

The Third Era

Reframing the Futures of Constitutional Governance



The Third Era is intended to be an ever-evolving work on the futures of constitutional governance. In a slight homage to the notion of constitutions being "living documents," this work will be continually revised and updated based on new developments, new conclusions, and constructive feedback. The most recent version will always be available on the Vision Foresight Strategy website.

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Cover art:
Scene at the Signing of the Constitution of the United States by
Howard Chandler Christy, 1940

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Reframing the Future

"The basic terms in which we now consider the question of universal political organisation could be altered decisively by the progress of technology, or equally by its decay or retrogression, by revolutions in moral and political, or in scientific and philosophical ideas, or by military or economic or ecological catastrophes, foreseeable and unforeseeable."

Hedley Bull. *The Anarchical Society: A Study of Order in World Politics.*

The Third Era Reframing the Futures of Constitutional Governance

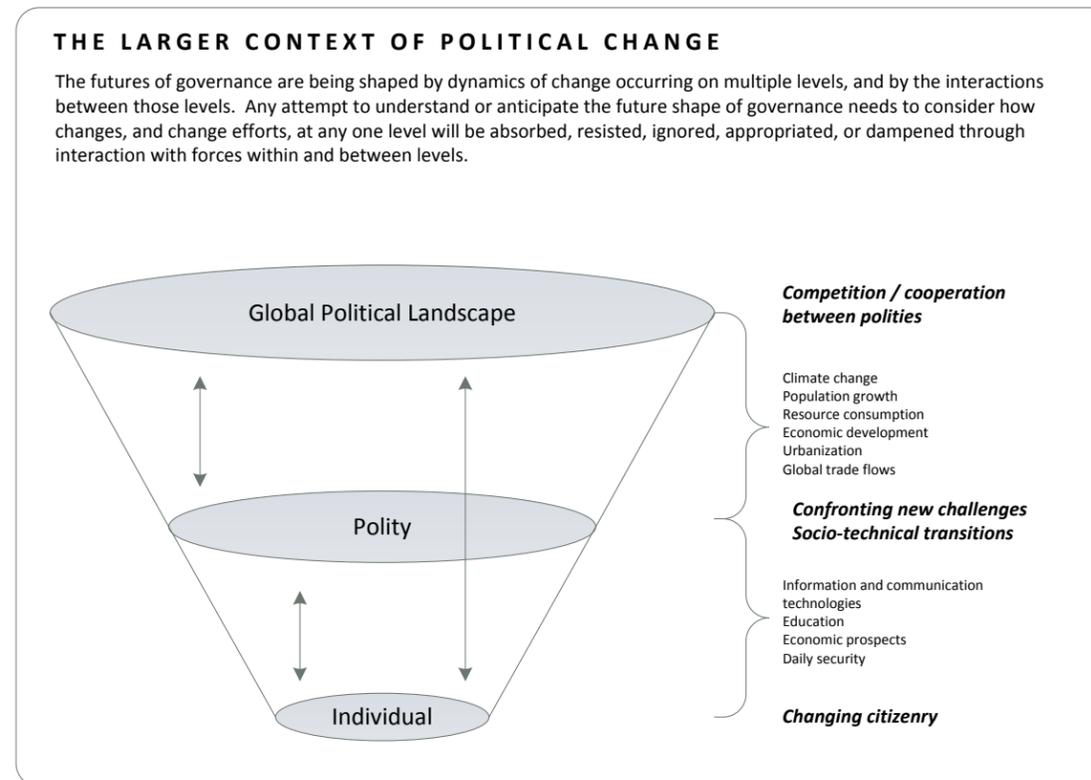
The Third Era is about the futures of governance, a topic whose appeal has been broadening in recent years among government officials, technologists, and entrepreneurial citizens.

The futures of governance, that is, what government will look like and what the role of citizens (and other entities) will be in collective decision making, will be shaped by the interaction of political change occurring on multiple levels.

On the individual level, a rising global middle class, mobile computing, and access to data will continue to drive citizens to wonder if they could not do things better than government. At the level of the state, governments will continue to struggle with reconciling new technologies with old institutions while expanding their scope and performance. At the level of the global political landscape, contests involving both states and non-state actors will intensify over the distribution of power, prerogative, and legitimacy.

These political changes are playing out across the world today, undirected and uncoordinated. Seldom do we take notice that they are all shaping our future. We would be fully at the mercy of these turbulent dynamics if we did not choose to take an active role in driving society's adaption to this complex and changing political environment.

Thus, *The Third Era* is not simply about anticipating the shape of changes to come. It is also about framing and informing our attempts to take advantage of this moment in history to design governance systems tailored to the challenges of this new era.



SCENARIOS DECISION MAKERS SHOULD EXPLORE

- Mediated Republics**

The rise of a pervasive civic infrastructure that forms a mediating layer between citizens and political leaders.
- The Victoria Hack**

In responding to their own challenges, individuals in Africa produce innovations that redefine the global norms of political life.
- Cycles of Power**

Digitization and automation accelerate power transition and power diffusion, leading to shorter periods of advantage, reduced power gaps, and greater conflict.
- Variant Struggles**

As economic and technological conditions change, societal actors are motivated to seek political change, which in turn triggers a period of divergence and competition among new political forms.

IMAGES OF WHAT PEOPLE EXPECT: THE WORLD SYSTEM

- Modernity + Asia**

Modernity absorbs the rising economies which rebalances the world order.
- The Middle Hegemony**

China is the new dominant power and the new role model.
- The Fractured World**

The international order "loosens," with states losing power to non-state actors.

IMAGES OF WHAT PEOPLE EXPECT: GOVERNMENT

- Gov 2.0**

The internet, mobile computing, data, and a tech savvy populace push government to be an enabler rather than enforcer of citizen action.
- Power 2.0**

The new technologies prevalent in the 21st century enable an unprecedented level of power resources that the state can convert into better monitoring, insight, and ultimately security for society.
- Demos Devolution**

Citizen demands and new governance challenges require that decision making be shifted from the impersonal, and corporate-captured "state" to real communities.

WHAT DISRUPTIVE POLITICAL INNOVATION COULD BRING

- Plēthocracy**

A class of governance system enabled by technology in which the preferences and choices of the "crowd" emerge up through the undirected actions and interactions of all political actors.
- Datocracy**

A system of governance which is deeply data-driven and in which human decision-making is both augmented and constrained by data, modeling, and ceaseless testing.
- Machinarchy**

A class of governance system in which the basic constitutional order is embedded into the built environment. The ecosystem of "machines" in society handles day-to-day governance functions.

