

Future-proofing Government

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Abstract

This article identifies current and pending problems with US public policy, and then prescribes how to pursue future-proof policy that not only addresses current problems but also stands ready for unanticipated issues. First, the article explores how current government is still failing to solve problems that are decades old. Second, it covers trends that indicate how government is completely unprepared for new and imminent crises, as well as for the frequency and amplitude of crashes across all asset classes. Once we have laid out many of these current and pending problems, we'll define several useful paradigms to evaluate and construct the platform needed to future-proof the government. Finally, this creates the scorecard needed to evaluate this platform. Most of the content in this article assumes the U.S. federal government as its scope, but much of the critique applies to national and local governments across the globe.

Many governments fail to address decades-old issues and fail to prepare for upcoming challenges.

Technology and society are both changing faster than ever. Technology is not only rapidly evolving, but also the pace of innovation is accelerating (Kurzweil, 2005). As Ray Kurzweil explains in *The Singularity is Near*, most people, including political leaders, still think technology is improving linearly. They are completely unprepared for the next 10 years, an era in which technology will evolve so fast that meaningful predictions about the future will become impossible (Kurzweil, 2005).

While confronting accelerating change in technology, government must also respond to faster shifting political forces. "In the twenty-first century, power is easier to get, harder to use—and easier to lose." (Naim, 2014, p. 2). Moises Naim in *The End of Power* shares many causes for and examples of the decline of power. This paper covers a few examples of how modern government fails, and the essential upgrades to, and full-scale replacements of, policy that government must adopt to embrace accelerating change in technology and politics to become future-proof.

Future-proof.

The process of anticipating future developments and events in the development of a product or system (Kerr, 2010). After establishing expectations (or lack thereof) for the near future, this article points out the trends that dictate the high level strategy of future-proofing government: assume very little about climate, natural resources, the labor market and have reserves and redundancies in place.

Trends from *The Singularity is Near*

The exponential rate of innovation means predictions will become meaningless within a 20 year horizon. (Kurzweil, 2005). Ray Kurzweil explains that accelerating improvements to technology render predictions meaningless. This phenomenon compares to the middle of a black hole, a "singularity", where information ceases to exist or at least ceases to be retrievable by any scientific instrument. Much of the innovation that we attribute to smart, hard-working scientists and entrepreneurs will itself become automated by more advanced artificial intelligence. One of the core arguments of Kurzweil's book is that as new sensors, new techniques and tools for gathering information become available, the more science will become an information technology. One example is the human genome project: most scientists in the field expected a full mapping of the human genome to take over 20 years—but those were educated guesses in the field of genetics, and not the field of information technology. The human genome was mapped entirely more than 10 years ahead of schedule. Scientists are still acclimating to the reality that computing advances geometrically and not linearly. (Kurzweil, 2005) Essentially, more branches of science will become exponentially advancing information technology and disrupt any planning based on linear growth.

Trends from The Black Swan

In his book, *The Black Swan: The Impact of the Highly Improbable*, Taleb explains that financial modelers create more risk in the economic system by making many assumptions that try to fit reality into a normal distribution curve. Unfortunately, as Taleb points out, the advance of globalization and the increasing pace of technology means that extremely unlikely events can have massive impact far more often than in the past, violating most of the assumptions built into past normal distribution curves. Taleb writes:

What we call here a Black Swan (and capitalize it) is an event with the following three attributes. First, it is an outlier, as it lies outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility. Second, it carries an extreme impact (unlike the bird). Third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable. (Taleb, Preface)

Regarding the dangers of synthetic stabilization policies, Taleb explains:

“Making something artificially bigger (instead of letting it die early if it cannot survive stressors) makes it more and more vulnerable to a very severe collapse— as I showed with the Black Swan vulnerability associated with an increase in size. Another thing we saw in the 2008 debacle: the U.S. government (or, rather, the Federal Reserve) had been trying for years to iron out the business cycle, leaving us exposed to a severe disintegration. This is my argument against “stabilization” policies and the manufacturing of a nonvolatile environment.” (Taleb, 2010, Kindle Locations 6202-6206).

Future-proof governments must embrace at least two lessons from the Black Swan. First, that governments must dramatically downsize what they assume about the future and embrace solutions that can respond to a great variety of threats and opportunities; and second, that governments must adopt, encourage, and/or mandate redundancies for all kinds of infrastructure and shared resources.

Increasing Economic Instability

While America remains the wealthiest country in the World, with the largest GDP, and the most millionaires, a large portion of Americans are not feeling or experiencing that wealth, and this trend is increasing. (Smith, 2016).

The rise in family income volatility would be less troubling if it was accompanied by dramatic income gains for the middle class. But, of course, this is not what has happened. According to the comprehensive post-tax income series of the CBO, average family income (adjusted for inflation and including public benefits) among the middle fifth of American families rose by 21% between 1979 and 2005. By contrast, the after-tax family income of the richest 1% of Americans increased by 230%. Meanwhile, workers in middle-class families are devoting much more time to paid work, mainly due to the increase work hours of women. Indeed, most of the income gains of the middle class are because of these increased work hours, rather than rising earnings. Even as family incomes are fluctuating more sharply, then, families are working harder for only modestly more income. (Hacker and Jacobs, 2008)

This EPI Briefing Paper indicates that a large portion of the U.S. is losing some of its economic freedom. America is prospering greatly but far fewer people find themselves included in that prosperity.

That lack of inclusion and decline in economic freedom is not just an American phenomenon. The U.K. is also facing its own form of rebellion against globalization and the promised economic benefit. The Wall Street Journal captured some of this sentiment in a 2016 article: Jeff Platt, a 33-year-old from Manchester, England, who voted for Brexit, said he saw the

Brexit vote and the U.S. election as being driven by people who felt ignored. “Ultimately, it’s the whole blue-collar protest vote, and on a large scale,” said Mr. Platt, who works at a bank.”
(Gross and Hilder, 2016)

Labor force participation also suggests that a large portion of the U.S. population is giving up on finding work.

“A citizen is classified as a member of the [labor force](#) if he has a job or is actively looking for a job. The participation rate is the percentage of adult Americans, excluding those incarcerated or otherwise institutionalized, who are members of the labor force. The 21st century has seen a steady decline in labor force participation. In 2000, it was 67%; by 2013, it had fallen to 63% (DePersio, 2015).

