïve. In January 2007, he was a co-author of a remarkable commentary that ran on the op-ed page of the Wall Street Journal. It was signed also by two former secretaries of state, George Schulz and Henry Kissinger and by Sam Nunn, a former chairman of the Senate Armed Services Committee—all leading military hawks and foreign policy realists who came together to argue for something radical: that the goal of U.S. policy should be not merely the reduction and control of atomic arms, it should be the ultimate elimination of all nuclear weapons. This sounded like gauzy utopianism, especially bizarre coming from supremely pragmatic men. But Perry and the others always made clear they were describing a long-term ideal, one that would only be achieved through a series of more incremental steps. The vision was stirring enough that it was endorsed by President Obama in his opening weeks in office, in a March 2009 address in Prague. In retrospect, Obama’s speech may have been the high point for the vision of abolition. “A huge amount of progress was made,” recalled Shultz, now 93. “Now it is going in the other direction.” “We have less danger of an all-out war with Russia,” in Nunn’s view. “But we have more danger of some type of accident, miscalculation, cyber interference, a terrorist group getting a nuclear weapon. It requires a lot more attention than world leaders are giving it.” Perry’s goal now is much more defensive than it was just a few years ago—halting what has become inexorable momentum toward reviving Cold War assumptions about the central role of nukes in national security. More recently he’s added yet another recruit to his cause: California Governor Jerry Brown. Brown, now 78, met Perry a year ago, after deciding that he wanted to devote his remaining time in public service mainly to what he sees as civilization’s two existential issues, climate change and nuclear weapons. Brown said he became fixated on spreading Perry’s message after reading his memoir: He recently gave a copy to President Obama and is trying to bend the ear of others with influence in Washington. If Bill Perry has a gift for understatement, Brown has a gift for the theatrical. In an interview at the governor’s mansion in Sacramento, he wonders why everyone is not paying attention to his new friend and his warnings for mankind. “He is at the brink! At the brink! Not WAS at the brink—IS at the brink,” Brown exclaimed. “But no one else is.” A California governor can have more influence, at least indirectly, than one might think, due to the state’s outsized role in policy debates and the fact that the University of California’s Board of Regents helps manage some of the nation’s top weapons laboratories, which study and design nuclear weapons. Brown, who was a vocal critic in the 1980s of what he called America's "nuclear addiction," reviewed Perry's recent memoir in the New York Review of Books, and said he is determined to help his new friend spread his message. “Everybody is, 'we are not at the brink,' and we have this guy Perry who says we are. It is the thesis that is being ignored." Even if more influential people wake up to Perry’s message—a nuclear event is more likely and will be more terrible than you realize—a hard questions remains: Now what? This is where Perry’s pragmatism comes back into play. The smartest move, he thinks, is to eliminate the riskiest part of the system. If we can’t eliminate all nukes, Perry argues, we could at least eliminate one leg of the so-called nuclear triad, intercontinental ballistic missiles. These are especially prone to an accidental nuclear war, if they are launched by accident or due to miscalculation by a leader operating with only minutes to spare. Nuclear weapons carried by submarines beneath the sea or aboard bomber planes, he argues, are logically more than enough to deter Russia.

The problem, he knows, is that logic is not necessarily the prevailing force in political debates. Psychology is, and this seems to be dictating not merely that we deter a Russian military force that is modernizing its weapons but that we have a force that is self-evidently superior to them.

It is an argument that strikes Perry as drearily familiar to the old days. Which leads him the conclusion that the only long-term way out is to persuade a younger generation to make a different choice.

His granddaughter, Lisa Perry, is precisely in the cohort he needs to reach. At first she had some uncomfortable news for her grandfather: Not many in her generation thought much about the issue.

“The more I learned from him about nuclear weapons the more concerned I was that my generation had this massive and dangerous blind spot in our understanding of the world,” she said in an interview. “Nuclear weapons are the biggest public health issue I can think of.”

But she has not lost hope that their efforts can make a difference, and today she has put her graduate studies in public health on hold to work full time for the Perry Project as its social media and web manager. “It can be easy to get discouraged about being able to do anything to change our course,” she said. “But the good news is that nuclear weapons are actually something that we as humans can control...but first we need to start the conversation.”

It was with her help that Perry went on Reddit to [field questions](https://www.reddit.com/r/IAmA/comments/4a0ga4/iam_william_j_perry_former_secretary_of_defense/) ranging from how his PhD in mathematics prepared him to what young people need to understand.

“As a 90s baby I never lived in the Cold War era,” wrote one participant, with the Reddit username BobinForApples. “What is one thing today's generations will never understand about life during the Cold War?”

Perry answered, as SecDef19: “Because you were born in the 1990s, you did not experience the daily terror of ‘duck and cover’ drills as my children did. Therefore the appropriate fear of nuclear weapons is not part of your heritage, but the danger is just as real now as it was then. It will be up to your generation to develop the policies to deal with the deadly nuclear legacy that is still very much with us.”

For the former defense secretary, the task now is to finally—belatedly—prove Einstein wrong. The physicist said in 1946: “The unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe.”

In Perry’s view the only way to avoid it is by directly contemplating catastrophe—and doing so face to face with the world’s largest nuclear power, Russia, as he recently did in a forum in Luxembourg with several like-minded Russians he says are brave enough to speak out about nuclear dangers in the era of Putin.

#### Economic data restricts biases, promotes critical thinking, and prevents flawed decision-making errors---rejecting economists plagues public discourse with innumeracy that results in worse outcomes.

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Thus, when economists preach the virtues of globalization, market solutions or cost-benefit analysis, they sound to critics on the left like corporate shills lacking any moral anchor. To critics on the right, they sound like globalist elites who despise patriotism.

Yet it is precisely their love of numbers that makes economists invaluable. By stripping the emotions from pressing problems, economists can often illuminate the most practical ways to tackle them—but only if ordinary people and their representatives are prepared to listen.

Economics emerged in the 1700s as an offshoot of moral philosophy. Known then as political economy, its pioneering practitioners—such as David Hume and Adam Smith —believed that liberating individual self-interest, rather than following religious or political authority, maximized society’s well-being.

Smith made this case most memorably in “The Wealth of Nations” (1776), in which he famously invoked the benevolent “invisible hand” of the free market. But for today’s economists, David Ricardo’s “The Principles of Political Economy and Taxation,” published in 1817, was even more of a breakthrough.

Most people aren’t surprised if a doctor, who could be a better caregiver to her children than a nanny, chooses instead to spend that time seeing patients and pays a nanny out of what she earns. Thanks to Ricardo, economists know that the same principle applies to countries. The average American worker can probably make more tires than a foreign worker, but his edge at producing grain is even greater—and thus the U.S. should export grain and import tires. This theory, known as “comparative advantage,” is both counterintuitive and powerful.

Ricardo went further, extolling the pacifying power of free trade: It “binds together, by one common tie of interest and intercourse, the universal society of nations throughout the civilized world,” he wrote. Most economists still agree that globalization fosters political stability and cooperation.

Non-economists have always found this emphasis on material interests and motives somewhat distasteful. In 1790, Edmund Burke, who was friends with Hume and Smith, wrote in “Reflections on the Revolution in France,” “The age of chivalry is gone. That of sophisters, economists, and calculators has succeeded; and the glory of Europe is extinguished forever.”

The influence of economists truly blossomed in the 20th century. The Great Depression gave birth to macroeconomics, the study of how consumption, investment, income and interest rates interact in the aggregate.

In search of better tools to manage the economy, the federal government commissioned economists in the 1930s to calculate gross national product. Convinced that the economy could no longer be left to its own devices, Congress passed the Employment Act in 1946, which established, among other things, a Council of Economic Advisers to provide the president with the necessary expert guidance.

The next year, Paul Samuelson’s seminal book, “Foundations of Economic Analysis,” used mathematics to formalize the key axioms of economics. He touched off a revolution that equipped economists with ever more powerful methods for explaining and analyzing economic behavior. They increasingly adopted the trappings of the physical sciences, hoping to achieve a similar degree of objective truth and predictive power.

Math did clarify economic thinking, but it didn’t improve its forecasting accuracy, which remains dreadful. Virtually no economists predicted the financial crisis of 2007-08 and the recession that followed. Nor has economics rid itself of bias. Economists who advise presidents and prime ministers routinely shape their analyses to validate particular political views.

In recent decades, the stature of economists has taken a beating from two critiques in particular. The first, popular especially on the left, argues that economists are slaves to the assumption that individuals act rationally and in their own best interests. These critics point to psychological and experimental evidence that shows how often people violate the axioms of Econ 101: Our spending and investment habits are often driven by emotions, rules of thumb, ignorance and shortsightedness. The financial crisis seemed to be the ultimate proof, as highly paid bankers and traders, armed with state-of-the-art economic techniques, took on so much risk that they nearly destroyed the global financial system.

Economists consider national borders and sovereignty annoying obstacles to the free flow of goods, capital and people.

The second critique originates from populist, nativist and nationalist movements in the world’s more prosperous countries. Economists consider national borders and sovereignty annoying obstacles to the free flow of goods, capital and people. The new movements of the right see them as essential preconditions for national identity and cohesion. Many Britons voted for Brexit because control over immigration and their laws mattered more to them than the pecuniary advantages of the European common market.