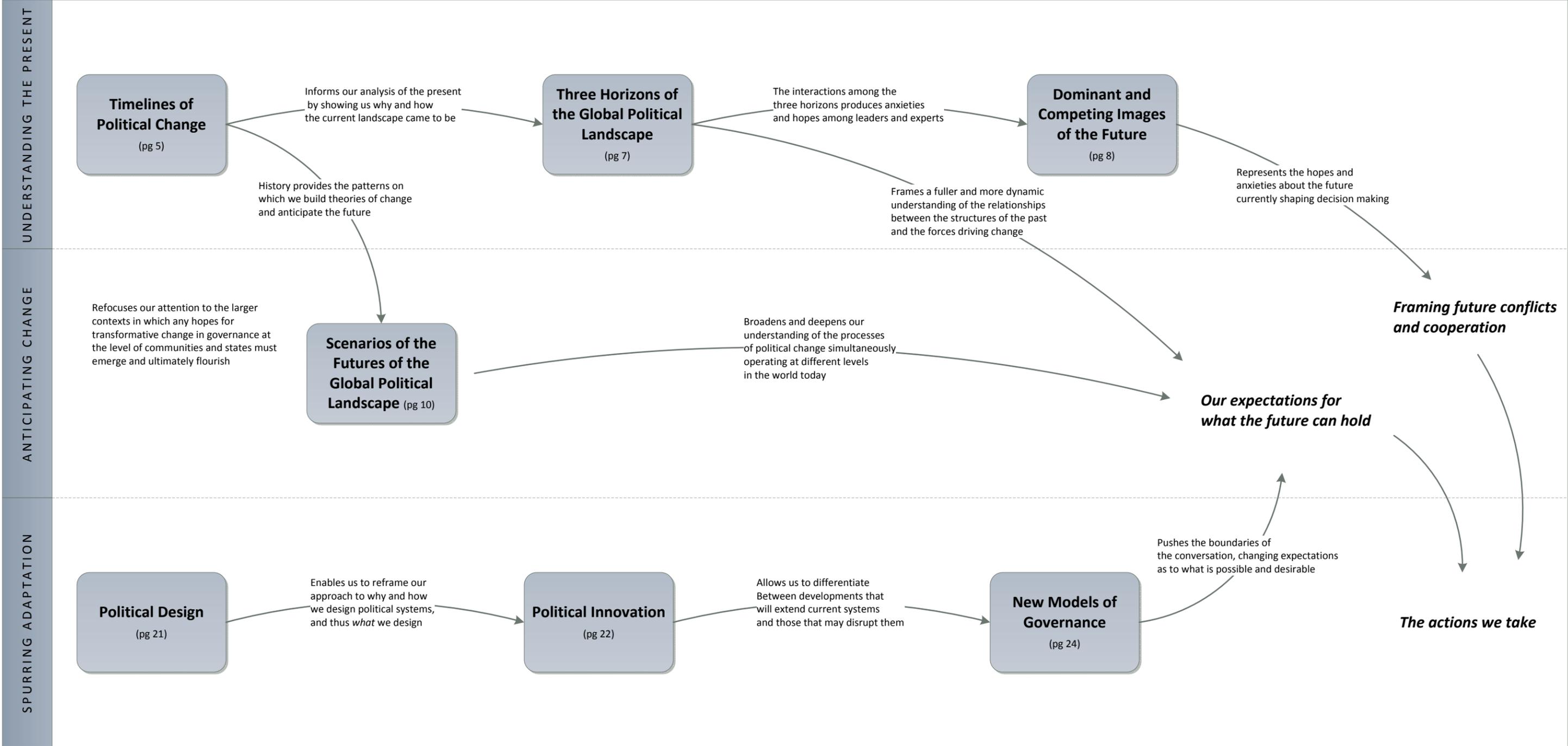
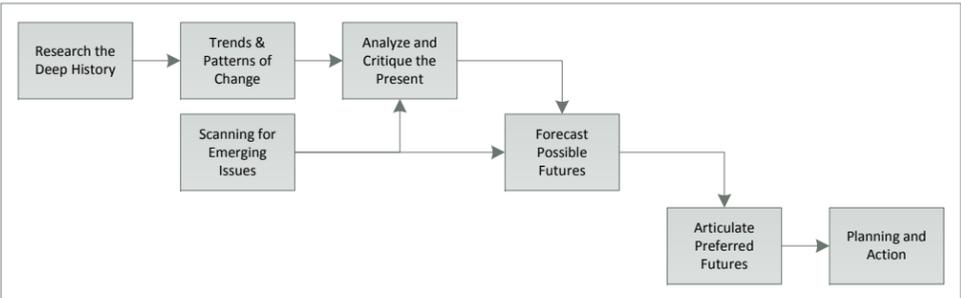
The Highlight Content in Overview

The chart below illustrates how each of the seven sheets included in the Highlight Booklet relate to one another and how they contribute to a broader reframing of the futures of constitutional governance.

While the complete book includes more details and a more comprehensive exploration of the present and the futures of constitutional governance, these seven main sheets provide a quick look at some of the main points of *The Third Era*.

The flow illustrated in the chart is an example of the basic process that underlies good futures work: it reviews deep history for an understanding of patterns, trends, and unique historical contexts; it organizes information about the present in ways that allow useful critique; and it uses those insights about history and the present in order to consider how various dynamics of change could play out in the future.

The generic (and idealized) process is illustrated to the right.



The Third Era Reframing the Futures of Constitutional Governance

Introduction

Today, interest in designing political systems and improving governance is at an all-time high. From open data advocates who want citizens to use public data to “hack” civic life to development specialists engaged in improving political institutions in “weak” states, individuals from diverse backgrounds and with similar but distinct agendas are intensely interested in political design.

Our modern notions of government and the global political system in which we live are the result of a particular history, one that emerged largely out of European experience. The structures that define governance today and the values and beliefs that justify them were all once political innovations developed in response to specific challenges faced within unique historical contexts.

But in the centuries since those innovations took root the world has experienced revolutions: in science and technology; in its social and economic orders; and in the scale of impact that humanity now has on the physical world. And every day the world grows, becoming more interdependent and more complex.

The environment in which governance systems must succeed has therefore changed. Many people today, recognizing this changed environment, are excited by the notion that new technologies combined with new values of engagement and transparency will lead to real systems change. But political change is being driven by forces on several levels, from the macro to the micro, and from interaction across all levels.

The governance systems that we will come to live in will not emerge in a vacuum. They will emerge as integral parts of a global political landscape and indeed will co-evolve with that landscape. They will be the result of a turbulent confluence of forces: individual innovation, competitions for power, and the reactions that preserve the status quo. To usefully anticipate the variety of forms that future governance systems might take requires an examination of the many forces driving political change.

Thus, one cannot speak intelligently about the future of “government” or “democracy” without accounting for the larger political landscape in which our polities are embedded and by which they are constrained. By the same token, it is difficult to forecast the future of global landscapes without considering the forces for social, economic, technological, and political change occurring at the levels of individuals, communities, and polities.

With so much going on today, on so many levels, and with so much riding on how we govern ourselves and our world as we move further into the 21st century, it is time to reconceptualize both constitutional governance and the processes through which it is developed.

The Third Era

This is a book about shaping the futures of constitutional governance. It springs from the intersection of political science and futures studies and is animated by a concern for the concepts and processes that frame the creation of governance systems

The concept of governance has become a hugely popular term in the last several years, in subjects ranging from economic development to state failure to corporate information technology. In its most general usage, governance is about control and management. Often it focuses on controlling human behavior. But whereas *ruling* has always been used to talk about commanding others and wielding power, *governing* carries with it a sense of pursuing collective interest.

While precise definitions of governance vary from those with a focus on rule-making to those with a focus on regulating systems, in this book governance will refer to making and implementing decisions in the collective interest, a definition that carries within itself the implicit goal of providing collective good.

Constitutional governance has always been governance that a political community comes together explicitly to create for itself. In this sense the Greeks were the first in recorded history to see government in this light: as a social construct amenable to self-conscious alteration.

The ancient Greeks created citizenship and democracy, simultaneously inventing the art of designing governance systems and inaugurating the first era of constitutional governance. The Americans, building upon two centuries of European political thought and practice, established the second constitutional era, creating patterns for constitutional governance that remain bedrocks of political design to this day.