While the stock market continues a multi-year recovery, compelling evidence suggests that many are experiencing a decline.

Yet average incomes have only recently recovered to their levels of 10 years ago since the financial crash. And economists say that, because some high-earners are enjoying rising incomes, the average-income measure may be masking the deterioration in living standards being felt by the bottom 50% (Hacker and Jacobs, 2008).

Hacker and Jacobs (2008) also argue that Americans are increasingly less financially prepared for the next market crash: Moreover, the main way in which Americans maintain their spending—by borrowing—has led to a growing problem of indebtedness, bankruptcy, and home mortgage foreclosure. The personal saving rate has fallen from an average of 9.1% in the 1980s to an average of 1.7% so far this decade. Between the same periods, household debt as a percentage of aggregate personal income essentially doubled, rising from 60% to 100%—and in 2006, aggregate debt approached 120% of aggregate income (Hacker and Jacobs, 2008).

While the U.S. government achieves new historical levels of indebtedness, the private sector also follows that trend. A few citizens with this kind of debt could be dismissed as a personal responsibility issue cured by some financial literacy. However, this quantity of debt held by so much of America is now effectively a systemic problem that directly affects the sustainability of the U.S. government.

Drought and War

War in many ways is the most extreme and devastating form of government failure. In nearly all wars far more civilians die than combatants. War typically destroys infrastructure that takes many years to rebuild. The ability of a government to promote the general Welfare, offer economic inclusion to all of its citizens and protect freedom rarely fails more deeply than during times of war.

Many governments around the world, including several that affect U.S. interests face increasing stress from drought. For example, mass crop failure in Syria exacerbated the civil unrest leading up to the conflict starting in 2011 (Kelly et al., 2015). These farmers en masse moved to cities like Aleppo, many desperate people crowded into cities without jobs, which became the powder keg of a Syrian crisis.

As the drought intensified and the water table plunged, Syria’s farmers chased it, drilling wells 100, 200, then 500 meters (300, 700, then 1,600 feet) down in a literal race to the bottom. Eventually, the wells ran dry and Syria’s farmland collapsed in an epic dust storm. More than a million farmers joined massive shantytowns on the outskirts of Aleppo, Homs, Damascus and other cities in a futile attempt to find work and purpose. (Jacobsen, 2016)

This mass migration “marked by illegal settlements, overcrowding, poor infrastructure, unemployment, and crime, were neglected by the Assad government and became the heart of the developing unrest.” (Kelley et al., 2015)

The War on Drugs

The US war on drugs has been largely a violent ineffective failure. According to a 2014 Rand Corp. study, “drug users in the United States spend on the order of \$100 billion annually on all four drugs (in 2010 dollars)” (Kilmer et al., 2014) The study goes on to say that the market share of each drug has changed but the relative size of overall illegal drug usage has remained steady over the previous 10 years. The war on drugs has damaged the freedom of many groups, not only in US but also in Mexico. Several drug cartels, that service the US market, maintain control through brutal violence harming the freedom of many Mexicans and financial opportunities of anyone interested in investing in Mexican businesses. Homicides in Mexico, 40% to 50% of which connect to drug trafficking, are back on the rise, up to 17,000 in 2015 (NSPS, 2016). Stateside we are seeing a incarceration levels swell to new heights with hockey-stick shaped growth starting in the 1980’s, largely because of drug offenses (Wagner, 2016). Furthermore, a disproportionate number of Blacks and Latinos are incarcerated despite the roughly equal levels of drug usage amongst all ethnic groups. (Substance Abuse and Mental Health Services Administration, 2013) Since most states prohibit prior felons from voting that means war on drugs has disenfranchised large parts of the Black and Latino community. Given the dramatically high cost to Freedom and to ethnic Inclusion in the U.S. and other nations, governments should be seeking out better solutions. The War on Drugs is also failing on the demand side. Many opioid users start on legal pharmaceuticals. *“Heroin is an epidemic. Patrick lost close to a dozen friends to heroin in the years before his death. He knew the dangers, and he managed them 99 percent of his waking hours, but in that 1 percent of weakness heroin won, and we all lost.”* (Hall, 2016)

Rampant usage of legitimate opioids has helped generate a large audience for illegal opioids indicating a failure of the state to properly manage the relationship between actual “gateway drugs” and life-debilitating drugs (Unick, 2013). As the World moves further into on-demand generation of nearly any type of molecule, the government will be increasingly unprepared and incapable of keeping pace with banning, certifying, or regulating new drugs.

Government is also failing to prepare for new threats.

While none of problems mentioned above are going away anytime soon, several more global issues loom on the horizon.

In addition to conflicts made worse by drought, conflicts directly pertaining to access to fresh water will also increase. U.S. intelligence experts expect increasing conflict over access to water (Quinn, 2012). These conflicts can’t all be averted by global consensus on climate change. Even if all water conflicts could be solved by focusing on climate change there would be no meaningful reversal of damage for decades. “If we stop emitting today, it’s not the end of the story for global warming. There’s a delay in [temperature increase](#) as the climate catches up with all the carbon that’s in the atmosphere. After maybe [40 more years](#), the climate will stabilize at a temperature higher than what was normal for previous generations.” (Marshall, 2016)

Financial issues do not leave reason for optimism either. Student loan debt is now the most delinquent form of debt. (Credible, 2016) Student loan debt means millions of millennials will not have resources to handle pending market shocks. Furthermore, the price-to-sales ratio of the S&P 500 is at its highest levels, surpassing the peaks of 2001 when internet stock prices completely disconnected from reality. (Multpl, 2016) This indicates that investors are paying more for companies despite the lack of increase in sales and implies there will be a massive corresponding correction in stock prices.

