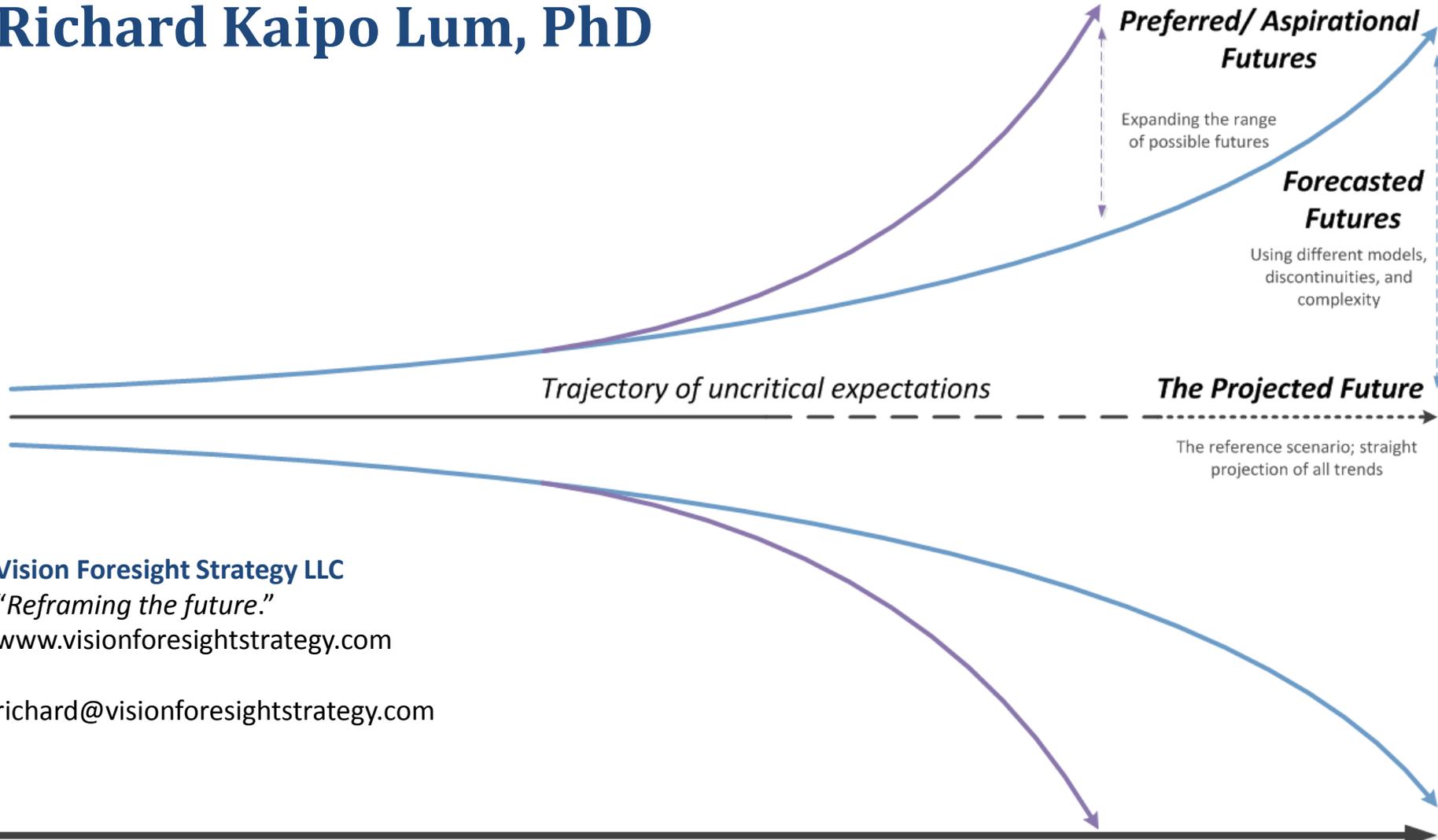


Scenarios, Black Swans, and Assumptions

A futures approach to anticipating conflict and cooperation in the
Asia-Pacific Region

Asia Pacific Center for Security Studies
APCSS, April 27, 2015

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“Reframing the future.”