Today, we confront both the possibility as well as the need for a third constitutional era. With old philosophies and structures confronting complex and globe-spanning issues of material and philosophic importance, we are in need of a fundamental reconsideration of the ways in which we govern ourselves. We should, in fact, be facilitating the arrival of a new constitutional era, one that discards ideas that no longer serve and that builds upon new knowledge and technologies to meet the challenges of the 21st century.

To that end this book suggests ways to begin rethinking constitutional governance and the methods for developing it.

Understanding the Present

The first section of the book looks at the history that led to the world that we have today as well as the norms about legitimacy, representation, and the control of power. The section also examines the trends that are putting pressure on this historical system and the emerging issues that may enable innovative responses to these challenges. Finally, the first section highlights a number of dominant but competing images about the world’s political futures, images that provide insight into the assumptions, anxieties, and hopes shaping the actions of decision makers.

Anticipating Change

The second section draws upon the approaches of futures studies to explore the types of political change the world may experience in the years ahead. Starting with a set of scenarios about the global political landscape, the section showcases the very different dynamics that could determine what changes occur and their various implications for governance in the future. This section also offers new models through which to anticipate and assess important trends, emerging issues, and future scenarios.

“Today we find ourselves with political systems based on 18th century philosophy, run with 19th century administrations, built on 20th century technologies, facing 21st century challenges.”

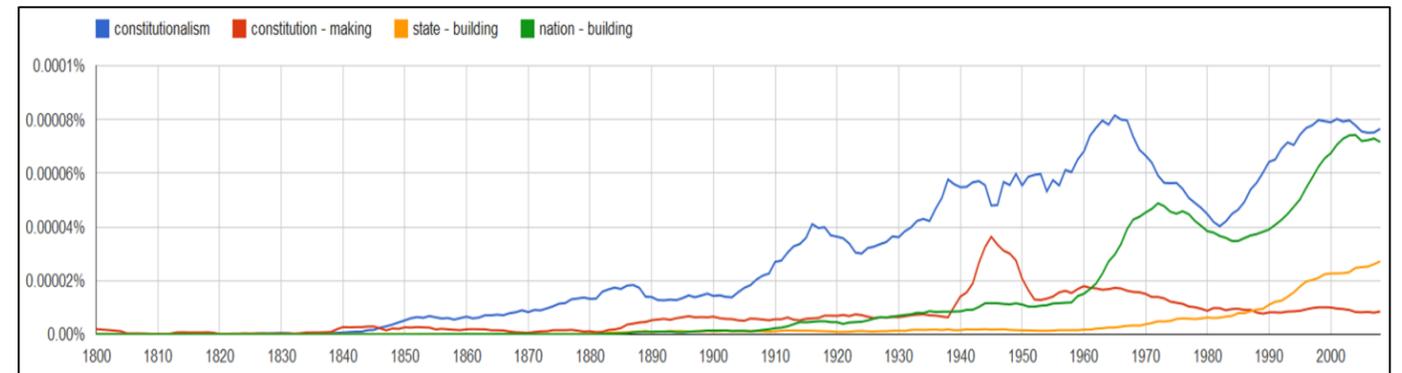
Dr. Richard A. K. Lum

Spurring Adaptation

The third section of the book focuses on the process of designing governance and on the models that can reframe our notions of governance. This section also anticipates the types of dramatically different political models that might emerge in the future and to consider the places such innovations are most likely to emerge. The ideas and forecasts contained in section three are neither predictions of what will happen nor intended to be the final word on reconceptualizing governance. Rather, they provide a starting point for a wider set of conversations and explorations.

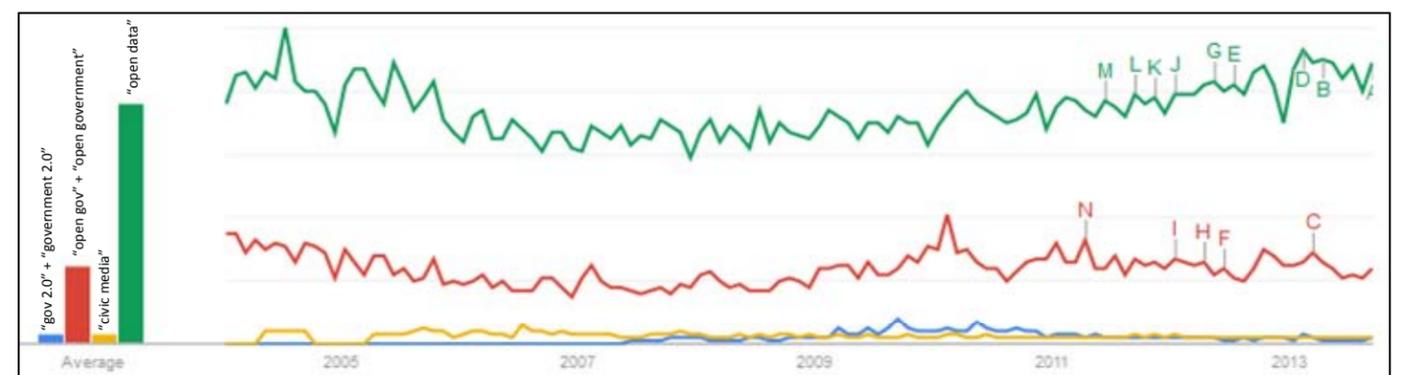
TRENDS IN KEY TERMS RELATED TO DESIGNING GOVERNANCE

Relative frequency of political design-related keywords in literature



Google Books Ngram Viewer

Relative volume of search terms for issues of technology-related political innovation