The Scorecard: Dimensions to evaluate a Future Proof Government

The obvious opportunity to improve the collective decision-making process that is democracy is to offer the public a framework or “scorecard” to make better choices between competing policies. The perfect scorecard for a future-proof government would likely have too many dimensions to keep most citizens engaged. So what is worth scoring? What

dimensions transcend or best generalize what humanity expects from its government? In all likelihood, there's no mathematically rigorous definition to great government that's independent of human bias. The next best thing is to make an openly defined framework that can be measured, and can be questioned openly, and can be incrementally improved. The best time window to define such a framework is now, current generation. Right now marks the apex of the human effort to leverage the overwhelming quantity of data that can now be gathered by 200 national governments and thousands of city governments. This time window ends when most management decisions are so wired with sensors and automated via openly accepted policy that much of it is handled by machines without human intervention.

As much as precise numbers would help with the quality of the scorecard, making each dimension a measurable quantity is beyond the scope of this paper. However precise metrics are worth further inquiry and development. For the sake of rough comparison we can say 10 is best possible score and 1 is the worst in each dimension. The most future-proof governments will score as close to 10 * number of dimensions as possible. Assigning quantified weights to each dimension is also beyond the scope of this article.

Triple Win for Stakeholders

Who wins when governments reorganize? The ideal answer is everybody. To break down future-proof policy outcomes let's establish three broad stakeholders:

1. The Incumbents - the existing power elite, the crowd that typically funds lobbyists to keep themselves at the top of their respective industries.
2. The Innovators - Entrepreneurs that tend to disrupt the for-profit Incumbents, and Grassroots Organizers that tend to disrupt social or political Incumbents.
3. The Followers - The overwhelming majority of people who flow with wherever the market and the prevailing culture take them.

Assumptions

Future-proof government doesn't know what is going to happen and plans for that. Both of the trends discussed in The Singularity is Near and The Black Swan compel future-proof government to make the minimal assumptions possible regarding the future. As a dimension on a scorecard, the fewer assumptions built into any plan means the government is more future-proof. Here some classic specific assumptions to avoid in a future-proof government:

1. Do not assume any knowledge about the mixture of jobs that will exist in any industry in the next 20 years. The future economies could comprise anything from 100% part time independent contractors, to 3 companies totally owned by the employees.
2. Do not assume any one specific crisis is going to happen. Rather assume all possible crises will happen and several completely unimagined will happen.
3. Do not assume any specific government will be the global superpower to fill any power vacuum as needed.
4. Do not assume that any one currency will remain valuable.

While there is no unit of measurement to use other than quantity of assumptions, the purpose of this dimension will be to compare solutions, and to consider what assumptions are built into each solution of a future-proof government. The fewer the critically important assumptions the closer to score 10 the policy will earn.

Inclusion

In their book, "Why Nations Fail", Acemoglu and Robinson cover several comparisons of nation states to illustrate how inclusive economic institutions have made the greatest difference over the last 500 years of the prosperity of nations. Nations with inclusive economic institutions have vastly outperformed extractive institutions.

"Inclusive economic institutions, such as those in South Korea or in the United States, are those that allow and

encourage participation by the great mass of people in economic activities that make best use of their talents and skills and that enable individuals to make the choices they wish. To be inclusive, economic institutions must feature secure private property, an unbiased system of law, and a provision of public services that provides a level playing field in which people can exchange and contract; it also must permit the entry of new businesses and allow people to choose their careers.” (Acemoglu and Robinson, 2012, p. 68)

Inclusion is a helpful and comprehensive term. Robinson and Acemoglu enumerate the core features:

1. Secure private property.
2. Unbiased system of law.
3. A provision of public services that provides a level playing field in which people can exchange and contract.
4. Must permit the entry of new businesses.
5. Allow people to choose their careers.

For the Incumbents, inclusion means governments do not steal assets through nationalization of their companies or steal profits through heavy taxation. It also means juries do not give arbitrarily large fines during a product liability suit. Inclusion can also mean reasonable access to invest in the startups that are disrupting their industries. For the Innovators, inclusion means governments will protect their innovations, their intellectual property, from theft by competitors with clear legal standards. For the Followers, inclusion means workers rights, access to affordable housing wherever the job market and career choices take them, and it means progressive growth in their retirement accounts.

Many of these concepts are familiar from other publications on governance. Several of these core features already have organizations that have defined measurable dimensions for comparing governments. For example, DoingBusiness.com, a project of World Bank, compares national governments on different aspects of starting and running a business, a large component of inclusion for all stakeholders. Alongside business metrics for inclusion, social metrics of inclusion continue to emerge via data from peer-to-peer business innovations. Datasets from Uber and Airbnb recently made headlines for quantitatively demonstrating racial bias affecting wait times and availability of places to stay. (Ge et al., 2016) This paper cannot comprehensively curate the perfect set of metrics for inclusion, but the definition from “Why Nations Fail” suffices for comparative scores. A score of 10 meaning everyone conceivable is included and 1 meaning no one is included.

Freedom

“The power or right to act, speak, or think as one wants without hindrance or restraint.” (Oxford Dictionary, 2016)

While a few specific Freedoms are mentioned in the definition of Inclusion, such as freedom to choose career, there’s a few freedoms that pervade most advanced democracies not explicitly mentioned, namely freedom of expression, freedom of assembly, freedom of religion. These particular freedoms do not directly affect an individual's capacity and opportunity to create value in society, but these freedoms dramatically increase the desirability of living under such a government. A score of 10 means an individual has no restrictions on their actions. A score of 1 means the individual is prohibited from doing anything.

Harm, Risk, and Threat Management

One of the classic concerns competing with Freedom and Inclusion is the government concern for preventing, discouraging, and punishing acts of harm. The only valid reason for the government to limit freedom, prohibit or discourage some types of property, consumption, transaction, assembly, or activity is to prevent harm and/or prevent risk of harm, a standard originally defined by John Stuart Mill in the essay *On Liberty*, 1859.

Because there are so many different types of harm— ranging from sexual assault to damaging biodiversity— scoring future-proof government on harm management poses a complex challenge. There are many interesting questions

surrounding the notion of harm. Is there a general, clear and consistent way to manage different types of risk and threat? What types of risk or harm should government manage, and what abilities should government possess to respond to risk? Terrorism consistently dominates news headlines and kills a few thousand people a year, while diabetes kills millions and costs billions to accommodate every year. So why are there drones to bomb people identified as terrorists but no program to bomb refineries of processed sugar? When should innovations in safety like seatbelts or biometric guns go from a good idea to mandatory? Governments of the future will have to identify new risks, decide and communicate responses to those risks at a faster pace than ever before because of the exponential pace of innovation.