These trends have fed a broader mistrust of experts and elites. During last year’s election campaign, Mike Pence, Mr. Trump’s vice-presidential running mate, dismissed statistical evidence of the U.S. economy’s health by saying, “People in Fort Wayne, Indiana, know different.” In the months after Mr. Trump’s victory, his team wondered whether it should even appoint a chairman of the Council of Economic Advisers. (The administration eventually nominated Kevin Hassett, a highly regarded economist from the conservative American Enterprise Institute.)

In Greece, economists aren’t simply mistrusted; they’re prosecuted. During the 2000s, Eurostat, the EU’s statistical arm, had repeatedly questioned the accuracy and political independence of Greek statistics. Soaring deficits in 2009 triggered a crisis and forced Greece to seek a bailout in 2010. Mr. Georgiou, a Greek native who received his Ph.D. from the University of Michigan and spent 21 years at the International Monetary Fund, took over Greece’s statistical agency that August. Officials had already shown previous debt and deficit figures to be understated. He revised them further upward and earned for his agency a clean bill of health from Eurostat.

Politicians of the left and right accused him of inflating Greece’s debts to justify its creditors’ demands for austerity. Prosecutors charged him with making false statements and improperly disseminating statistics without his board’s approval. Courts acquitted him, but the second set of charges was reinstated, resulting in this month’s conviction. Mr. Georgiou, who now lives in a suburb of Washington, D.C., plans to ask Greece’s supreme court for a retrial.

Mr. Georgiou says that his real offense, in the politicians’ eyes, was breaking from the past practice of “resisting” and “negotiating” with outsiders, such as the EU, over what official Greek data would show. The politicians needed a scapegoat to preserve their own “political narratives,” he says. He calls the implications of his case “terrifying” for other professionals responsible for economic statistics.

Economists bear some blame for the public and political backlash. Their disagreement with populist policies has often colored their predictions. British economists, including Mr. Carney, thought that Brexit would unleash so much uncertainty that markets and the economy would tank. American economists foresaw similar swoons if Mr. Trump became president. Both were wrong, at least thus far: Economies in both countries have chugged along, and stock markets in particular have soared. There may be long-term costs, of course, but those may be hard to detect.

Economists didn’t predict the financial crisis, but they did help to arrest it.

But such misjudgments don’t justify the charges leveled at economists. Take, for example, their inability to predict financial meltdowns. Crises almost by definition are unpredictable. In a recent essay, Ricardo Reis, an economist at the London School of Economics, argues that failing to foretell a financial crash is no more an indictment of economics than failing to predict when a patient will die is an indictment of medicine. Economists didn’t predict the financial crisis, Prof. Reis notes, but they did help to arrest it by applying theory and experience: “The economy did not die, and a Great Depression was avoided, in no small part due to the advances of economics over many decades.”

Another caricature of economists is that they try to emulate physicists, fetishizing elegant, abstract mathematical models disconnected from economic reality. Paul Romer, the chief economist at the World Bank, derisively calls this approach “mathiness.” The critique is certainly fair in some corners of academia, but it is increasingly untrue of the profession as a whole.

In 1963, roughly half the papers published in the top three American economics journals were theoretical, according to a tally by Daniel Hamermesh, now at Royal Holloway, University of London. By 2011, that figure had shrunk to 28%; the remainder were empirical papers based on public data, on data gathered by the authors or on experiments. Economic debates these days are won not by the best theory but by the best data: Statistics are more important than calculus. Economists are far more obsessed with measurement than with math. When public discourse is plagued by innumeracy, this capacity to count is no small thing.

Economists are also instinctively skeptical of simple explanations. They are trained to look for equilibrium, which is another way of saying, “When you change one thing, how do other things respond? Where do things settle once all interactions have occurred?”

Advocates for a higher minimum wage extol the benefits to workers. Economists ask: Will it change employers’ demand for workers who earn the minimum wage? Or what they pay workers who earn just above the minimum? Or the prices they charge, or how much market share they lose to companies that don’t face the higher minimum or how much they invest in automation? Does it reduce turnover and thus make workers more productive?

Advocates of tariffs on imported steel focus on the benefit to domestic steelmakers and their workers. But economists ask: What happens to steel-consuming companies that now face higher prices, as well as to their workers and customers? Does penalizing imports boost the dollar and hurt U.S. exports?

The more data economists collect, the better they can map such complex interactions. Seemingly simple questions seldom have simple answers. A higher minimum wage helps workers in some circumstances but hurts them in others. Tariffs help some workers but hurt many others. Global warming will do some economic harm, but not enough to justify banning fossil fuels.

Sometimes, this attachment to numbers conveys a false precision. Critics say that the Congressional Budget Office overestimated how many people would get insurance under Obamacare and must therefore be overestimating how many will lose it if the law were to be replaced. But the CBO always warned that its estimates were highly uncertain; what no economists doubted, including those working in Mr. Trump’s administration, is that the number would be large. Economists could confidently predict that price controls would lead to shortages in Venezuela, though not how severe they would be.

Non-economists see all this as hopeless equivocation, but it is actually the way that evidence drives science. Economists still have their ideological leanings, but data has helped to restrict these biases. Surveys of top academic economists by the University of Chicago show considerable agreement, even among liberals and conservatives.

For example, the scholars almost all agree that fiscal stimulus reduced unemployment after the last recession and that trade with China benefits Americans by providing them with cheap goods. A study by Gordon Dahl and Roger Gordon of the University of California, San Diego, found that disagreement among economists was greatest where the empirical research was most sparse, as with the issue of whether natural-gas fracking helps U.S. exports.

Though economics remains an imperfect science, it has come a long way in 200 years. Its greatest challenge today isn’t the quality of the analysis it supplies, but whether there is still sufficient demand for it.

#### No consistent link between economic freedom and inequality---capitalism net alleviates poverty.

Lazear 20, \*Edward P. Lazear was the Morris Arnold and Nona Jean Cox Senior Fellow at the Hoover Institution and the Davies Family Professor of Economics at Stanford University's Graduate School of Business.;(May 26th, 2020, “Socialism, Capitalism, And Income”, https://www.hoover.org/research/socialism-capitalism-and-income-0)

First, there is no evidence that, as a general matter, high-income groups benefit more from a move toward capitalism than low-income groups. The effect of changing state ownership and economic freedom on income is not larger for the rich than for the poor. Second, income growth is positively correlated across deciles. The situation is closer to a rising tide lifting all boats than to the fat man becoming fat by making the thin man thin. Finally, there is no consistent evidence across the large number of countries and time periods examined of any strong and widespread link between income growth and inequality. There are examples, like China, where income growth was coupled with large increases in inequality, but others like Chile, where strong income growth came about without much change in inequality, and South Korea, where inequality declined slightly as economic freedom and income grew over time.

Transfers and redistribution present the most complex picture of state involvement.

Transfers from rich to poor through the tax system are a luxury that only rich countries seem to be able to afford and are not a product of socialism per se. There is a very high correlation (-.67 in 2010) between contemporaneous median income and the low transfer index across countries.

High transfer countries like those in Scandinavia and other rich parts of Europe have primarily private ownership and economic freedom more like what prevails in the United States than in socialist countries. The poor definitely—and unsurprisingly—seem to benefit from higher transfers at a point in time. But the high taxes that generally go along with transfers do result in low income growth for median and high-income groups within a given country over time.

A similar pattern exists with respect to rule of law. The contemporaneous relation of rule of law to income is strong, but this seems to reflect the fact that countries that are wealthy demand rule of law rather than the reverse. Low state ownership at a point in time is a more consistent predictor of income growth within a country over the following decade than is rule of law at that same point in time.

Finally, not all transitions are alike. The Eastern European countries and the former Soviet Union saw large transitory declines in incomes for all groups during their transition to the market and the poor were more adversely affected than the rich. In China, and to a lesser extent India, market reforms brought about almost uninterrupted income growth. Venezuela provides an opposite example, moving from a more market-oriented economy to a socialist one.

Inequality fell slightly, but income growth was low for all groups and the poor have not regained the income levels that they had at the peak during the 1990s. The evidence suggests that it is economic shocks rather than transitions that disproportionately affect the poor. Transition from a command structure to the market is but one example of such a shock.

In sum, most income groups benefit from moves away from socialist command structures to free-market capitalism, but transfers can at least in the short run improve the well-being of those worst off.