Google Trends

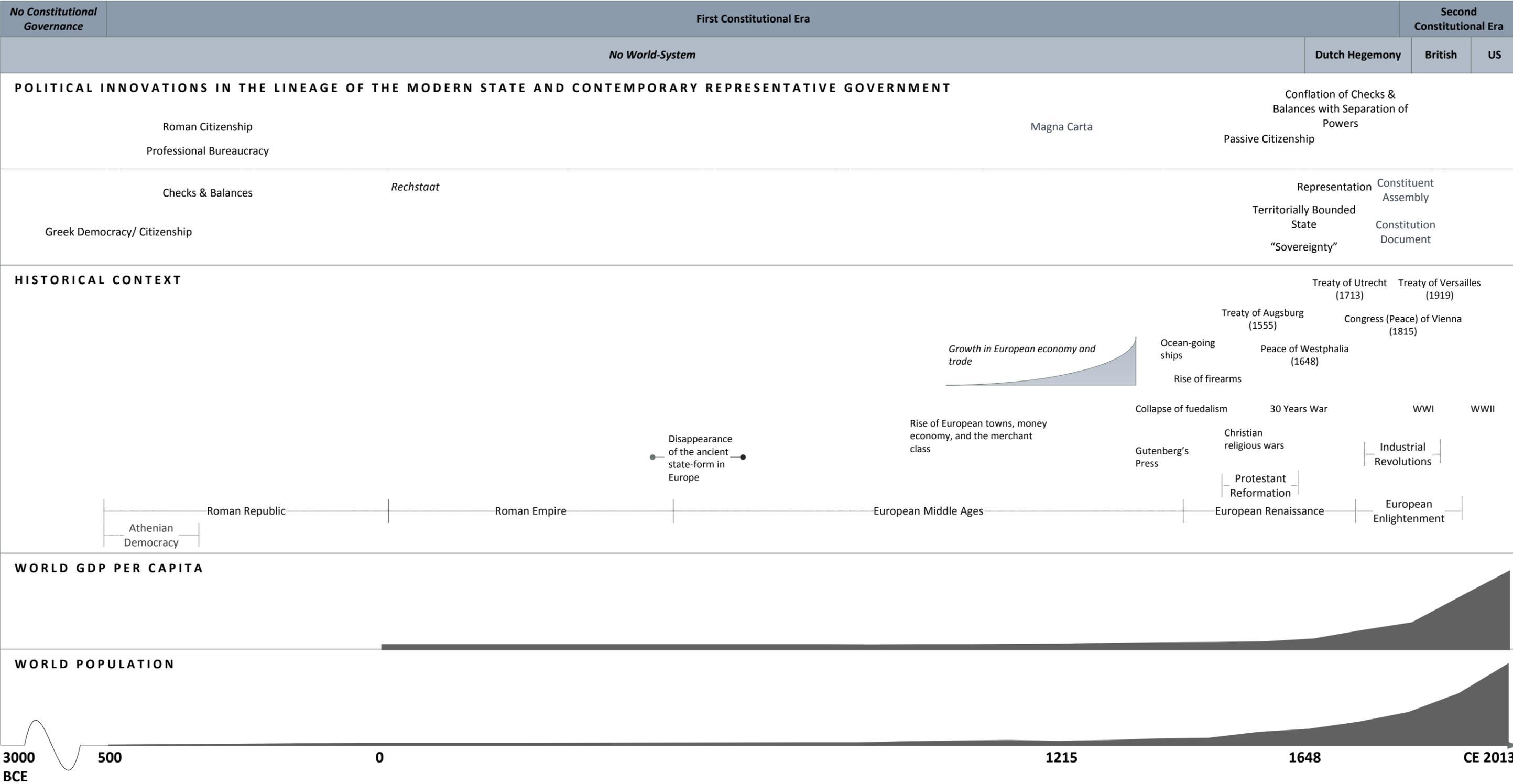
Timelines of Political Change

The modern state and modern representative government emerged from a particular history, a unique evolutionary context that occurred in Europe. This context posed specific challenges for governance and for political survival, challenges that the modern state form evolved to address. This historical context also offered a unique intellectual and philosophic worldview through which actors understood the events of their times and from which they

drew inspiration for their political, economic, and social solutions. Spanning a period of time stretching from the Middle Ages to the Modern Era, the evolutionary context of the modern state included: an end to foreign invasions of Europe; the rise of towns, a merchant class, a money economy, and long distance trade; growing wars, changes in military service, changes in military

technology, and changes in military operations, a significant rise in the cost of these wars, and the increasing devastation they wrought; the Reformation and the religious wars throughout Europe; the discrediting of the Roman Catholic Church; the Renaissance, the Enlightenment, and the Industrial Revolutions; and the rise of representative bodies and the centralization and regularization of taxation.

Our modern patterns of governance were evolutionary responses to challenges posed by unique historical environments. They did not evolve to handle many of the most important governance challenges that we face today, from global economic interdependence to powerful non-state actors to the effects of climate change. It is to these challenges we will turn in the pages that follow.



The Three Horizons of the Global Political Futures

The three horizons is a futures framework developed by Tony Hodgson and Bill Sharpe¹ to visualize the overlapping changes underway in society. Related to the common “s-curve” of development, the three horizons permits us to map the rise of new ideas and technologies and to trace the fall of core assumptions and structures as they become less “fit for purpose” over time.

The first horizon represents the key assumptions and structures of the present that are becoming less fit for purpose. The third horizon represents the early-stage emerging issues slowly coming into notice, as well as being the realm of individuals’ dreams and anxieties for the future.

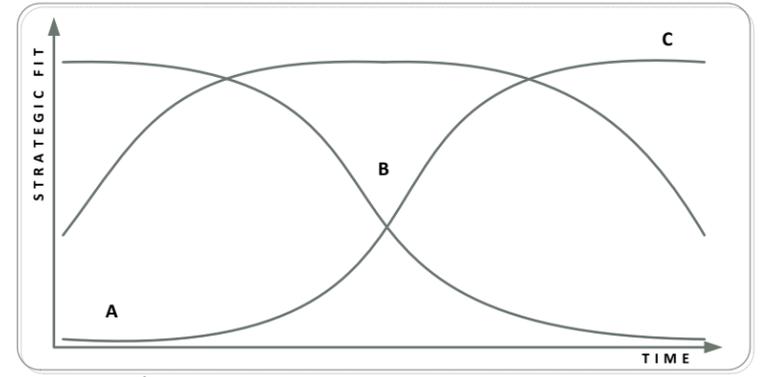
The second horizon represents the trends that have been most directly putting pressure on the first horizon, as well as being, conceptually, the space in which conflicts and cooperation over shaping the future occur.

It is a common understanding that the modern state and its representative governments have been under increasing pressure for several decades. The three horizons shows that major Strategic Drivers of Change, a resulting Emerging Context, and Rising Governance Challenges are putting pressure on foundational assumptions about the modern state and about how we go about designing and constituting new governments.

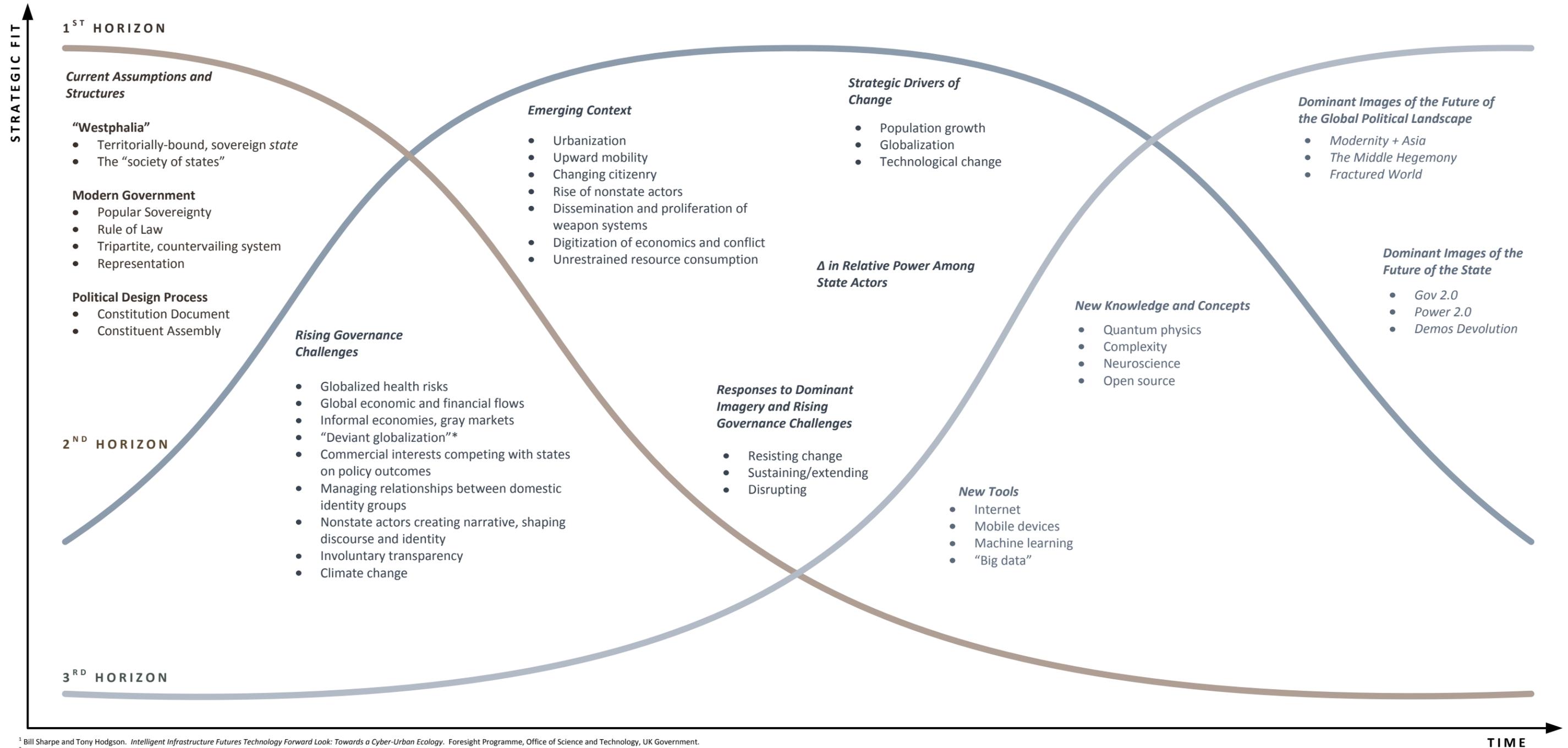
A: “Pockets of the future’ embedded in the present”