While there are too many different types of harm to list them all, there are a few dimensions that all forms of harm have in common: who, how many, and how severely. The table below breaks down some example harms and example government responses. A score of 10 means the government prevents harm and risk of harm to every size and type of group. A score of 1 means no group of any size is protected from any type of harm.

Scale and Severity of Harm	Government Response
1. Fatal Harm Imminent to Self (suicide, accidental death)	Least Aggressive and Least Costly Government Response. (Contact and refer to service)
2. Fatal Harm Imminent to Other (murder, manslaughter, medical malpractice)	...
3. Fatal Harm Imminent to Group more than 5 (drunk driving onto sidewalk, intentional doctor failure)
4. Fatal Harm Imminent to Group more than 100 (faulty engineering, chemical plant leak, act of war)	Most Aggressive and Most Costly Government Response (Kill threats even if innocent people harmed in process, e.g. War)
5. Long term Harm Imminent to Self	Click-it or Ticket
6. Long term Harm Imminent to Other	...
7. Long term Harm Imminent to Group more than 5	...
8. Long term Harm Imminent to Group more than 100	Most Aggressive and Most Costly Government Response (Kill threats even if innocent people harmed in process, e.g. War)

Cost Measured in Terms of Life, Property, Freedom, Inclusion.

Like all current governments, future-proof governments need a clear, objective, measurable means to assess cost. Cost also has to be multi-dimensional. Although the monetary value of human life is a contentious topic, i believe it is necessary to consider it as a cost. The scorecard simply has to accept at least two dimensions to cost: money and lives. World War II was the most expensive human-caused event in modern history in dollars, \$11 trillion (2011 dollars), or in lives spent, 55 million. The US Federal Highway system cost \$465 billion (2011 dollars)⁴; unfortunately the author could not find statistics on how many people died while constructing it. Instead of adding more values to Cost to reflect Freedom and Inclusion, this scorecard uses the existing scores for the dimensions Freedom and Inclusion. To continue the comparative score, a 10 means the policy costs nothing in lives lost or money lost to anyone. A score of 1 means everyone loses life and money on the policy.

Order of Solutions and Responsibility

US politicians maintain a longstanding tradition of pitching policy as a fix to a systemic failure and very often counter-arguing that the problem is too much government in our lives. Libertarians push to strongly bias the government to permitting personal freedom while socialists push to strongly parent and care for any group that can be labeled disadvantaged. How can the US political process data driven determination of which level of solution gets the most efficient and effective result? Humans have lots of needs. The largest need in the near future will be adapting to change. For any given problem what is the simplest level at which it can be solved. Example issue, obesity: Some individuals can solve their obesity issue and self regulate. However, the evidence is showing that number of self-regulating individuals is decreasing. Rather, obesity among U.S. adults is at a new high of 28% (Witters, 2016). Debate regarding health care policy and cost rages on in the U.S. forming a campaign cornerstone for the President-elect. A future-proof government will need to make quick work of designing policy that pursues effective solutions at the simplest level. For example, consider the list of groups to look for an effective action to reduce obesity:

1. Individual. Personal responsibility already works for over 70% of US adults, but maybe some policy shift could improve that number another 10%.
2. Closest friends / family. Even the smallest amount of social confirmation for an action can create dramatic improvements, so policies that encourage group exercise, goal accountability, or diet could be a solution.
3. Local Community. Access to local gyms in good condition would likely improve willingness to exercise, or local food growing could couple the human need for Community connection with healthier choices.
4. For Profit Business. A for profit company could make an impact on obesity through all kinds of products and services while creating jobs, and opportunity for investors.
5. Private Voluntary Nonprofit Organization. While Nonprofits do not create opportunity for investors they can still create jobs and effective solutions, perhaps a new YMCA chapter or a program to promote obesity prevention.
6. Government Mandated Nonprofit Organization. If the obesity epidemic withstood solutions from all of the simpler solutions, then something at the level of intervention of US Postal Service could be considered.
7. Mandatory Nonprofit Organization (Government). Purely government solution might be in order, but the cost of obesity to the nation would have to drastically exceed the cost to freedom that some mandatory action incur.
8. Involuntary For Profit Business (Private Prisons, Utility companies, Obamacare) Involuntary For Profit business comes last in this list because the stakeholders don't have alternatives. Involuntary means the cost is deliberately high to opt out, a \$400 fine to not get private health insurance, or in the case of for profit prisons a felony to opt out.

The highest score, 10, on this dimension goes to the simplest most effective solution where government intervention happens at the individual level, and pure government solution or mandatory for profit business equates to lowest score, 1.

Spectrum of Incentives and Deterrents

Even when a policy specifies at what level a government is taking action, the policy must still indicate what kind of action to take. There are too many possible actions to enumerate completely but future-proof government will consider how aggressive, how forceful an action is and choose the least aggressive action that's effective. Below are two sample lists ordered roughly by severity of intervention.

How Governments Incentivise or Coerce Human Behavior

1. Offer reward. E.g. Reward someone who gives info to capture a criminal.
2. Offer tax credit. E.g. Pay lower taxes for purchasing an all electric vehicle.
3. Offer low interest loans. E.g. Subsidize mortgages for first time home buyers.
4. Promote some behavior with Public Service Announcement. E.g. Buckle-up campaigns.
5. Highlight people who made similar choices. E.g. Award troops with Medal of Honor
6. Send a notice directly to a person. E.g. Send a reminder to sign up for selective service.

How Governments Discourage or Prohibit Human Behavior

1. Permits.
2. Add Sin Taxes to specific purchases or transactions. E.g. Extra taxes on alcohol.
3. Waste their time with legal issues. E.g. County courts will make court appearance mandatory rather than just pay fine.
4. Fine a person.
5. Publicly shame a person. E.g. Local newspapers print who has not;t paid their property tax.
6. Cap and Trade. E.g. Polluters must buy permits from clean energy sources to
7. Seize assets. Civil forfeiture as in the case of seizing assets of a drug dealer.
8. Fire a person. E.g. Other-than-honorable discharge from military service for drug offenses.
9. Outlaw: don't follow the law you get no protection from the law.
10. House arrest.
11. Fabricate a social confirmation bias by making behavior illegal.
12. Ban travel. E.g. deny visa or keep a citizen in state during probation period.
13. Imprison a person.
14. Kill a person to discourage certain actions. E.g. Capital punishment for Treason, Murder.
15. Kill close family, loved ones. E.g. North Korea will kill close family of any soldier that deserts North Korea.