#### Reject preventable future nuclear war --- it’s more likely and devastating than we are trained to believe and the only survivors will be the agents of destruction

Scarry 19, PhD, Professor of English at Harvard (Elaine Scarry, 2019, Interview, *Representations*, 146.1)

RA: At the Buffalo conference on pain, you gave a paper that built on some of the insights of your then most recent book, Thermonuclear Monarchy. 1 In the book, you demonstrate the incompatibility of democracy and nuclear arms at least in part on the grounds that, by the nature of their deployment, nuclear arms make it impossible for the populace to consent to their use. In your talk, you made a different but related claim that focused on the relative silence of the population regarding nuclear arms in the post-Cold War era. You were concerned, in particular, with the difficulties of imagining the consequences of nuclear war. I wonder if you could expand on this second point: why it is so hard to think about nuclear war. ES: The two points are deeply related. The architecture of nuclear arms requires that the population be eliminated from the decision about going to war. It also requires that Congress be eliminated from the decision about going to war—just because the nature of the technology requires a tiny number of people to do the launch. The result of that architecture is that people eventually, over seven decades, have internalized the fact that they’re worthless when it comes to the need to defend the country and to carry out acts of mutual aid toward one another. We now simply abandon the right of self-defense and the right of mutual aid and give unlimited injuring power to the executive branch of government and fall silent. RA: How much responsibility, how much blame, does one give to the population for remaining silent? ES: That has always been a question. Gandhi said, ‘‘You can wake a man who’s asleep, but you can’t wake a man who’s pretending to be asleep.’’ His statement marks a fork in the road. If the population has been anesthetized and is genuinely asleep, then they are morally innocent (even if infantilized and terribly reduced as moral agents). If instead the population is pretending to be asleep, we are morally culpable: the population is complicit with the genocide that’s standing in the wings waiting to happen. During my lecture and in many years of working on disarmament, I stressed the first path and tried to outline why waking up is difficult. In recent months, I’ve moved closer to the position that your question identifies, the responsibility of the population. I feel the force of Martin Luther King’s statement, ‘‘There comes a time when silence is betrayal.’’ I’m almost at the point of believing that there is a wanton refusal to [recognize] ~~see~~ the imminent peril, a refusal to understand not just that we have a responsibility to reverse it, to dismantle it, but that we have the ability to do so, and that if we don’t, it is going to happen. I don’t know if it’s going to happen this year. Or whether it’s going to happen this century. But it’s almost inconceivable that it isn’t going to happen. RA: Why is it that people have such a hard time understanding this? If you allow that people might honestly and ardently be trying to understand, what is it that is getting in the way? ES: Four or five answers come to mind. First, people often lack key pieces of information. If you ask someone in this country which nations have nuclear weapons, they are likely to say Iraq (which has none), Iran (which has none), or North Korea (which has fewer than 60; leading experts say fewer than 20). The United States has 6,500. The United States and Russia together own 93 percent of the world arsenal: the other 7 percent is owned by the other seven nuclear states—in order of numerical possession, France, China, the United Kingdom, Pakistan, India, Israel, and North Korea (see fig. 1). An equally profound misconception held by US citizens is the belief that our nuclear architecture is for ‘‘defense’’ and ‘‘retaliation.’’ In fact we have had a ‘‘presidential first-use’’ policy for the whole nuclear age. The profound obscenity of that arrangement, which has only begun to be glimpsed with the current president, has been an equally grave moral wrong from day one. Second, even when American ~~citizens~~ [denizens] and residents have this information, the outcome is derealized by its being future—that is, the unreality something has by having not yet happened is conflated with the unreality something might have by being merely imaginary. People, it’s true, are uninformed. But once they become informed, even then the flash of insight fades from their eyes after about ten minutes. RA: Why do you think that is? ES: Because they think ‘‘future’’ equals ‘‘unreal.’’ But we need to stop and understand what we mean by ‘‘future.’’ If it takes 10,000 steps to put a nuclear architecture into place, 9,999 steps have already been completed: we know how to split the atom; we know how to provide enriched uranium; we know how to deliver the bomb; we’ve completed not only the theoretical steps but the materialization steps: we’ve made the bombs; we’ve completed the delivery systems—Ohio-class submarines, the land-based ICBMs, and airdelivery B-2s and B-52s. Unlike in China and India, the weapons in the United States are already ‘‘mated’’ to the delivery systems; they are on alert; specific weapons have been assigned to specific cities in the countries of present enemies and, yes, even potential enemies. One step remains: the order to launch. So 9,999 steps are present and accounted for; one remains undone. While the 9,999 steps took vast amounts of time and resources, the last one is designed to be carried out in minutes. The word ‘‘future’’ does not apply to the 9,999 steps, only to the last one. When people decline to address the nuclear peril on the grounds that it is an ‘‘unreal’’ worry because ‘‘following the bombings of Hiroshima and Nagasaki it hasn’t yet happened,’’ they are unknowingly allying themselves with the position that our own Department of State and Department of Defense took in 1995. At that time, seventy-eight countries asked the International Court of Justice to declare the possession, threat of use, and use of nuclear weapons illegal on the basis of the humanitarian and environmental instruments such as the UN Convention on the Prevention and Punishment of the Crime of Genocide, the Geneva Protocols, the Declaration of Saint Petersburg, the Vienna Convention for the Protection of the Ozone Layer, the Rio Declaration on Environment and Poverty, and many others. Though the United States worked to invalidate the application of these protocols to our nuclear weapons one at a time, an argument they used over and over was that the firing of the weapons was ‘‘future,’’ hence ‘‘hypothetical,’’ hence ‘‘suppositional’’—this despite the billions of dollars that each year go into polishing and oiling the architecture of earth’s destruction to keep it in a present-tense state of constant readiness. RA: At the conference you also spoke about the problem of ‘‘statistical compassion.’’ ES: Let’s call that the third reason why the population is asleep. American indifference to our own genocidal nuclear architecture comes from the constraints on compassion when large numbers of people [become] ~~stand~~ to be injured. Public health physicians distinguish between narrative compassion (where one or two or three people are at risk) and statistical compassion (where thousands or millions are at risk).2 We’re fairly good at the first, and have many occasions to strengthen our capacity through daily acts of friendship and from reading literature. We’re terrible at the second, and have almost no training in strengthening our feeble abilities in this region. The nuclear peril of course entails the second: recent work on nuclear winter by Alan Robock and his colleagues shows that if even a small fraction of the current world arsenal is fired (one one-hundredth of one percent of the total available blast power), forty-four million people will be casualties on the first afternoon and one billion in the weeks following. The small shrug people make when the subject of nuclear weapons comes up—the little lift and fall of the shoulders—means they have just run a quick check on their interior brain-and-soul equipment and can report: nope, nothing in there in the way of statistical compassion. RA: Narrative compassion and statistical compassion seem to take place in widely separate spheres. How then do you see them coming into conflict with each other? ES: For me, a frightening example occurred in the Bulletin of Atomic Scientists, the wholly admirable body that sets the Doomsday Clock (now at two minutes to midnight) and that works round the clock to educate the people of the United States and the world about the hazards of nuclear weapons. Yet in commemorating the seventieth anniversary of the Nagasaki bombing in August of 2015, they published a historically factual narrative about the pilots of the plane delivering the atom bomb to Nagasaki, how many things went wrong and had to be repaired midflight. The lead-in read, ‘‘A typhoon was coming, the fuel pump failed, they had to switch planes, things were wired incorrectly, they missed their rendezvous, they couldn’t see the primary target, they ran out of gas on the way home, and they had to crash-land.’’ But the worst part was when ‘‘the Fat Man atomic bomb started to arm itself, mid-flight.’’3 The story, narrated in edge-ofyour-seat suspense, is an example of narrative compassion utterly preempting the possibility of statistical compassion: the crew might die, but if they had in fact died over the Pacific, tens of thousands of persons would not have been burned into nonexistence that day. RA: Your emphasis at the conference was on the nature of physical pain itself. ES: Yes, that was my central subject. In terms of our conversation now, we can say that a fourth and fifth reason for indifference arise from the difficulty of comprehending pain, whether it takes place in one person’s body or in the bodies of millions, and whether it occurs in the past, present, or future. (But if I were listing the reasons in the order of importance, these two would be near the top.) Once we exhaust a small handful of adjectives for physical pain, two (and almost only two) metaphors arise: the metaphor of the weapon (one may say it feels as though a knife is sticking in my shoulder blade even if it isn’t); and that of body damage (one may say it feels as though my elbow has snapped in two, even if it hasn’t). The Body in Pain concentrates on problems arising from the first; a later essay (‘‘Among Schoolchildren’’) concentrates on the second.4 Both metaphors, if carefully controlled, can help us understand the felt experience of another person’s pain; but both are highly volatile and can lead us far away from understanding. An example of the benign or genuinely expressive potential is provided by findings in neuroscience that we have mirror neurons that help us recognize another person’s physical pain. When you look at the actual experiments that were done, however, you see that the test subject is asked not to listen to a sufferer’s report of pain but to observe, for example, a pin being stuck into someone’s hand or the administration of a small electric shock. The experiments show not our comprehension of another person’s pain but our recognition of the aversivenes of being subjected to a weapon—often closely related to but by no means identical with physical pain. The very fact that a weapon can be separated from the site of the injury means that the attributes of pain can be lifted away from the sufferer and conferred on the agents inflicting the harm, so now it is not the pain that is world destroying but the inflictor of the pain. There are many examples of this in the case of nuclear weapons. For example, the mushroom cloud is often regarded as ‘‘awesome,’’ some even say ‘‘sublime.’’ But the hibakasha, the survivors in Hiroshima and Nagasaki, say, ‘‘We saw no mushroom cloud.’’ A mushroom cloud is what you see if you’re an observer far away, seated high in the sky in the airplane that dropped the weapon, or standing on the ground scores of miles beyond the radius of the harm. Like any sensible mortal, I admire J. Robert Oppenheimer, but his endlessly quoted statement following the Trinity test, ‘‘I remembered the line from the Hindu scripture ...I am become Death, the destroyer of worlds,’’ allows the scale of the injury to be transferred across the weapon and conferred on the agents, who now perceive themselves as magnificent, thrilling, almighty in their power. Oppenheimer even prefaces the quotation by saying that Vishnu here takes on a multi-armed form ‘‘to impress’’ the prince. The name he chose for the test, ‘‘Trinity,’’ shows this same fabrication of godlikeness. What if instead Oppenheimer had said, ‘‘I remembered the goddess Guanyin whose name means ‘The one who perceives the sounds of the world’ and the sounds I heard were excruciating cries, unbearable shrieks of tens of thousands scalded together in an instant of molten flesh.’’ The first statement is a fiction: Oppenheimer is neither a multi-armed god nor a three-personed god; the second statement (could we hear Guanyin) is accurate; if we could internalize and practice the second statement, we would disarm immediately. The image of the nuclear weapon, which might help make visible the pain and suffering it will bring about, instead captures the gigantic scale of the suffering, only to lift that ‘‘giganticism’’ away from the site of suffering altogether and confer it on the human agents—ordinary men, small in stature and in number, but who now appear gigantic. Insofar as any shred of ‘‘suffering’’ still remains visible, we believe it is the suffering of the nowgigantic human agent who is in mighty peril. Thus the nation spends billions of dollars on a presidential fallout shelter while convincing the public that fallout shelters for the population are ridiculous. In Thinking in an Emergency, and again in Thermonuclear Monarchy, I contrast the Swiss shelter system—Swiss law requires that every house have a fallout shelter;5 the law was reaffirmed in a 2003 referendum that had an 80 percent turnout at the polls—with the staggering constructions that have been made in the United States for... the people? no—for the president and those close to him, a shelter inside a mountain, with buildings and a lake that is, according to observers, large enough for waterskiing. One country, Switzerland, believes in what the Swiss call ‘‘equality of survival’’; the other country, the United States, believes that only the agents of nuclear [disaster] holocaust deserve the chance for survival. Much more detail on the multiple presidential fallout shelters is described by Garrett M. Graff in a recent book, Raven Rock: The Story of the U.S. Government’s Secret Plan to Save Itself—While the Rest of Us Die. The nuclear architecture requires that either the weapon be invisible (buried in a submarine or buried in a cornfield, like the 450 ICBMs) or, when it is visible, it must become the path across which the magnificent prowess of the human agent is seen—he’s so thrilling, so important, so vulnerable; here, please, take my tax money, use all of it to protect the man who will launch our nuclear missiles. What should bring us to our knees in sorrow and shame instead brings about a dutiful salute to the thermonuclear monarch. If one thinks fallout shelters for the population are ridiculous (ignoring the fact that the medically sophisticated Swiss have data showing otherwise), then it is informative to contrast the money lavished on our nuclear architecture with ordinary forms of safety structures for the population like bridges, dams, roads, levees. The American Society of Civil Engineers, in their 2017 report on infrastructure, gave our bridges a ‘‘Cþ’’ (56,000 are ‘‘structurally deficient’’), our dams a ‘‘D’’ (2000 have a ‘‘high-hazard potential’’), our levees a ‘‘D’’ ($80 billion is needed for structural repair), and our roads a ‘‘D’’ (one out of every five miles of highway pavement is ‘‘in poor condition’’).6 Might Americans be given a choice on whether they want their taxes spent on infrastructure or—as is currently the case—on nuclear weapons and presidential fallout shelters? Or has ‘‘no taxation without representation’’ disappeared along with all our other basic democratic principles?