B: “Futures space in which policy and strategy conflicts play out”

C: “Visions of the future”



Curry and Hodgson²



¹ Bill Sharpe and Tony Hodgson. *Intelligent Infrastructure Futures Technology Forward Look: Towards a Cyber-Urban Ecology*. Foresight Programme, Office of Science and Technology, UK Government.

² Andrew Curry and Anthony Hodgson. “Seeing in Multiple Horizons: Connecting Futures to Strategy.” *Journal of Futures Studies*. August 2008.

Dominant and Competing Images of the 3RD Horizon of Global Political Futures

In the three horizons framework, the third horizon represents both the “pockets of the future” found in the present as well as the images of the future that we presently hold. For some, the core assumptions and structures of the first horizon are valued, and so rising second horizon trends and unfamiliar emerging issues in the third horizon are threatening, creating images of anxiety. For others, the first horizon represents constraints impeding a better future, and so the images they generate about the future are aspirational visions, images of a more preferred future.

The images below represent the basic, competing images about the future dominant in media and literature today. Drawn largely from American narratives, they begin to reveal the core anxieties and hopes most influential in policy-making circles and in shaping the expectations of the general public. And while the United States does not by itself and according to its own collective whims create the future, these dominant images of the future can provide insight into the types of conflicts and tensions that America expects and, certainly to some extent, thereby generate.

Of these major competing images of the Interstate System, certainly the first two, *Modernity+Asia* and *The Middle Hegemony* currently have the most followers. Of the images of the State, *Gov 2.0* and *Power 2.0* are currently the strongest, at least in the media.

Dominant Images of the Future of the Global Political Landscape

Modernity + Asia



Modernity absorbs the rising economies which rebalances the world order.

This is China as a "responsible stakeholder" and a validation of the liberal economic order and Westphalian hard-boundaries political map with which we are familiar. This images expects the gradual, partial expansion of representation in Chinese government as it liberalizes and a subsequent multiplicity of alliances throughout the Indian Ocean rim.

The Middle Hegemony



China is the new dominant power and the new role model

An instinctive image for hegemonic power realists, this image is about the decline of the West and the triumph of China. It sees Chinese client-states throughout the hemisphere, paying 21st century forms of tribute to Beijing. In this image there is a further weakening of the Westphalian norms and the spread of non-representative governance models. The Confucian worldview is ascendant and China dictates policy from the Western Pacific to the Arabian Gulf.

Fractured World



The international order “loosens,” with states losing power to non-state actors.

This image encompasses the various “new middle ages” analogies that have periodically gained ground since the 1970s. The stable, normalized society of sovereign states unravels, leaving behind multiple forms of polities with a new multiplicity of cross-cutting identities, loyalties, and power relationships. Non-state actors and non-state polities assume new roles alongside remaining states.

Dominant Images of the Future of the State

Gov 2.0



The internet, mobile computing, data, and a tech savvy populace push government to be an enabler rather than enforcer of citizen action.

Power 2.0



The new technologies prevalent in the 21st century enable an unprecedented level of power resources that the state can convert into better monitoring, insight, and ultimately security for society.

Demos Devolution



Citizen demands and new governance challenges require that decision making be shifted from the impersonal, and corporate-captured “state” to real communities.

Scenarios of the Future of the Global Political Landscape

Scenarios are common vehicles for exploring the complexity of multiple, alternative futures. The following four scenarios sketch a broad range of possible futures for political forms on the global stage. The value of such scenarios is to highlight the many competing dynamics of political change that are occurring simultaneously around the world today.

If we are interested in anticipating or shaping political innovation, then we need to be cognizant of the larger context in which any and all such innovation and change will necessarily occur.

Each of the four scenarios was built by combining a particular model of change with a number of applicable trends and emerging issues. In this fashion the set explores a variety of different theories about what drives political change in the world today, from technology-focused theories to large world-systems structures and patterns.

This approach is based on a simple equation that we often use to produce distinct and dynamic scenarios: TOCS +TEI + Inspiration + Intuition = Scenarios

THE SCENARIO FORMULA

$$4 \times (\text{TOCS} + \text{TEI} + \text{Inspiration} + \text{Intuition}) = \text{Scenarios}$$

TOCS = theories of change and stability

TEI = trends and emerging issues

Inspiration = minor models of change, historical

precedents, analogies, and additional images of the future

Intuition = human x factor

SCENARIOS OF THE GLOBAL POLITICAL LANDSCAPE

Technological Revolutions

Mediated Republics

The rise of a pervasive civic infrastructure that forms a mediating layer between citizens and political leaders.

As the digital revolution continues to reshape society, a layer of “civic infrastructure” is created based on pervasive mobile computing, massive data, and increasingly autonomous software. This layer of infrastructure collects and processes data on society for the government and keeps citizens informed and engaged in the public issues of greatest interest to them.

“Civic avatars” act as semi-autonomous, virtual, political assistants for individuals, managing the overwhelming flood of information: curating information, highlighting political issues, suggesting strategies, and communicating citizen preferences to officials. Avatars allow citizens to be “constantly interacting, but only intermittently engaged” with government. Government agencies rely on the vast civic infrastructure to communicate with civic avatars, collect and process data, model options, and predict outcomes.

Such civic infrastructure emerges across most of the world. In the democratic world it gives rise to “mediated republics.” Advantage and power accrues to mediated republics, which process much more societal data, on shorter decision loops, than the “old states” relying on limited citizen input and outmoded political decision-making processes.

Political Innovation

The Victoria Hack

In responding to their own challenges, individuals in Africa produce innovations that redefine the global norms of political life.

Economic challenges in Kenya spur experimentation with alternative governance models, while tech-oriented civic hackers pursue government transparency and increased citizen engagement. The collapse of the Democratic Republic of Congo and widespread instability in the region drive people to draw on innovations like digital fabrication, global crowdsourcing, and mobile computing to provide security and basic services for communities.

New models like “nested deliberation,” in which all stakeholders now have roles in policy-making, are common place. “Relative rights,” in which individual governance roles vary based on proximity, expertise, and age, is also popular. Interlaced governance, incorporating elements of both innovations and used by geographically dispersed communities, is spreading.

Several parts of Africa use nested deliberation, while interlaced governance has spread to Central and South America and the Pacific. Adaptations of both nested deliberation and relative rights have appeared in North American and Europe. And globally, a thin but responsive layer of private and crowd-driven platforms serve as the digital foundation for providing governance services to communities in need.