Future-proof governments will bias action towards the least aggressive action, track results, and assess effectiveness before changing to a more severe or forceful action. To properly rank the severity of force, future-proof governments will consider the cost to freedom, and inclusion for all stakeholders, and will also consider the cost of undoing an action in case the government is in error. For example, sentencing an innocent man the lethal injection is impossible to undo. In contrast refunding a fine takes little effort hence those actions receive a higher score in the future-proof scorecard. A score of 10 means the lightest possible or no intervention of government is needed. While a score of 1 means the most extreme intervention possible, “kill everyone”, is needed.

Walkthrough of a Future-Proof Governance Strategy

To summarize as a question the future-proof scorecard previously defined -- “What set of policies will assume the least about circumstances of the future, include as many people as possible in any benefits, limit individual and group freedoms the least, use the lowest cost in life and wealth, prevent the most harm, and use the lowest form of intervention?” Any policy in future-proof governance should score as close to 10 in every dimension possible.

Wellbeing

While Wellbeing is far too interdependent with Freedom and Inclusion to be it’s own dimension, it is worth defining as a paradigm. Governments that score high on freedom, inclusion, etc. should produce the highest WellBeing reported by the most number of people. If the great mass of people report a low sense of WellBeing under a government that scores high on the scorecard detailed above, then the Scorecard needs review and repair.

Tom Rath and Jim Harter, authors of the book “Wellbeing” break wellbeing down into 5 dimensions:

The first element is about how you occupy your time or simply liking what you do every day: your Career Wellbeing.

The second element is about having strong relationships and love in your life: your Social Wellbeing.

The third element is about effectively managing your economic life: your Financial Wellbeing.

The fourth element is about having good health and enough energy to get things done on a daily basis: your Physical Wellbeing.

The fifth element is about the sense of engagement you have with the area where you live: your Community Wellbeing.”

Following are several policies that would score near 10 on every dimension and secure Wellbeing for the most number of people.

Core Financial Plans

Smart, inclusive financial planning lies at the heart of future-proof governance because money assumes very little about the next set of crises facing mankind. Furthermore, money is also useful even when there is no crisis at hand. For example, one of the greatest known threats to life and limb is auto accidents. Instead of hard fought campaigns in Congress to create programs for adopting self-driving cars, which are 10 times safer than human drivers, the more versatile solution is to help the great mass of people increase their income. Then a greater number of customers can purchase self-driving cars without any government mandate. Regarding energy policy, local solar energy combined with a public that can afford to install solar tech means freedom from oil politics and more security against attacks on the power grid. Taleb shows that money offers anti-fragility like nature handles Black Swan events with redundancy. We have two kidneys, two lungs, etc just in case something catastrophic happens to one of them. The Future-proof Financial Ecosystem offers redundancy via savings accounts, cash under the mattress, owning real estate and other assets, for that rainy day or tsunami day. Given the lessons of The Black Swan, it is now wise to move society’s mindset from “just-in-case” to “when and how often” regarding systemic catastrophe and use government incentives to increase savings and investing.

Future-proof governance will also help the public ride the waves of business boom and bust, not suppress the waves. The following financial and technology choices can help modern government move away from a web of band-aids accumulated over decades of crises to a free, inclusive, future-proof system.

Bulletproof Fund

Goal: Make passive income from investments so pervasive amongst US citizens that there is no longer a division between the labor class and the capital class.

Key Performance Indicator (KPI): 90% or more of all US citizens earn over \$1,000 a month in passive income from rent, dividends, and interest income.

Strategy: Open a tax sheltered investment account for every citizen in the US.

1. No assets can be withdrawn from the account and the account is capped at \$150,000 in assets. Building a portfolio that returns 8% is pretty easy, so finding a return of \$12,000 a year on \$150,000 is quite reasonable.
2. Only dividends from stock, interest from bonds, and rent from investment properties can be withdrawn. There is no speculation on capital gains can be withdrawn from the fund.
3. There is no age requirement for collecting income from the fund. This is the biggest difference from a traditional retirement account.
4. Only individuals can have a Bulletproof Fund; no other types of entities allowed, no pets, no corporations.
5. Anyone can donate capital to anyone’s Bulletproof Fund up to the full \$150,000.
6. Upon death, assets go to designated beneficiary’s Bulletproof Fund. Surplus and undesignated funds will be distributed across all existing Bulletproof Funds that aren’t full.

Bulletproof means nothing can pull assets from the fund. No divorce settlement, no child support debt, no felony conviction, no civil forfeiture of any kind, no IRS liens, no hospital bill can pull the assets from the fund. No kidnapper can take the assets as ransom. No drug addiction or gambling addiction can compromise the fund. Any management fee would be capped at a similar management fee of an ETF or Index Fund; thus the name Bulletproof.

Why should a future-proof government endorse such a strict plan?

“If you owe the bank \$100 that's your problem. If you owe the bank \$100 million, that's the bank's problem.”

-J. Paul Getty

The Bulletproof Fund serves a systemic purpose and private purpose. The inverse lesson of the quote above is that when all individuals are doing well, the system is doing well.

Since this fund could dramatically increase the amount of investing by 350 million+ Americans, it's paramount to let the fund invest in the largest variety of assets possible, far beyond stocks, bonds, and mutual funds. At a minimum it should include all the traditionally accepted assets of a retirement account, plus access to peer-to-peer lending like Prosper.com, private REITs, and equity crowdfunding campaigns enabled by the Jobs Act of 2012. Anyone can donate tax-free to any one's fund like a normal 501(c) charitable donation.