(112-118) RA: That all follows from the instability of the weapon; what about the second field of representation, body damage? ES: The phenomenon of body damage is like the image of the weapon but works in a much different way—almost the opposite. Whereas the problem of the weapon is its very separability from the body (and the way to make it benign is to retether it to its referent in the body), the problem of body damage is that it overlaps, overrides, and eclipses the personhood of the one underneath the damage. Either one looks away, or, if one looks, one recoils. Visual artists and writers—from Peter Paul Rubens and Andrea Mantegna in the Renaissance to fin de sie`cle artists Ka¨the Kollwitz, Aubrey Beardsley, Edvard Munch, Joris-Karl Huysmans, to twentieth-century Guatemalan writer Miguel Asturias—all solve this problem by finding a way to double the location, so that personhood remains intact in our perceptual field even if the human body is at that moment being obscenely shredded. 118 Representations If you visit the Nagasaki Atomic Bomb Museum, you will probably find yourself, as I did, surrounded by young schoolchildren, who look with courage on the visages of those who were incompletely incinerated in the bombing of that city (see figs. 2, 3, and 4). In the United States, few adults face up to the faces of those harmed there. In February of 2016, the Central Square Library in Cambridge agreed to let me—and Joseph Gerson, an American Friends Service colleague—do a monthlong program on the bombings of Hiroshima and Nagasaki with weekly lectures and an exhibit of books, drawings, and photographs. The morning after we put up the exhibit, we found all the photographs of injuries had been removed. The effort to put on an exhibit about Hiroshima and Nagasaki at the Smithsonian Institution in 1994 led to such controversy that it had to be canceled—with one exception: the Enola Gay (the plane that delivered the bomb) was put on display. Here we circle back to the phenomenon of the weapon being perceptually severed from the site of the pain. It’s in part because of museums like those in Hiroshima and Nagasaki that so many people in the Japanese population are passionately in support of nuclear disarmament. In preparation for a disarmament demonstration in New York, Cambridge and Boston activists (I include myself) worked for months to bring supporters to the march: after endless work, approximately one hundred did so. But one thousand Japanese men and women arrived that morning in New York; they carried a petition signed by six million of their countrymen, who collectively paid for the travel costs of the thousand who came. RA: Can you provide any examples of authors who ‘‘double the location,’’ as you have just described, ‘‘so that personhood remains intact’’ while the ‘‘human body is being ...shredded’’? ES: Miguel A´ngel Asturias’s Men of Maize begins with a heroic Indian in Guatemala, who ordinarily protects his people no matter what; he is able to do so, in part, because he has a level of sensory acuity that approaches genius. He knows the scent of every flower; he can discern the whole recipe of scents present in the forest in any given moment. The European colonizers can commit a slaughter of his people only if they can divert this heroic leader; and the only way to divert him is to subject him to horrible, scalding, obscene pain. Asturias must convey to us the felt experience of pain, the turning of the body inside out, and he chooses to do this through the associated phenomenon of body damage; but in order to do so without eclipsing the personhood of Gaspar Il´om, he decouples the body damage from the hero. The book opens with a dog, which the invaders have used as a test case for their pain-inducing poison laced with glass. The dog, in excruciating pain, zooms hysterically through the village square, covered with open sores, his penis erect, howling in a way that is aversive to everyone who hears and sees. This horrible scene conveys the obscenity of pain, the obscenity of bodily damage. By obscenity, I mean interior substances in the body which come before us without our consent, come before us before we are mentally prepared to comprehend what we are seeing. But the story separates this bodily desecration from the person, for now, having seen the dog, we need only be told that Gaspar Il´om has drunk this glass-laced poison to understand why he abandons his post, submerges himself in the lake, drinks all its waters, and eventually comes out. He has survived. But during the moments when he disappeared below the surface of the water, his people have been slain. RA: I wonder how you think about the role of the visual in that context. Do you think of the visual as akin to a language? ES: In visual art one can see the same phenomenon taking place, as when Ka¨the Kollwitz refuses to let an injured victim be portrayed as what Shelley called ‘‘a monstrous lump of ruin.’’ In her 1900 etching and aquatint The Downtrodden, she pushes the wounds on the body just beyond the body’s edge onto a linen sheet on which the person is lying. These mouthlike, liplike structures of open wounds are there but are not permitted to compromise figure 4. Photographs of survivors of the atomic bomb in the Nagasaki Atomic Bomb Museum. An Interview with Elaine Scarry 121 our recognition of the sufferer’s personhood. Even somebody like Aubrey Beardsley, in one of his posters, puts the wound in a tree rather than on the body of the woman. And yet the woman has attributes that make the viewer see the analogy, just like Marty South and the trees in your account of Hardy’s The Woodlanders [Scarry is referring to Rachel Ablow’s account in Victorian Pain]. Her posture, for example, is exaggeratedly erect and treelike. She wears a high-waisted skirt that is made to be a visual analogy with the tree. But our perception of her personhood remains uninterrupted. RA: One issue you have raised recently is the particular difficulty of thinking about the specific kinds of injuries caused by nuclear war, namely burns. There was a striking moment in your talk when you discussed the protocols used in burn units to help doctors and nurses in looking at burn victims. It seems so intuitively right that caretakers would have difficulty looking at these patients. It seems to suggest something about the limits on the imagination in terms of suffering. I’m wondering what it is about burns that makes it so hard to imagine the suffering they entail. Is it about the skin as the site of humanity? Is it about the face? ES: It is the visage. Without preparation and help, when we see the complete mutilation of the body, especially the face, we mistakenly feel we are seeing the mutilation of personhood. The ‘‘rule of nines’’ is devised to enable rescue workers to look at a gravely burned person and (instead of having their own minds shut down in sorrow and confusion and revulsion) to assess instantly the gravity of the injury, start appropriate treatment, and report the scale of the injury to the hospital awaiting the person’s arrival. Each part of the body is assigned an easy-to-remember number that is a multiple of nine (see fig. 5). Counting forms a key part in many forms of emergency rescue, and this is one instance. The numbers, once totaled, tell the rescuer the next step, such as whether to insert an IV for fluid resuscitation. The need to train the perceptions of those who hope to help those who are burned is also illustrated by a procedure called ‘‘staying.’’ During the years when I was part of a research group on suffering at the Hastings Center for Ethics, I heard a lecture by a physician-nurse who worked in a burn unit. She mentioned that because of the difficulty oflooking at a severely burned person, nurses assigned to burn units may begin to avert their eyes when speaking with a patient, decline to touch the patient, or stand at a greater distance each day, or request a transfer after a few days. To counteract these problems, caretakers can participate in a class on ‘‘staying’’ where they recognize the temptation to withdraw from the patient and practice trying to overcome that withdrawal. While the ‘‘rule of nines’’ and ‘‘staying’’ are brilliant inventions, we should recognize that in nuclear war there will be few rescue workers and nurses. A study in the Netherlands of what would happen if a terrorist brought into Rotterdam a very small 12 kg weapon (the size used in World War II) found that of those who had not immediately evaporated, four thousand persons would require burn beds.7 They noted that in all of the Netherlands there are only a hundred burn beds. A leading hospital in Boston, Mass General, has seven burn beds. The burn beds themselves—what few there are—will disappear in a nuclear strike. On the floor of the UK Parliament, the possession of four Trident submarines has repeatedly been justified by the potential need to bomb Moscow. In response, a Scottish study by John Ainslie looked at the scale of damage that would actually take place if a nuclear missile were launched against the Ministry of Defense building in Moscow: along with the Ministry of Defense, four major hospitals would be destroyed and four others subjected to fire and radiation that would make them inoperable. Thirty-one schools would also be destroyed with at least 700,000 children slain.8 If the missile is larger, so, too, will the disappearance of hospitals be larger. An article by Steven Starr, Lynn Eden, and Theodore A. Postol in the Bulletin of Atomic Scientists shows that if an 800-kiloton weapon were detonated above Manhattan, the center of the blast would be four times the temperature of the sun, and, within ‘‘tens of minutes,’’ a firestorm will cover 90 to 150 square miles. figure 5. Pocket card showing ‘‘Rule of Nines for Adult and Child,’’ Northwest Healthcare Response Network, https:// nwhrn.org/wp-content/ uploads/2018/08/BurnPocket-Card.pdf. An Interview with Elaine Scarry 123 RA: Was the artistic strategy that you just described of doubling the location so as to protect personhood apparent in the real-world examples you were citing, the Nagasaki children, the ‘‘rule of nines,’’ ‘‘staying’’? ES: I think so. It is not accidental that the Nagasaki Atomic Bomb Museum is itself physically beautiful in its architecture, or that as you enter you pass lavish cascades of paper cranes, inspired by the child Sadako Sasaki, like cherry blossoms in spring, or that you see an inscription about Nagasaki’s exceptional generosity to outsiders—its many centuries of open trade with foreign companies, a level of cosmopolitan hospitality not at that time found to the same degree in other regions of Japan; you see engraved inscriptions from Dwight D. Eisenhower and from the ‘‘United States Strategic Bombing Survey, Summary Report (Pacific War), July 1946’’ saying unequivocally that the atom bomb was not needed to end the war. All these elements, and many others, keep the personhood of the city’s inhabitants in view, side-by-side with the excruciating vision of burnt faces. The ‘‘rule of nines’’ lets one reconstruct the body out of a beneficent invention, toylike in its simplicity. In ‘‘staying,’’ the very name of the procedure holds the injury within the frame of sympathetic personhood. RA: Let’s return to Ghandi’s forking path. You’ve sketched the reasons why the US population is innocently sleeping. But what if they’re feigning sleep? ES: I am sometimes floored by the discrepancy between the attention we give to injuries that have happened when we can’t do anything to change them and the attention we give to injuries that haven’t yet happened when by intervention we absolutely can prevent them. I don’t know how to explain this. I have always assumed that those acts of trying to talk about the pain of torture victims in the 1970s in my case, or the pain of people in World War II, the Holocaust, that those acts are meant to act as a warning to the future. What is our motive for thinking about the unchangeable injuries of the past if not to increase our ability to prevent such injuries in the future? Yet almost incomprehensible is the distance between the willingness to think about events from the past we can’t possibly change and the complete comfort with feeling that future massacres need not concern us. Or worse, that one is slightly superior to protesting a wrong: intellectually superior because the moral wrong is an obvious moral wrong, and we only like to address sophisticated, hard to discern moral wrongs. It might be embarrassing to have to stand on a street corner with a sign or attend a public meeting. Imagine, though, if we forgave the complicity with past acts of enslavement or genocide by saying, ‘‘People saw that it was wrong, but they considered it too intellectually obvious, too compromising of their dignity, to have to stand up and protest.’’ Or take the argument that the aspiration to dismantle nuclear weapons is now many decades old, and we must turn to fresh undertakings: imagine that someone tried to defend those who tolerated slavery in 1860 because they had been hearing antislavery sentiment since 1820 and now considered such sentiments ‘‘stale.’’ We would never give a ‘‘pass’’ to anyone in the past who excused their inattention to slavery or the ~~transfer of people to concentration camps~~ on either of those two grounds; yet we believe such arguments release us from addressing weapons whose outcome is instant genocide. There are historical periods in which people were dissuaded from protesting because dissidents were beaten (Charles Sumner on the floor of the Senate) or killed (Dietrich Bonhoeffer in Germany). No such beatings or death threats excuse our own silence today. RA: Staying with this point about the relative ease of imagining pain past as opposed to pain in the future, do you attribute that to sentimentality? It sounds so reprehensible put in those terms. I wonder how you account for it. ES: I think you are right to worry that our attention to the past begins to look like sentimentality. The argument is sometimes made by academics that sympathy is less about compassion or the desire to ameliorate pain than it is a kind of cultural signaling of our moral goodness. To me that thesis seems horrifying: it lets the many who ignore past pain excuse their own inattention on the grounds that the few who do attend to pain are only doing so to announce their own goodness. So I feel a strong aversion to that argument; it works to reduce still further the number of those who show any wish to help. However, if it turns out that we only speak about irremediable injuries from the past while a huge architecture of massacre [is] ~~stands~~ waiting to be used, then one has to ask oneself: why were we looking at injuries in the distant past? Is it just sentimentality? Is it just cultural signaling?9