Power Transitions

Cycles of Power

Digitization and automation accelerate power transition and power diffusion, leading to shorter periods of advantage, reduced power gaps, and greater conflict.

China increasingly asserts itself, prompting counter moves by the United States and escalating global tensions. Military automation and cyber capabilities are seen as the new power resources, especially with an assertive China and a combative United States. Virtually all countries, as well as non-state actors, aggressively pursue their development.

State militaries are increasingly unmanned and autonomous, and the almost complete digitization of society has made cyber capabilities vital to defense and offense. Cyber actors from hacktivists to organized crime routinely level the global playing field by revealing sensitive information and distributing technical advances from both states and corporations. Technical and information-based advantages are short-lived.

The global power hierarchy has flattened as power gaps between states have lessened and power transitions among states have increased in frequency. Conflict is greater as states and non-state actors engage each other through autonomous engagements and deniable cyber activities. Non-state actors, while not full-fledged political communities, function to support a new type of balance of power among states.

Punctuated Equilibrium

Variant Struggles

As environmental conditions change, societal actors are motivated to seek political change, which in turn triggers a period of divergence and competition among new political forms.

The pressures and opportunities of the intensely competitive global economy trigger “adaptive” responses by politicians, business leaders, and individuals. The governments of states diverge in form (with many unraveling), corporations and social networks evolve into coherent political communities, and cities reemerge as distinct political entities.

Urban-states, characterized by massive populations, sprawling urban territories, and decentralized governance systems based on “smart” infrastructures dominate most continents. For urban-states, effective governance and claims to authority end at the edge of the built environment. Transurban polities, the convergent descendants of transnational corporations and global social networks, crisscross the globe by flowing through urban-states, acting as the main conduits and organizers of the world’s economic flows.

Powerful leagues of megacities dominate Asia, while sprawling urban-states in Africa and South America evolve with little central steering. North America exists as set of regions centered on clear urban centers and megalopolis.

SCENARIO HIGHLIGHTS

Mediated Republics

- Interaction change*
- Change is driven by a broad technological shift in wealthy societies
- Civic infrastructure is central
- Digital “civic avatars”
- “Constantly interacting, intermittently engaged”

The Victoria Hack

- Systems change
- Change is driven by political conflict in unstable states
- Relative rights
- Nested deliberation
- Interlaced governance
- Private-Crowd Partnerships

Cycles of Power

- Systemic change
- Change is driven by shifting power relationships among states
- Deepening automation of economics and business
- States and non-state actors “drone up”
- “Every community a factory, every home a barracks.”
- 21st Century levee en masse

Variant Struggles

- Systems change
- Change is driven by the emergence of new, competing political forms
- Convergent evolution
- Urban-states are the center of political life for most people
- Symbiotic relationship between urban-states and transurban networks

TYPOLGY OF INTERNATIONAL POLITICAL CHANGE

The scholar Robert Gilpin developed a typology of international political change in his book, *War & Change in World Politics*. It is used here to further classify and differentiate the scenarios.

- Systems Change: a change in the character of the international system itself; the nature of the many actors within the system change
- Systemic Change: a change within the international system but not of the system itself; a change in the distribution of power among actors
- Interaction Change: a change in the interaction between actors (when the nature of the actors themselves does not change)

Future Political Design: Rethinking Constitutional Governance

Given the many changes underway, we need to consider new concepts and processes for developing constitutional governance.

And process is key. You won't get a 21st century design using an 18th century process.

We can begin with a few new principles to guide design efforts:

- Focus on governance and not just government
- See governance as systems: nested, interacting, overlapping
- Draw upon all systems, both human and natural

But we need to include a few cautionary principles as well:

- Never forget issues of power in human society
- Balance tradeoffs between mass participation and expertise
- Do not conflate process objectives with design requirements

In an attempt to operationalize some of these principles, we can adapt the work of evolutionary economist Richard Nelson and the additional conceptualizing done by Eric Beinhocker to think of governance systems as unique architectures of physical technologies combined with political technologies.

By incorporating work done by James Dator and by taking inspiration from industrial design practices, we can begin by considering an (idealized) approach to designing constitutional governance in the 21st century.

STRUCTURES AND MECHANISMS FOR GOVERNANCE*

Political Institutions

Those human organizations and structures that we have traditionally thought of as "government." These have traditionally held a monopoly on the authority to establish priorities and steer society.

Social Customs and Norms

The many informal and non-law aspects of culture that shape and constrain human behavior.

Markets

The "market" as a mechanism for producing and distributing collective goods continues to be hotly debated, yet it remains an important option for how to organize (or not) human incentives and activities.

Built Environment

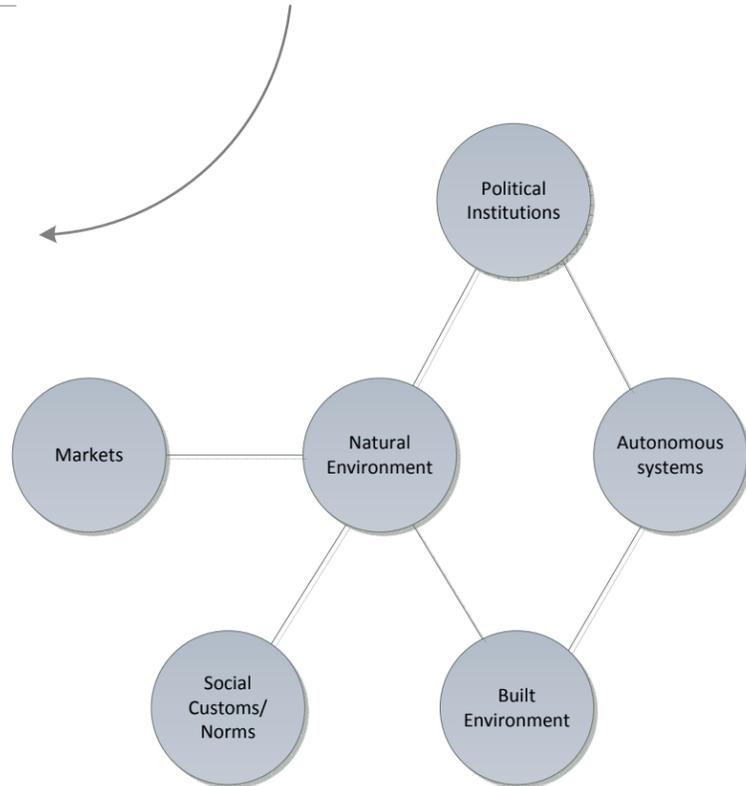
Architecture, urban design, and information infrastructure have clear though often overlooked influence on human perception and behavior and on regulating issues in the collective interest.

Natural Environment

Systems in the natural world are very important for influencing human behavior and for providing collective goods. The interface of human systems and natural systems is a critical one for governance.

Autonomous Systems

Mechanisms, devices, vehicles, and structures that sense, respond, adapt, and communicate will be increasingly important.



GOVERNANCE

Making and implementing decisions in the collective interest.

The goal of governance is to provide collective goods.

GOVERNANCE SYSTEM

A unique collection structures and mechanisms arranged so as to produce the societal outcomes desired by the political community.

CONSTITUTIONAL GOVERNANCE

Constitutional governance is achieved when the political community formally comes together to create the system(s) by which it will be governed.