Design Features of the Bulletproof Fund

1. Keeps the middle class from evaporating as technology and other changes eliminate jobs. U.S. says “no” to feudalism.
2. Avoids creating a new mandatory spending liability for the government, the biggest pitfall of current programs.
3. Doesn't assume anything about the number of workers that will be available to fund the mandatory spending.
4. Encourages everyone to participate in capitalism and think like investors. The feedback on your investment choices is immediate because the better you invest the more money you make now.
5. Helps create a whole new common place stream of income so people can still buy stuff while they are looking for a job.
6. Drug addicts, and gambling addicts can't kill their own golden goose because they can't withdraw assets.
7. Passive income in the range of \$1000.00 a month is helpful but not so much that everyone will quit working and quit being productive.
8. Since everyone is capped at \$150,000 max assets, wealthier individuals and corporations can't saturate demand for dividend yielding stocks, bonds and thereby ruin the rates of return on these investments.

Disruption Fund

Goal: Intercept some of the operational efficiencies from automation and globalization and set up additional pension fund for laid off workers.

Key Performance Indicator: 90% or more of laid off workers, each receive additional pension income summing over \$1000 a month.

Lots of jobs will come and go with technology, and lots of resistance will come. This phenomenon has been true for thousands of years and will increase in frequency and severity as more jobs leave or automate, made obsolete by technology or globalization. Several entitlement programs have sprung up over the decades to deal with the mass extinction of industries and jobs. Furthermore, there is no mechanism baked into innovation that guarantees new job creation at the same or faster pace of job destruction. The unprecedented increase of wealth at the top 1% and the stagnation of middle class wages provides evidence that most of the gains from disruptive and global innovations are going to business owners and executives rather than the laid off workers (Hacker and Jacobs, 2008).

When mass layoffs or the threat of mass layoffs happen governments and workers often respond by expanding, unemployment insurance or labor union job protection programs. During the 2008 and '09 meltdown, unemployment insurance was practically federalized and subsidized to create an unusually long period of supporting out-of-work job seekers.

The future-proof Government will take disruption as a given and be consistently ready for it. The U.S. doesn't need one-off protectionist policies generated by a Congress trying to get re-elected. Rather, the U.S. can continuously grow a Disruption Fund.

Borrowing research from Laurence Kotlikoff in his book "The Coming Generational Storm", the most likely successful fund is a global market-weighted index fund of stocks, government bonds, corporate bonds and real estate trusts.

Essentially it behaves as a pension fund that laid off workers tap into after a plant shutdown. Large employers make these choices to save huge amounts of operating expense when moving a factory, or automating some part of production. Disruption Fund is funded by a payment of 50% of the projected savings over 5 years into the Disruption Fund. For example when ACME furniture plant moves or automates operation saving \$2 million each year for 5 years it will save a total \$10 million and then the Disruption Fund gets a payment of 50% or \$5 million, which goes to the Disruption Fund of the laid off workers.

Basic Income: Public Money Creates Public Data

Goal: Dramatically simplify the funding of health care, education, and basic needs for the poor. Replace all the income-based programs at the city, state, national level with one stipend from the national government funded by taxes.

Key Performance Indicator: 80% of Basic Income gets spent on productive expenses, avoids harmful expenses.

The Basic Income Network explains:

A basic income is a periodic cash payment unconditionally delivered to all on an individual basis, without means-test or work requirement. That is, a basic income has the five following characteristics:

1. Periodic: it is paid at regular intervals (for example every month), not as a one-off grant.
2. Cash payment: it is paid in an appropriate medium of exchange, allowing those who receive it to decide what they spend it on. It is not, therefore, paid either in kind (such as food or services) or in vouchers dedicated to a specific use.
3. Individual: it is paid on an individual basis—and not, for instance, to households.
4. Universal: it is paid to all, without means test.
5. Unconditional: it is paid without a requirement to work or to demonstrate willingness-to-work.

(BIEN, 2016)

To make Basic Income better serve future-proof governance, it will possess one additional feature: Make the data public on how individuals spend their Basic Income. Individuals can maintain privacy by spending their private income. Two major benefits is that it will offer economists and policy makers a huge dataset to conduct research, and everyone will have at least public accountability on how they spend the money. Ideally, all participants spend Basic Income on health, retirement savings, education, food, sustainable business, but there will likely be loss to bad habits.

Once government installs the Bulletproof Fund, the Disruption Fund, and Basic Income, entire categories of government intervention can be eliminated. Populist outcry for unsustainable policies like Social Security and for distortions to the free market will evaporate with the simplicity and autonomy of improved incomes.

Drug Law Reform

The War on Drugs has harmed every stakeholder in the economic equation from customer, supplier, to employee. However, several campaigns to decriminalize marijuana indicate movement towards more future-proof policy. High scoring future-proof government will not assume which drugs will exist in the future nor will they assume levels of popularity. Since drug addictions and the corresponding problems can arise during legal medical and non-medical use the

future-proof government will pursue government interventions consistent across all types of drug usage to prevent harm. Harm to self (individual overdose) will be the lowest priority harm to prevent, while harm to a large group of others, (commercial pilot under the influence) will be the highest priority.

Since incarceration is such a large cost to freedom and often abused to limit inclusion, drug criminalization will be very limited. We only need 2 laws to govern the criminality of drugs:

1. The drug has to be the drug advertised and only the drug advertised. Anything else is criminally liable fraud.
2. The age of consent and mental condition for consent to use harmful drugs has to be a set standard.

One of the issues already evolving in the right direction is decriminalization of drugs in Portugal and decriminalization of marijuana in the US. Portugal, at present, is the crown example of drug decriminalization, and is testing out new strategies for rehabilitation. Nearly every statistic about usage, overdose, and rehabilitation in Portugal has improved dramatically between 2001, when decriminalization started, and 2012, the time period of the study (Oakford, 2016). The campaigns to decriminalize in Portugal and various states of the US show much promise to maximize freedom and still prevent a lot of harm to self and harm to others.

All three stakeholders, incumbents, innovators, followers stand to benefit by moving drugs towards less severe and more effective forms of intervention. Incumbent law enforcement at federal, state, and local levels can spend their time and energy on higher value law enforcement. Violence towards law enforcement will go down. Fewer abuses by law enforcement will mean better race relations between local communities and law enforcement. Better drug validation can happen in regulated markets meaning more safety for users. Incumbent taxpayers win with all the new tax revenue from drug sales tax, and additionally win with avoiding the cost of new prisons. The main loser incumbent stakeholder would be drug cartels. Jobs that once exported money and violence to Latin American countries would now stay domestic and more peacefully governed. Innovators in the drug market can help establish fair trade sources of any relevant crop.