#### Globalization is immensely beneficial for improving quality of life in the Global South---it’s also widely supported which proves their epistemic skepticism is from an ivory tower.

Horner et al. 18 (Rory, Global Development Institute, University of Manchester, Manchester, UK, “Globalisation, uneven development and the North–South ‘big switch’,” Cambridge Journal of Regions, Economy and Society 2018, 11, 17–33 doi:10.1093/cjres/rsx026)

Citizen surveys further reveal dramatic changes in attitudes to globalisation across and within the global North and South. While such surveys have methodological limitations,1 the results indicate distinctive trends that support the thesis of the ‘big switch’. Among people in the global South, polls have consistently found quite positive attitudes towards globalisation. In 2007, the Times of India claimed that ‘Indians believe globalisation benefits their country’, citing a poll by the Chicago Council on Global Affairs and World Public Opinion that 54% of Indians answered ‘good’ compared to 30% ‘bad’ to the question of whether increasing economic connections ‘with others around the world is mostly good or bad’. More recently, Stokes (2016) reported on Pew Research Surveys from 2016 which found that 60% of Chinese think their country’s involvement in the global economy is good (compared to 23% who think it is bad), while 52% of Indians surveyed thought it was good compared to 25% who said it was a problem. A recent YouGov survey of 20,000 people across 19 countries found a majority believed that globalisation has been a force for good. That survey found the most enthusiasm for globalisation in East and South-East Asia, where over 70% in all countries believed it has been a force for good. The highest approval, 91%, was in Vietnam, a relative latecomer to globalisation (Smith, 2017).

By contrast, public support for globalisation in the global North has plummeted. Bhagwati (2004) cited an Environics International Survey presented at the 2002 World Economic Forum Meetings to argue that disillusionment with globalisation was not universal; ‘anti-globalisation sentiments are more prevalent in the rich countries of the North, while pluralities of policy makers and the public in the poor countries of the South see globalisation instead as a positive force’ (2004, 8). Although Bhagwati suggested this was an ‘ironic reversal’, it proved to be in line with a 2007 BBC World Service poll that found 57% of people in G7 countries thought the pace of globalisation was too rapid, whereas the majority of those in ~~developing~~ countries surveyed thought it was just right or too slow (e.g. IMF, 2008; Pieterse, 2012). A 2007 Pew Global Poll similarly found a decline in the percentage of people in many Northern countries who believed trade had a positive impact. In its analysis of the survey results, Kohut and Wilke (2008, 6–7) commented that ‘it is in economically stagnant Western countries that we see the most trepidation about globalisation’. Almost 10 years later, The Economist (2016) reported on a YouGov survey of 19 countries, which found that fewer than half of people in the USA, UK and France believed that globalisation is a ‘force for good’ in the world. This broad change in attitude toward globalisation is playing out in national electoral politics as well as gatherings such as the World Economic Forum and the meeting of the Asia-Pacific Economic Cooperation.