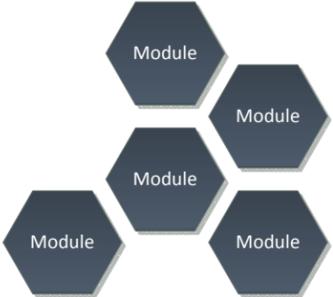
TECHNOLOGIES TO MODULES

Combining different physical, political technologies, and natural systems in order to carryout specific functions and govern issues.



MODULES TO ARCHITECTURE

Through testing and simulation we integrate modules together into a overarching, and unique, systems architecture.



STARTING WITH DISCRETE TECHNOLOGIES

Breaking man-made institutions and structures down into the smallest practical components.



ENCODING THE DESIGN

Classic political design encoded the constitution in a written document. Yet as we move beyond thinking of governance merely as a thing of laws and involving far more than just political institutions, we need new and more dynamic ways of encoding governance designs.

Some possibilities:

- Constitution-document (2D, text, static)
- Prezi* (2D, multi-media, interactive)
- Tinker Toys (3D, static)
- Computer model (2D, interactive)

*Modified from a list originally developed by Professor James Dator

Political Innovation

Disruptive Innovation

The Harvard professor and business management thinker Clayton Christensen is famous for his “disruptive innovation framework” in which he theorizes why and how industries are disrupted from innovations aimed at meeting the needs of un-served segments of a market. This disruptive innovation framework is widely applied in business circles and is often referenced in futures (foresight) circles. Here Christensen’s framework has been adapted for use in political design work; it provides a useful way to think about and to categorize both historical changes in political design as well as current attempts at political innovation.

Adapting Disruptive Innovation for Governance

First, in adapting Christensen’s disruptive innovation framework for political design, we are concerned with innovations both in governing and in the processes for designing governance systems. Second, we are concerned with determining whether an innovation extends the current political system (a sustaining innovation) or whether it redefines the market, as it were (a disruptive innovation).

For our purposes, a *sustaining* political innovation is one that causes the existing political system to perform better, as defined by the priorities and expectations of the current political community (and, one might argue, the elites of that community). With sustaining innovations the political system has been improved but not fundamentally altered.

In contrast, a *disruptive* political innovation is one that both redefines the dimensions of political performance *and* comes to redefine general expectations for political life. That is, the innovation must not only introduce an essential change to a political system, but it must also get absorbed into either political philosophy or the common practice of governance. In this way, a disruptive political innovation is one that redefines the standards and assumptions to become a new norm.

Disruptive political innovations can range from new philosophies to new governance structures to new definitions of the political community. Traditionally, the political innovations in the lineage of the modern state were very much innovations in the sense of being solutions to contemporary political problems or normative arrangements intended to address the perceived failings of human behavior or societal institutions.

Domains in which an innovation might prove disruptive:

- Defining a new source of political authority
- (Re)defining the political community
- Altering who makes decisions or how those decisions are made

As referenced on the previous page, new physical technologies enable new social (or political) technologies. With the widening array of new knowledge and new physical technologies, we expect a greater chance of both sustaining as well as disruptive political innovations in the years ahead.

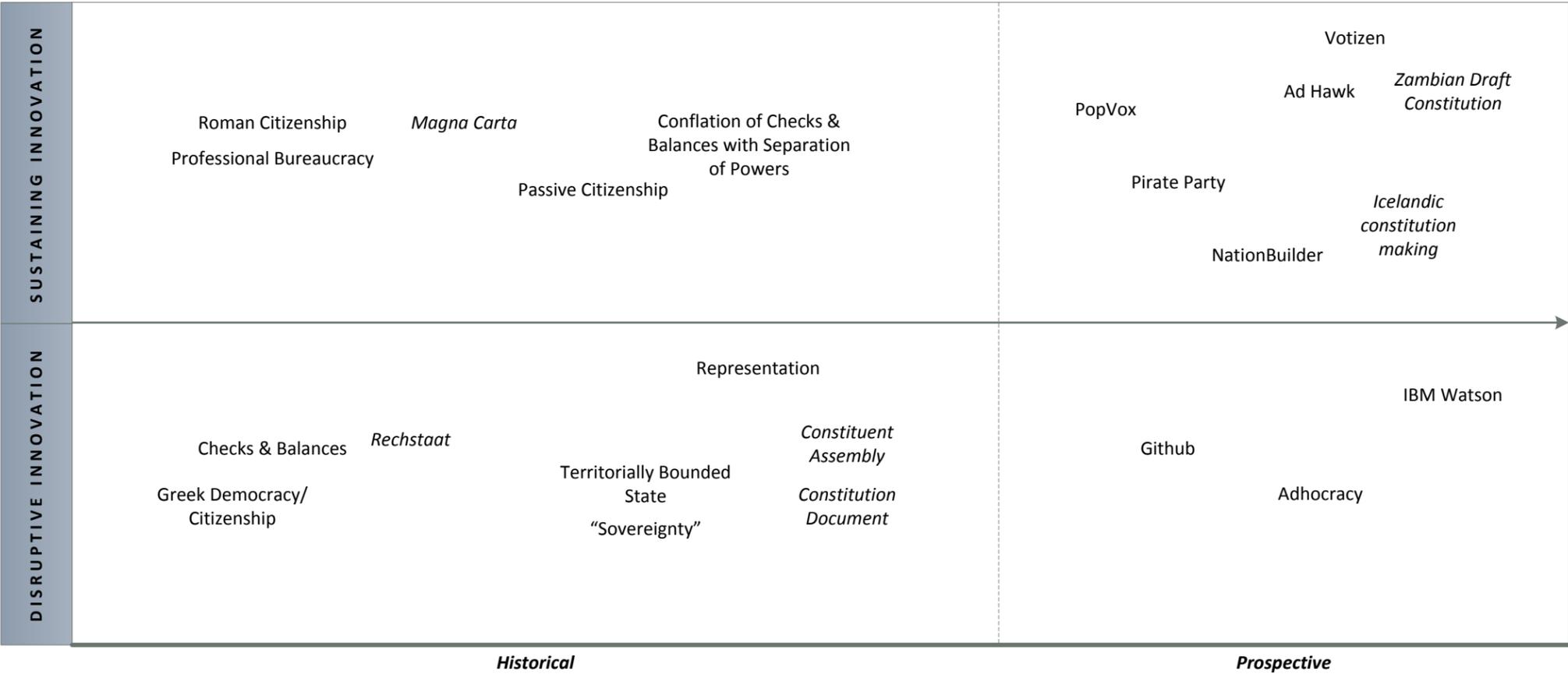
SUSTAINING VS. DISRUPTIVE POLITICAL INNOVATION

Sustaining Innovation	Disruptive Innovation
Improving performance along the established, expected dimensions	Redefining the dimensions of performance or serving new customers
<i>The Athenian reforms of Solon (594 BCE)</i>	<i>The Athenian reforms of Cleisthenes (508 BCE)</i>
<i>Constitution-making process of South Africa (CE 1990s)</i>	<i>Constitution-making process of the USA (CE 1787)</i>
E.g. making it easier to communicate with my Representative	E.g. a very large scale virtual legislature with participants chosen by sortition
Voting via my mobile device	Replacing human Representatives with digital avatars/agents