Sex and Marriage Policy Reform

High scoring future-proof governments will assume as little as possible about sex and marriage and avoid involvement as much as possible. Government can simplify crime prevention to two limitations on sex and marriage and meet the responsibility of preventing harm:

1. Sex and Marriage both have to be consensual.
2. The age of consent to sex and/or marriage has to be a clear set standard.

While many behaviors surrounding sex and marriage remain taboo, there lies in the near future opportunities to dramatically simplify law that will increase freedom and reduce harm, particularly harm to others. In recent years, laws attempting to ban gay marriage have cropped over the US and have been categorically shut down by the US Supreme Court. All the drama surrounding these laws could have been avoided if lawmakers had held themselves to the much clearer and more limited purpose of preventing harm. Despite the vast majority of local governments banning prostitution, the sex industry continues to thrive. Like in drug law reform, data shows an opportunity to downsize criminality and significantly reduce harm to others. In a 2014 study by the National Bureau of Economic Research, Shah and Cunningham study the consequences of a judge's ruling in Rhode Island which inadvertently decriminalized indoor prostitution between 2004 and 2009. Shah and Cunningham reported that decriminalization caused a 31% decrease in rape and 39% decrease in female gonorrhea in that state. Huge numbers of women can see reduction in harm while simplifying law.

Like in the drug industry, the biggest loser incumbents are the existing cartels that traffic illegal workers. Incumbent law enforcement enjoys additional opportunity to avoid violence in their communities. Innovators can continue to innovate at the intersection of dating, sex, and marriage with minimal government intervention.

Healthcare Reform

Future-proof government will avoid making assumptions about what the most prevalent illnesses and injuries will be over the next 20 years. It will also avoid assuming what costs of treatment will be or how they will change. One of the best thought out plans regarding healthcare comes from Laurence Kotlikoff in the book “The Healthcare Fix”. It’s similar to single payer, but instead it’s vouchers for private health insurance.

The Medical Security System 1. Provides universal coverage. 2. Offers each American, annually, a health plan voucher. 3. Those with higher expected healthcare costs receive bigger vouchers. 4. Participants can change their health plans annually. 5. Government defines basic policy each year. 6. Basic policy covers drugs, home healthcare, and nursing home care. 7. Plans must cover basic policy. 8. Plans compete for participants. 9. Annual voucher budget is fixed as share of GDP. 10. Medicare, Medicaid, and employer-based health insuranceance tax breaks are eliminated. (Kotlikoff, 2007)

The cost of the program is capped at 10% GDP, which avoids assumptions about what various treatments will cost. The voucher received by each American is based on data from the year prior, not debates in Congress. Future-proof governments will keep decision-making as responsive to data as possible, automating adjustments in vouchers wherever possible.

For Healthcare reform the incumbents are healthcare providers and insurance companies. For these stakeholders profitability remains for each customer regardless of the projected cost of that recipient. Innovators disrupting the cost of specific treatments will be pitching mostly to providers and insurers rather than to the public. Taxpayers will benefit by having the plan capped as percent of GDP. Followers benefit clear standards of that basic plan that has to be provided and from the subsidy itself. Furthermore, with a comprehensive standardized electronic system for healthcare documentation U.S. will see massive improvements in admin costs which have been shown to be 31% of total healthcare cost. (Woolhandler et al., 2016)

Conclusion

This paper walked through evidence that government is failing to address current issues particularly regarding middle-class stability, drought and war, and the war on drugs. Furthermore, government must also prepare for accelerating change in technology and accelerating shifts in political power. To help with identifying solutions this paper offers a scorecard possessing dimensions critical to future-proofing governance amidst accelerating change. Future-proof governance minimizes assumptions, limits to freedom, the severity of deterrents or incentives, the complexity of a solution. Future-proof governance maximizes inclusion, and prevention of harm. When government succeeds at these considerations, then the Wellbeing reported by everyone involved should be at the highest levels possible. One of the themes that surfaces across issues such as drugs and sex is to downsize criminality and use lighter-weight deterrents and incentives to influence many behaviors that lead to self harm and to consider the same downsizing for behaviors that harm others. Future-proof government stands to improve outcomes for almost all stakeholders by avoiding criminality as the solution. Evidence from several nations and a several U.S. states support this trend. Minimizing the severity of incentives or deterrents by government generally costs less in financial damage, cost to freedom, and inclusion to all stakeholders.

Future-proof governance pursues inclusion and freedom for all three types of stakeholders -- incumbents, innovators, and followers. When incumbents perceive that a policy will help them prosper, then there will be fewer fights in the courtroom or in Congress. When innovators perceive an increase in their access to opportunities, then prosperity for everyone increases with new forms of productivity. When the followers see that free markets actually include them, overall income goes up, confidence goes up and there are more customers for the incumbents and the innovators. As governments face an increasing number of crises, the governments that choose the future-proof policies detailed above will perform far better in maintaining and expanding inclusion. As power becomes harder to retain by force the most responsive, free, and inclusive governments will have the considerable advantage to empower the world’s talent and

utilize the world's resources.