The ‘big switch’ and the geography of uneven development

The ‘big switch’ seemingly confounds the predictions of the most vocal proponents and critics of globalisation alike. Uneven development is dynamic and relates to differences both within and among countries (Sheppard, 2016). Naïve claims that the world is flat or that economic globalisation is ‘win-win’ have rightly been dismissed (Baldwin, 2016; Christopherson et al., 2008; Turok et al., 2017), yet it is also insufficient to suggest that globalisation simply leads to a reproduction of existing inequalities, overlooking how that unevenness may be changing as a result of new macroeconomic geographies (Peck, 2016). While trade theory could predict that there would be ‘losers’ in the global North from international economic integration, proponents of economic globalisation have asserted that they would be few in number and could be compensated. More recently, it appears that a large group of people feel more forsaken than compensated. Similarly, for those who embraced Marxian political economy, and warned of its negative consequences in the South, the apparent optimism and support for globalisation in the South may have been unexpected. The sceptical internationalists (e.g. Evans, 2008; Kaplinsky, 2001; Stiglitz, 2006) should be acknowledged, however, for forecasting downsides in the global North. As we outline below, many people in the global North have experienced relative stagnation, whereas, albeit from a very low starting point and amidst considerable inequality, many people (but not all) have experienced improved development outcomes in the global South. We then explore what this apparent ‘big switch’ may tell us about contemporary economic globalisation.

The new geography of global uneven development

Significant portions of the population in the USA and other countries in the global North have experienced limited, if any, income gains in an era of globalisation. Milanovic’s (2016) ‘elephant graph’ (Figure 1) has quickly become a popular way to demonstrate the relative stagnation experienced in North America and Europe in recent decades. Exploring changes in real incomes between 1988 and 2008, he showed that those who particularly lost out on any relative gain in income were the global upper middle class (those between the 75th and 90th percentiles on the global income distribution) and the poorest 5% of the world population. Of these least successful percentiles, 86% of the population were from mature economies in the global North (Lakner and Milanovic, 2016, 23). Considering these contrasts more widely, a growing body of evidence shows that the global North’s dominance in the global economy is receding, with the share of high-income countries in global GDP having fallen from 76.8% in 2000 to 65.2% in 2015 (see Figure 1).

A different picture emerges in the global South. In Figure 1, it was Asians who comprised 90% of the population in the percentiles which did best in terms of relative income gains from 1988 to 2008 (Lakner and Milanovic, 2016, 223). The UNDP has remarked that

A striking feature of the world scene in recent years is the transformation of many ~~developing~~ countries into dynamic economies…doing well in economic growth and trade … they are collectively bolstering world economic growth, lifting other ~~developing~~ economies, reducing poverty and increasing wealth on a grand scale. (UNDP, 2013, 43)

The share of global GDP of low and middle income countries increased from 22.5% in 2000 to 34.1% in 2015 (Figure 2). Much of this increase is accounted for by China, as well as India and Brazil. Their share of global GDP, only 4.6% in 1960, 6.6% in 1990 and 9.3% in 2000, had almost doubled in the 21st century to 18% by 2015.

The development context of the global South has changed significantly since the turn of the Millennium, across a variety of important indicators. The total number of people in the world living on less than $1.90 per day (i.e. extreme poverty) has more than halved from 1.69 billion in 1999 to 766 million in 2013. At least by official estimates, the share of the population in the global South who are living in extreme poverty has fallen considerably this century. Whereas the percentage of the population in the global South with a daily consumption level of less than $1.90 was 33.4% in 1999, it was just 13.4% in 2013.2 The percentage of the world’s countries classified by the World Bank as low-income, albeit a very low threshold, more than halved within the first 15 years of the 21st century. Moreover, the total number of countries which are highly dependent on aid (having a net ODA > 9% of GNI) has fallen considerably, from 42 in 2000 to 29 in 2015, or from 34.1% to 23.2% of all low and middle-income countries with data available over that period.3

Considered overall, in comparison with the 1990s, the global South, in aggregate, now earns a much larger share of world GDP, has more middle-income countries, more middleclass people, less aid dependency, considerably greater life expectancy and lower child and maternal mortality. Table 1 provides some summary indicators for high-income countries (HICs) and low and middle-income countries (L&MICs), as somewhat imperfect approximations for global North and South.

After two hundred years of a ‘divergence, big time’ (Pritchett, 1997) between developed and ~~developing~~ countries following the Industrial Revolution, recent measurements suggest a change in the pattern of global inequality across a number of indicators (Horner and Hulme, 2017). The Global GINI of income distribution across all individuals in the world has fallen from 69.7 in 1988 to 66.8 in 2008 and 62.5 in 2013 (World Bank, 2016, 81). Analysis presented in the World Bank’s Taking on Inequality (2016) suggests that, in 1998, 26% of global income inequality was related to differences within countries, with the remaining 74% relating to differences among countries. By 2013, these shares were 35 and 65%. Two hundred years of a great divergence between global North and South now seems to have had some reversal, although more than half of an individual’s income can be accounted for by the country where he/she lives or was born (Milanovic, 2013). Inter-country inequality, rather than intra-country inequality, is still dominant, but it accounts for a diminished share of income-based and other inequalities (World Bank, 2016).

#### Inequalities in global poverty, health, education, mortality and famine are declining drastically---thank capitalism.

McAfee 19, \*Andrew Paul McAfee, a principal research scientist at MIT, is cofounder and codirector of the MIT Initiative on the Digital Economy at the MIT Sloan School of Management; (2019, “More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources and What Happens Next”, https://b-ok.cc/book/5327561/8acdbe)

The World’s War on Poverty

The total number of poor people in the world peaked right at the time of the first Earth Day in 1970, then started to slowly decrease. But the real miracle came when this happy decline accelerated during the twenty-first century. In 1999, 1.76 billion people were living in extreme poverty. Just sixteen years later, this number had declined by 60 percent, to 705 million. Hundreds of millions fewer people are living in poverty now than in 1820, when the world’s total population was seven times smaller than it is today.

Much of this decline is reflective of what occurred in China, which, as we saw in the previous chapter, threw off economic socialism beginning in 1978 and let capitalism work its poverty-reducing miracles. But the story of global poverty reduction isn’t a purely Chinese one. As the graph below shows, every region around the world has seen large poverty reductions in recent years. The speed of the recent decline indicates that it’s no longer ridiculous to talk about completely eliminating extreme poverty from the planet. The World Bank thinks this might be possible by 2030.

It’s not just incomes that have improved. As I consult Our World in Data and other comprehensive sources of evidence, I struggle to find even a single important measure of human material well-being that’s not getting better in most regions around the world.

Here are recent trends in a few key areas.

Daily Bread

As recently as 1980, the global average number of available daily calories wasn’t enough to permit an active adult male to maintain his body weight. Less than thirty-five years later, however, every region in the world met this standard of twenty-five hundred daily calories.

Clean Living

More than 90 percent of the world’s people now have access to improved water; VII in 1990 only a bit more than 75 percent did. The situation is similar for sanitation: in 1990 only a bit more than half of the world’s people had it; now, more than two-thirds do.

Young Minds

The trend in secondary education enrollment around the world is similar to the one for sanitation, but even sharper: in 1986 fewer than half of the world’s teenagers were in school; at present, more than 75 percent are.

One Thing We Say to Death: Not Today

By now the pattern should be familiar: life expectancy at birth has gone up around the world in recent decades:

As we saw in chapter 1, global life expectancy was about 28.5 years in 1800. Over the next 150 years, that number increased by 20 years. Then, in the years between 1950 and 2015, it increased by 25 more. These gains are now universal; Southern Africa has regained the 10 years of expected life lost during its terrifying AIDS crisis.

One of the reasons life expectancy has gone up so quickly is the collapse in both child and maternal mortality around the world:

I find these mortality declines especially fast, large, and broad. Today, we still have desperately poor regions, failed states, and the decimations of war. But in no region today is the child mortality rate higher than the world’s average rate was in 1998.

Convergent

Trends in maternal and child mortality highlight a critical fact that’s often overlooked: around the world, inequality in most important measures of human material well-being is decreasing. Poor countries are catching up to rich ones, and gaps that were once large are shrinking. Inequalities in income and wealth dominate the news, and in many places these gaps are large and growing. They’re also important, so we’ll look at economic inequality in the next two chapters.

But it’s true, too, that there are other kinds of inequality that we should care about as we examine the human condition: inequalities in health, education, diet, sanitation, and other things that matter deeply for the quality of a person’s life. Here the news is profoundly good; these inequalities are collapsing. As the four horsemen have galloped around the world in recent decades, they’ve made life better not only for those people and countries that were already rich but for just about everyone else. Everywhere, fewer mothers and babies are dying, more kids are getting an education, more people have adequate nutrition and sanitation.

It’s essential to acknowledge these global victories because they show us that what we’re doing is working. Tech progress, capitalism, public awareness, and responsive government are spreading around the world, and improving it. It’s often said that insanity is doing the same thing over and over but expecting different results. The corollary might be that ignorance is not examining the results of what’s being done. Over and over, when we look at the evidence, we see that the four horsemen are improving our world.