NEW KNOWLEDGE, CONCEPTS, AND TECHNOLOGIES*

Examples of New Knowledge	Examples of New Physical Technologies
<ul style="list-style-type: none"> • Quantum physics • Chaos, complexity, and networks • Neuroscience • Behavioral economics • Ecology 	<ul style="list-style-type: none"> • Internet • World Wide Web • Social media • Cellular/wi-fi/wi-max/NFC • Mobile devices • Mobile and networked sensors • Automated structures • Algorithms, machine learning, and M2M communication • “Big data”
Examples of New Concepts	Examples of New Political Technologies
<ul style="list-style-type: none"> • Governance vs. government • Limited statehood • Shared sovereignty • Variable sovereignty • Open source • Open Government • “Government as platform”¹ • Nonspatial governance² • “Planetary scale computing”³ • Biomimicry • “Deep democratization”⁴ 	<ul style="list-style-type: none"> • “Aanivalta” model⁵ • Deliberative democracy • Participatory budgeting • Mosaic rights⁶ • Crowdsourcing • Crisis mapping

TIMELINE OF POLITICAL INNOVATION IN THE LINEAGE OF THE MODERN STATE



¹ Tim O’Reilly; ² Bruce E. Tonn and David Feldman. “Non-Spatial Government.” *Futures* vol 27 no 1, 1995.; ³ Benjamin Bratton. “On the Nomos of the Cloud: The Stack, Deep Address, Integral Geography.” November 2012; ⁴ Andrew Feenberg; ⁵ “The Platform of Aanivalta (The Finnish Citizen’s Power Movement)”; ⁶ Barbara Heinzen and James Magode Ikuya. “Mosaic Rights in the 21st Century.” December 11, 2012

Anticipating New Models of Governance Based on Disruptive Political Innovation

While it is impossible to predict the exact models of governance we will see in the future, it is important to forecast the types of systems that *could* emerge in the future given emerging issues, shifting citizen preferences, and new technologies.

Returning to the notion of disruptive political innovation, we can survey the various technologies and concepts available to designers today and we can anticipate how actors will attempt to deploy these technologies in order to meet current and future governance challenges.

Three truly novel systems, based on disruptive political innovations and oriented on modern challenges, would include *plēthocracy*, *datocracy*, and *machinarchy*.

Plēthocracy

Whereas *dēmos* refers to the “populace as a political unit”¹, *plēthos* refers to the multitude, the crowd. In a *plēthocracy* the crowd holds power, though not in the direct, deliberative fashion

of a democracy. Enabled by technology, preferences are identified and decisions emerge through the undirected actions and interactions of all political actors.

This is the natural home for notions like “wisdom of the crowd,” “crowdsourcing,” and self-organization and emergent patterns.

Datocracy

Datocracy is a class of political system in which governance structures and processes are deeply data-driven. In these systems, humans (or other actors to which they ascribe political rights) still play a conscious and deliberate decision-making role, but they are framed, buttressed, and evaluated on all sides by data and computational augmentation.

Datocracy is the natural home for practices such as A/B testing and where algorithms have an explicit and important role supporting human discourse and decision-making.

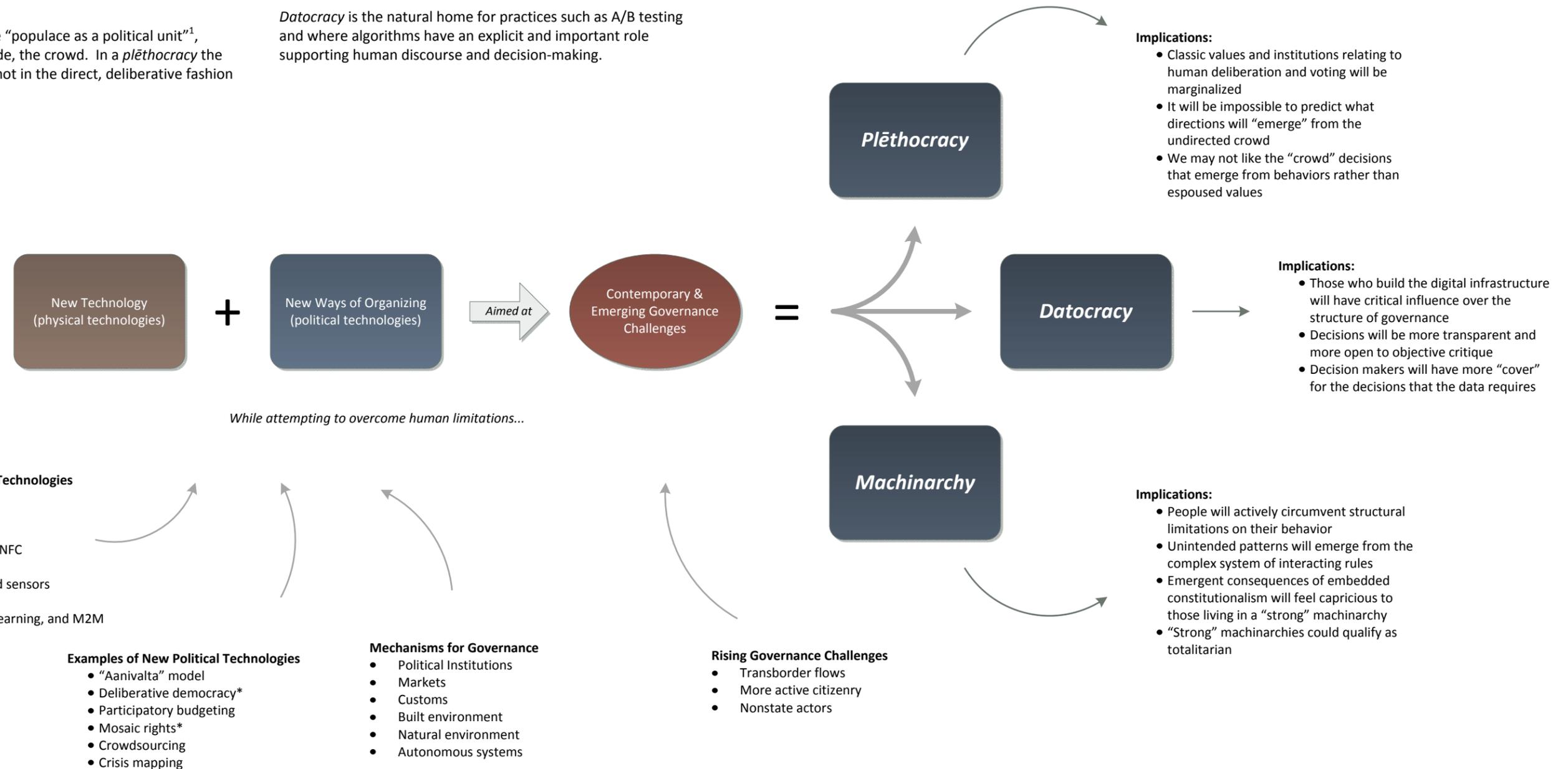
Machinarchy

Machinarchy is a system in which the constitutional order is embedded in the built environment. The day-to-day role of human political actors is removed, replaced by the pervasive, unceasing, yet potentially adaptive steering of behavior through the built world of buildings, objects, and code. These are the systems in which machine-to-machine (M2M) communication and machine learning figuratively come to the fore.

If in datocracies “machines” augment and buttress our political capabilities and performance, in machinarchies they collectively govern society day-to-day.

What all three of these models have in common is their attempt to use technology to overcome the inherent limitations of boundedly rational human beings. When we consider the boundary-crossing and complex challenges that societies face today, we quickly realize the problem-solving limitations of individual and collective human deliberation.

While future governance systems are likely to combine elements each of these systems rather than being pure forms, these models provide designers with useful starting points for fundamentally rethinking what constitutes governance and the role of human and non-human agents.



¹ New Oxford English Dictionary