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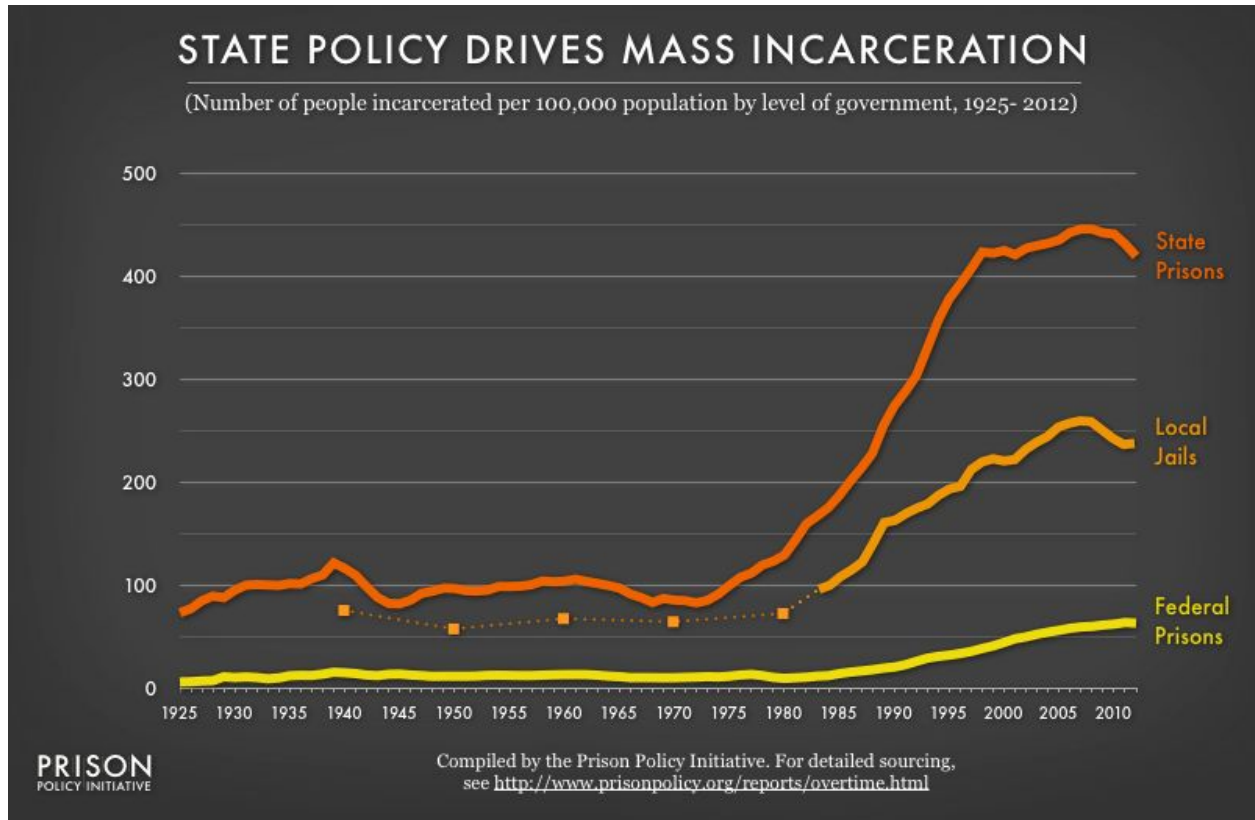
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Footnotes

1. “Redundancy (in terms of having savings and cash under the mattress) is the opposite of debt. Psychologists tell us that getting rich does not bring happiness— if you spend your savings. But if you hide it under the mattress,

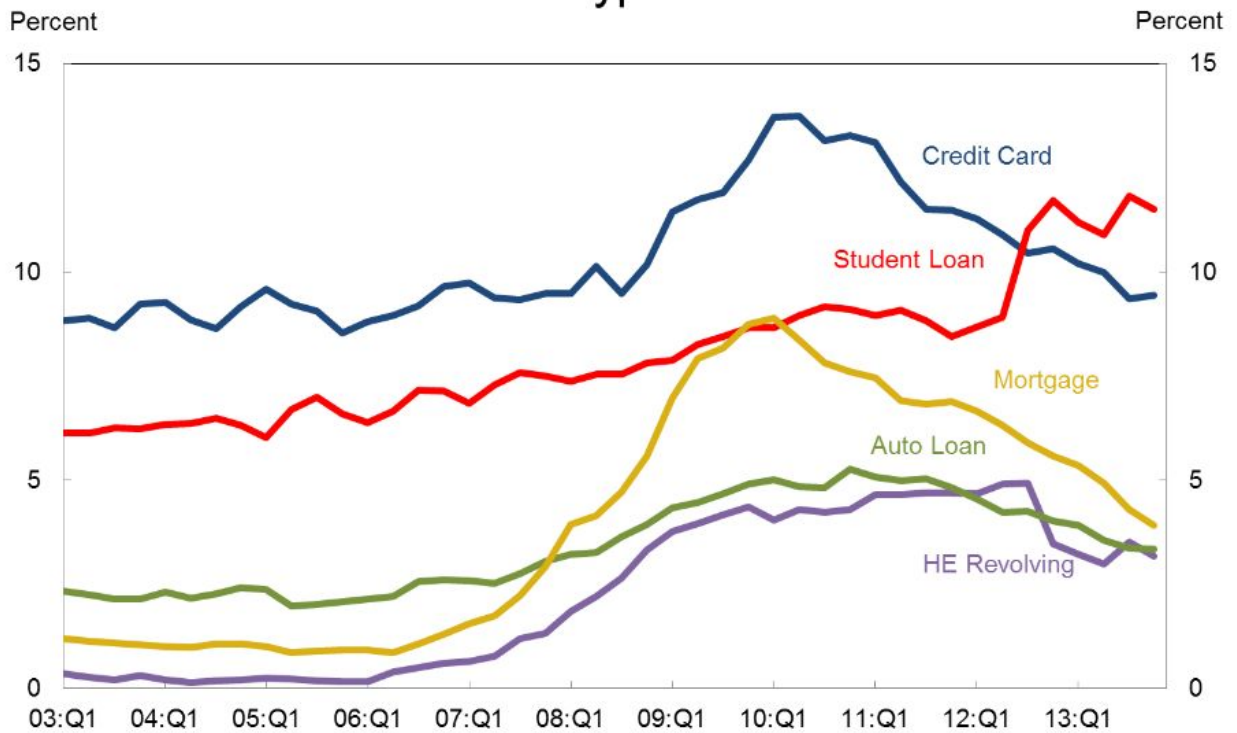
you are less vulnerable to a Black Swan.” (Taleb, Kindle Location 6984)

2. Data Source: For detailed sourcing, see <http://www.prisonpolicy.org/reports/overtime.html#driverdata>. (Graph: Peter Wagner, 2014)



3. Student loan Debt Delinquencies. Credible.com

Percent of Balance 90+ Days Delinquent by Loan Type



Source: FRBNY Consumer Credit Panel/Equifax

4. No report of fatalities during construction of the Federal Highway System could be found.