#### Refusal fails

Laing 15, Ph.D. candidate, School of Geographical and Earth Sciences, College of Science and Engineering, University of Glasgow (Anna Frances Laing, January 2015, “Territory, resistance and struggles for the plurinational state: the spatial politics of the TIPNIS Conflict,” Ph.D. thesis, pages 215-216, http://theses.gla.ac.uk/5974/7/2015laingphd.pdf)

The use of indigeneity as a common signifier has fostered mobilisation across different ethnic groups. This process has been aided by NGOs and técnicos (technical experts) that accompanied the Eighth and Ninth Marches. NGO representatives facilitated meetings, provided training, funded activities and constructed written announcements and texts. These mediatory actors therefore helped to re-articulate the grievances of the marchers under the banner of indigenous rights. This could be seen in the writing of open letters to the government during both the Eighth and Ninth Marches, made possible through the aid of technical experts from one of the principle legal organisations defending indigenous rights in Bolivia CEJIS (Centro de Estudios Jurídicos e Investigación Social; Centre of Legal Studies and Social Investigation). Therefore, in order to ‘speak’ and be heard, the indigenous peoples have to undergo a process of representation through the language of legal rights. They therefore remain ‘subaltern’ because their attempts at self-representation fall outside the ‘the lines laid down by the official institutional structures of representation’ (Spivak 1996: 306). Thus, Glenn (2011) contends that the UN Declaration on the Rights of Indigenous Peoples is ironic since it seeks the recognition of alternative epistemologies through civic institutions that have homogenising and universalising tendencies. However, as Fabricant notes in her work with the Landless Peasants Movement in Bolivia, movements ‘take NGO ideas and meld them with their own creative strategies to come up with solutions that will work for their communities’ (2012: 120). Moreover, Gustafson (2009b) offers a balanced interpretation of the ways that NGOs offer a language and model for politicising alternative worldviews. The indigenous movement consciously reifies certain strategic essentialisms whilst at other times actively resisting them. Indeed, indigenous knowledges do not exist outside of other knowledge forms (Walsh 2002). As Walsh argues ‘[t]he efficacy of the movement in fact derives from its ability to construct and use the correspondences among various contemporary knowledge positions […] in order to exercise political tactics and strategies’ (2002: 71). A politics of refusal is unlikely to advance indigenous demands. As such, Hale suggests an analytical framework based on the Gramscian notion of articulation to ask: will the subjugated knowledge and practices be articulated within the dominant, and neutralised? Or will they occupy the space opened from above while resisting its built in logic, connect with others, toward ‘transformative’ cultural-political alternatives that still cannot be fully imagined? (2002: 499). Indeed, there is the danger that identifying under a single indigenous label risks losing the complexities and processes that permeate the heterogeneous inter-ethnic collectivity of the lowland indigenous movement. This acts to disembody the identity claims from some of the more radical tangents of the movement. Mexican anthropologist Miguel Alberto Bartolomé argues that indigenous autonomy should contemplate ‘new modes of [interethnic, inter-cultural] social articulation that are more egalitarian than existing [ones]’ and that a multi-ethnic state ‘should explore all possible paths in the search for novel forms of conviviality between culturally distinct groups’ (2005: 146 cited in Gustafson 2009a: 998). Escobar similarly calls for a decolonisation that ‘can be started in earnest from a deessentialized perspective’ (2008: 305). Indeed, the movement seeks the recognition of plurality without the homogenisation of indigenous cultures or ideologies or the ranking of difference that necessarily works to subordinate some cultures and let others dominate. This project of emancipatory societal transformation is an on-going challenge for the lowland indigenous movement.

#### It leads to conservative cooptation

Pain et al. 12, Professor in the Department of Geography, Durham University; Geography & Sustainable Development - Senior Lecturer, University of St. Andrews; University of Glasgow (Rachel Pain; Mike Kesby; Kye Askins, “The politics of social justice in neoliberal times,” Area, 44 (1). pp. 120-123. ISSN 0004- 0894, http://eprints.gla.ac.uk/98223/1/98223.pdf)

We agree with Gregson et al’s (2011) observation that the impact agenda may be both evidence of and an opportunity to challenge the neoliberalisation of higher education. Our critique of opposition to the impact agenda was a call to reflect on the degree to which the defence of ‘blue skies’ and ‘autonomous’ research is a defence of a particular expression of those values shaped by previous Research Assessment Exercises (RAE). Our intervention sought to re-produce audit in ways that support the agendas both we and Slater value, and to do this before the meaning of ‘impact’ solidifies and produces entirely neoliberal effects. Slater is right that there are dangers in a strategic, more positive engagement. Such tactics entail tensions and discomforts, leave us exposed, and their politics are unfinished and require continuous working through. We recognise that such resistance, through reworking meaning, runs the paradoxical risk of (re)circulating discourses that retain the potential to effect neoliberal agendas - even if we are successful in making them do other work as well. But a politics of refusal/non-engagement is precarious in ceding control over the meaning of key discourses to those who don’t share a radical vision for the academy. This is a hopeful but not naïve politics. Subverting academic governance is also about disrupting and revealing it as constructed and transmutable through engagement. In this vein, participatory geographers continue alternative traditions, such as collective naming as a response to academic individualism (Autonomous Geographies Collective 2010; mrs kinpaisby 2008) and pursuing direct action as means to research praxis (Mason forthcoming; Routledge 2011). Such examples, small and large, practice alternatives to saying “no”. Slater argues for having an impact and being political through teaching. We agree wholeheartedly. In answer to his question ‘might we find innovative ways to get our students to ‘participate ’ too, with a view to contesting the institutional arrangements governing higher education?’ (p6), we point to participatory pedagogies: to undergraduate modules where geography students collaborate in research with local activists and community organisations (Kindon and Elwood 2009, Mountz et al 2008; Pain et al forthcoming); to academic geographers’ support of student protests in the UK (Hopkins et al 2011); to the burgeoning number of PhDs working with communities and grassroots organisations (come to any RGS/IBG Participatory Geographies Research Group event); and to attempts to engage school children to think critically about geography, drawing on their own knowledges of place (see http://thegeographycollective.wordpress.com). Participation in social justice movements can be integrated into all aspects of academic activities (see Leeds University’s Masters programme in Activism and Social Change): teaching a politics of social justice in the classroom is just part of this. We agree that the separation between research and teaching engendered by RAE/REF reflects the logic of accountancy rather than the experience of academic practice, and this is precisely why we argue for a much broader conceptualisation of ‘impact’ that holds the potential for recognising that learning and teaching activities are interconnected with research.

#### **Prefer pragmatism over rejection**

Snelgrove 14, MA Candidate, Indigenous Governance, University of Victoria (Corey Snelgrove, 2014, Unsettling settler colonialism: The discourse and politics of settlers, and solidarity with Indigenous nations,” Decolonization: Indigeneity, Education & Society Vol. 3, No. 2, pages 1-32)

Corey: This relational, interdependent focus is also important amongst settlers ourselves – perhaps as a way to counter the flattening of differences that occurs amongst settlers, particularly in solidarity work. Settlers obviously need to be doing our own work and challenging ‘our’ institutions and practices that serve to protect or further colonization. But we can’t do this if we flatten the differences and ignore the inequalities and power relationships that exist within settler society. Not only does such flattening prevent much needed alliances but flattening itself can actually work to protect certain elements of settler colonialism. For instance, white supremacy works to naturalize white settler presence. In terms of solidarity then, I find it problematic for myself, as a white, class privileged, cis-hetero, and able bodied male (as well as people like me) to demand other peoples to act in solidarity, while also not holding myself (and others like me) responsible and accountable to other forms of violence that may be a contributing factor to the further reification of structures that support settler colonialism, like the State. Now I’m not arguing for the continued eschewal of Indigenous governance and legal orders because others experience violence, but rather, that the substantive recognition of Indigenous governance and legal orders also requires a dismantling of other, related forms of domination. This latter dismantling I see as necessary but also insufficient for the dismantling of settler colonialism. These sites and spaces of domination and resistance are distinct, but also connected dialectically. This seems to be something that settlers, white settlers specifically, have yet to articulate and take up, critique and act against. And this is perhaps most evident in how settlers seem to be continuously waiting for instruction from Indigenous peoples on how to act. Rita: I wonder if this relational approach is a more useful direction for settler colonial studies, not unlike the kind of work you do Jeff, in thinking about colonialism in a global, comparative context. Jeff: And I think, the more you can make those links, the British occupation of Maori territory is directly related to HBC’s strategy to begin treaty making here… All those things are interrelated. They are shared, and they are seen as shared strategies. The other thing I see is this impulse to delocalize it… it’s always that kind of Free Tibet Syndrome… the further away acts of genocide are from your location, the more outrage expressed at these injustices. It’s a way of avoiding complicity, but it’s also a way of recasting the gaze. It’s like, ‘We’re not going to look right here, because this appears to be fairly peaceful’ And so it’s always that sort of re-directing away from localized responsibility, and almost magnifying impacts farther away. Rita: So what settler colonial studies does do, is help us relocate to locality, which is helpful. You mention the HBC. I wonder what was the relationship between the Hudson Bay Company in Canada and the East India Company or the East Africa Company? If we’re thinking about settler colonialism as a structure, how is it related to other modalities of gendered and sexualized white supremacy? How are the logics of State sovereignty and authority over nonwhite bodies connected? If we’re thinking about it, as non-Indigenous peoples being ‘in solidarity’, part of that is locating, attacking the whole structure of imperialism that is deeply gendered and homonationalist, that depends on neo-liberal projects of prioritizing able-bodied workers who can serve capitalism. Corey: Part of this, I think, what we’ve been discussing here, relates to what I sometimes see as the framing of ‘settler’ as event, rather than structure – where we are perhaps overly focused on the question of ‘who’ at the expense of the ‘how’. If we don’t understand how settlers are produced we run the risk of representing settlers as some sort of transhistorical subject with transhistorical practices. So I’m worried that while in one moment the term ‘settler’ denaturalizes our – that is all non-Indigenous peoples – presence on Indigenous lands, in the next, and through this construction of the ‘settler’ as transhistorical, we renaturalize it. In short, we go from a disavowal of colonization, to its representation as inevitable. Here is where I think a historical materialist or genealogical approach to the production of settler subjects may be useful in showing how this production is conditioned by but also contingent on a number of factors – white supremacy, hetero-patriarchy, capitalism, colonization, the eschewal of Indigenous governance and legal orders, environmental degradation, etc. Now this is also not to say that the binary of Indigenous/Settler isn’t accurate. I think its fundamental. Rather, I think it is possible and important to recognize that there have been, and are, individuals (or even collectives) that might be referred to as something other than settlers by Indigenous peoples, perhaps as cousins. Or in a similar vein, that there have been and are practices by settlers that aren’t colonial (and here is where centering Indigenous peoples’ accounts of Indigenous-settler relations, as well as their own governance, legal and diplomatic orders is crucial). But I think it’s just as important to recognize that these relations have and do not occur despite settler colonial and imperial logics, and thus outside of the binary. Rather, such relations occur in the face of it. The binary then is fundamental as the logics that uphold the binary cannot be ignored due to the existence of possiblly good relations as the logics that uphold the binary threaten those relations through the pursuit of the elimination of Indigenous peoples. Rita: Yet, how do we act in light of these entanglements, and with, rather than overcoming differences? Corey: Tuck and Yang (2012) had this really great article, “Decolonization is not a Metaphor.” In it, they talk about the importance of an ethics of incommensurability – a recognition of how anti-racist and anti-capitalist struggles are incommensurable with decolonization. But what I’ve been thinking about recently is whether these struggles are incompatible. For example, in the Indigenous resurgence literature, there is a turn away, but it’s also not an outright rejection. It also demands settlers to change. Yet recognizing that settlers are (re)produced, the change demanded is not just an individual transformation, but one connected to broader social, economic, and political justice. There are then, it seems, potential lines of affinity between decolonization and others, though incommensurable, struggles. And in order to sustain this compatibility in the face of incommensurability, relationships are essential in order to maintain accountability and to resist repeating colonial and other relations of domination, as well as, in very strategic terms, in supporting each other’s resistance. Rita: As some anti-racist and Indigenous feminists have long argued, it’s not possible for people of colour to confront different racisms without thinking about sexism, capitalist exploitation, homophobia and transphobia, Indigenous struggles – they are tied to one another. There is an affinity between decolonization and other struggles. Differently positioned people of colour and Indigenous peoples are not operating with the same kinds or degrees of authority as whites or each other, but nonetheless we are not outside of these relations and forces of power. Jeff: I like building off Tuck and Yang too. It’s a way of showing the linkages across these movements, but also how they can be tighter. How can we deepen them and focus on the everyday acts of resurgence that Indigenous peoples engage in? Rita: What you say reminds me Corey about a question you have raised in another context on temporal and spatial solidarities. Corey: In June 2013, at Congress, you both were on a panel titled “Solidarities, Territorialities, and Embodiments.” At this panel, Jeff, you seemed to be challenging Rita’s notion of “temporary solidarities” by emphasizing the importance of relationship grounded in place. So I first would question how useful ‘temporary solidarities’ as a concept is. Second, I’m wondering about the importance of bringing the role of territorialities within these discussions of solidarity themselves. Maybe, Jeff, what you were talking about at Congress and in conversations you and I have had, is a gesturing towards what we could potentially call ‘spatial solidarities’ – or bringing spatiality into discussions of solidarity. Jeff: As the late Vine Deloria, Jr. (2001) has said, “power and place produce personality.” In this sense, place-based relationships are personal and anything approaching spatial solidarity would entail the regeneration of Indigenous languages, ceremonial life, living histories, and nationhood. For this reason, spatial solidarities can be a way to localize struggles for Indigenous resurgence. While the “Idle No More” movement, which began in 2012 in Canada as a response to proposed legislation by Prime Minister Stephen Harper’s government that undermined Indigenous protections of land and water, tapped into an ongoing and collective Indigenous struggle for land, culture and community, the settler support for it was predominantly temporally driven and performative rather than localized and land-based. I find that the most powerful mobilization for change happens when the spatial and temporal intersect. Rita: This centering of land strikes me as constitutive to any kind of political work with Indigenous peoples. Can you give an example Jeff? Jeff: One example might be how settlers are welcomed onto Indigenous homelands among Native nations in Australia. Beginning in the 1980’s, Tasmanian activist and lawyer, Michael Mansell, issued ‘Aboriginal Passports’ to an Indigenous delegation visiting Libya in 1988. More recently, Aboriginal Passports have been issued to non-Indigenous people living on Indigenous homelands. Someone visiting Indigenous homelands in Australia can apply for an Aboriginal Passport and sign a pledge stating that, “We do not support the colonial occupation of Aboriginal and Torres Strait Islander lands” (Aboriginal Passport Ceremony, 2012). This innovative strategy challenges the authority of the Australian government to regulate the travel of visitors onto Indigenous homelands and raises awareness of contemporary struggles of Indigenous peoples in order to build solidarity for future movements. Rita: Corey, your question is helpful, and Jeff’s response also helps me think through the movement between time-situated and place-based practices of ‘solidarity’ and ways of thinking about these situated practices in terms of an ethos of ‘unsettled solidarities’ that moves across time and space, that is a way of being in the world, a set of ongoing relations. Where I, where we, are never outside of struggle, everyone is ‘structurally implicated’ in the dispossession of Indigenous lands. Everyone is differentially structurally implicated, where the ideology of presumed consent underlies settler colonialism. Jeff: I would add that living on another Indigenous nation’s territory also carries an obligation to support those defending their homelands. Cheryl Bryce from Songhees First Nation started the “Community Tool Shed” in 2009 to generate support for the restoration of Lekwungen food systems. The Community Tool Shed in Victoria, British Columbia, is where settlers and Indigenous peoples can come together to rid the land of invasive species, such as Scottish Broom, and to revitalize traditional plants such as kwetlal or camas. Cheryl’s focus for this informal group is on reclaiming traditional place names, educating people about the destructiveness of invasive species, and reinstating Lekwungen food systems. The tool shed meets once per month to pull invasive species on places that have been managed by Cheryl’s family for generations, such as Meegan (aka, Beacon Hill Park), and Sitchamalth (Willows Beach). To a ‘resident’ of Lekwungen homelands, the above-mentioned places are public lands. This demonstrates the urgency of reclaiming Indigenous place names in tandem with the restoration of Indigenous foodscapes and landscapes. The May 22, 2013 reclamation of the name PKOLS (formerly known as Mount Douglas) is one of many examples where communities can come together to demand representation on their own terms. These are everyday acts of resurgence that highlight the terrain of Indigenous struggles to restore and reconnect a place-based existence. Corey: And both examples you highlighted Jeff do not foreclose a wide-range of participants. The PKOLS reclamation led by the W̱ SÁNEĆ peoples, involved participation from Indigenous peoples across Vancouver Island and across Turtle Island, it involved the university through the Indigenous Governance program, and it involved local, non-Indigenous, activist groups, most notably Social Coast. The Community Tool Shed, a project that I’ve also been involved in for the past two years, does something similar. What I find really interesting in this work is that settlers and Indigenous peoples challenge our environmentally degraded and colonial present simultaneously. Yet, there is still attention paid to the different roles and responsibilities in this work. For instance, non-Lekwungen people in removing invasive species, and Lekwungen people in managing these lands and in harvesting plants such as camas. So unlike other stewardship groups around Victoria, those participating are not seeking to depoliticize this work, nor do they argue that this work erases their complicity or their potential complicity in colonization. In supporting Cheryl’s assertion of her roles and responsibilities, they aren’t seeking to restore land in order to claim it for themselves. They aren’t Locke redux. And, given the nature and extent of Broom here – you find it pretty much everywhere around Southern Vancouver Island, something like 18,000 seeds are produced in a single plant, and those seeds can lie dormant for up to thirty years – pulling broom one time really does not mean much. So there is a demand for longterm work, which itself can help build accountability through such place-based relationships. And since land is the irreducible element of settler colonialism, and that environmental degradation has often proceeded through and in support of settler colonialism, it provides an example of non-Indigenous practices with the land that aren’t necessarily colonial. Now I’m not saying that this is an example of decolonization or that those involved are somehow not settlers. After all, decolonization and the transformation of settlers requires subjective and objective transformations. Rather it’s a practice that does not reify colonization, and thus challenges settler colonial studies construction of settler colonialism as inevitable and transhistorical. Decontextualized conceptions of settler colonial studies, ‘settler’, and solidarity risk further eschewing Indigenous peoples and thereby reifying the stolen land each of the above is founded upon. Perhaps, most centrally, this is done through de-centering Indigenous peoples own articulations of Indigenous-settler relations, their governance, legal, and diplomatic orders, and the transformative visions entailed within Indigenous political thought. Such de-centering has the potential to present settler colonialism as complete or transhistorical, as inevitable, rather than conditioned and contingent. This failure to attend to the conditions and contingency of settler colonialism can also be traced to the marginalization of how colonization actually proceeds across time and space. That is, as entangled with other relations of domination, and not only through structures, but also practices that serve as, what Paige Raibmon (2008) refers to, “microtechniques of dispossession.” Those who critique settler colonialism through transhistorical representations are then able to feel good and satisfied about their criticisms, despite their ahistoricism and decontextualization, and thus their own role in actually sustaining colonial power by failing to attend to its conditions and contingency.