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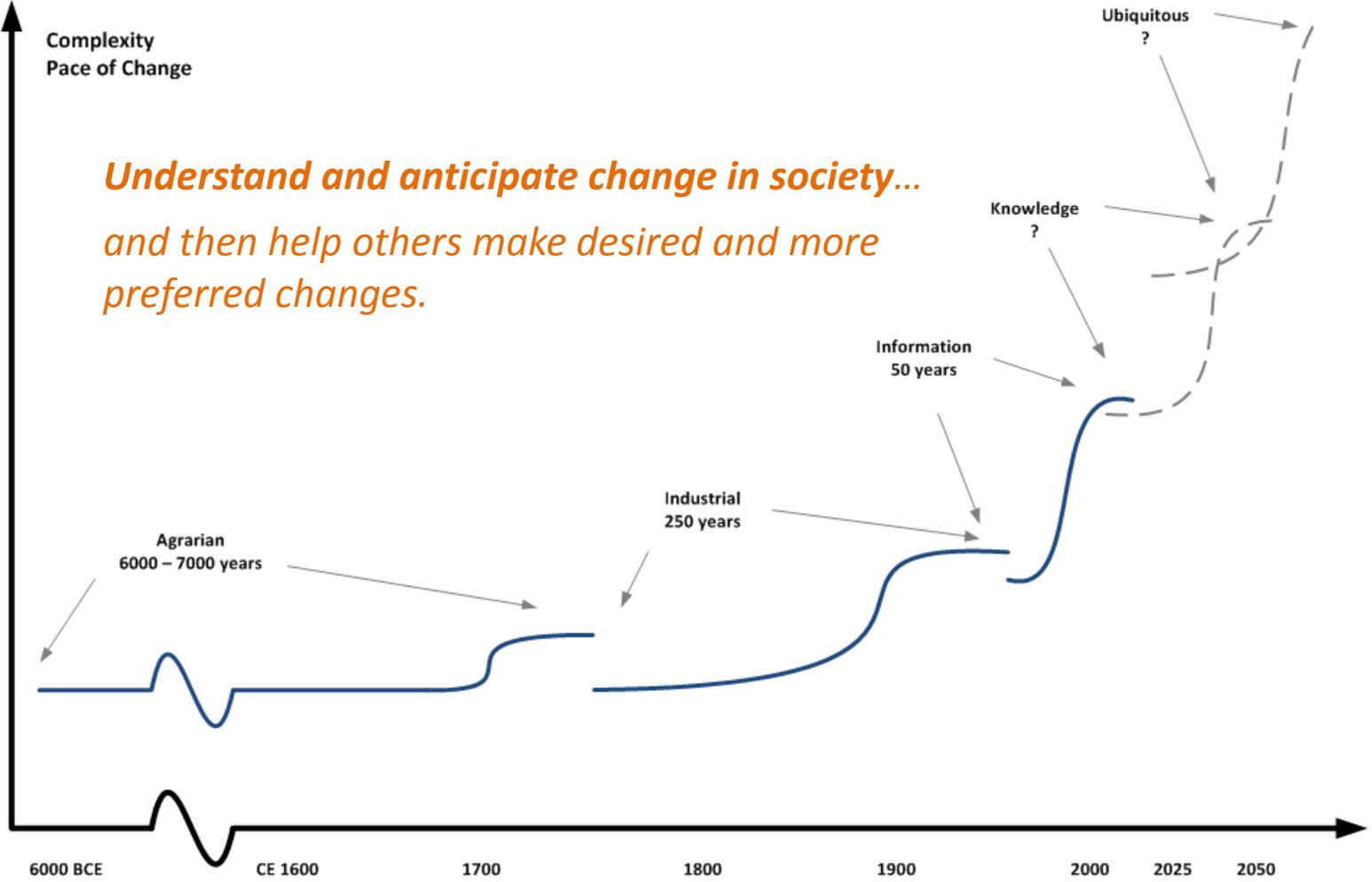
“No problem so persistently defies our skill at drawing boundaries as the problem of the future, and no problem presses quite so hard on our intellectual horizons.”

Objectives

1. Consider the role of images of the future
2. Look at assumptions and black swans
3. Explore different scenarios
4. Think about opportunities for collaboration

Understanding and anticipating change in society

FUTURES STUDIES

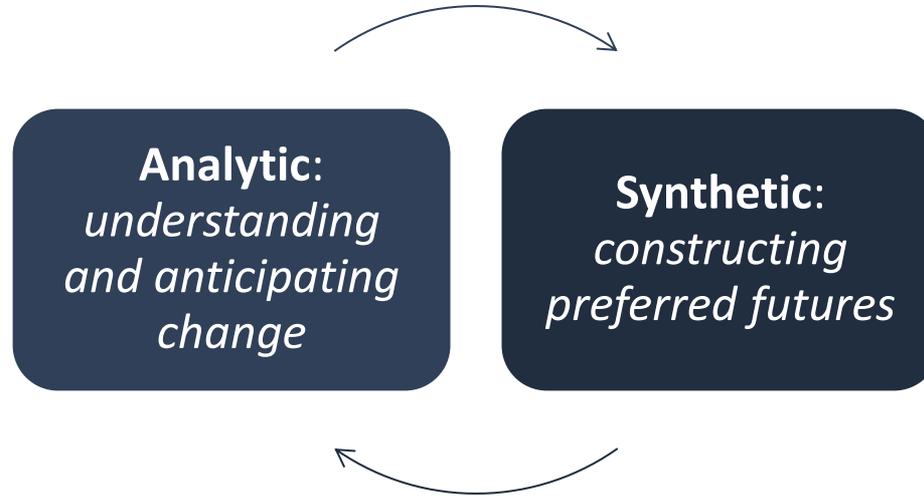


*Understand and anticipate change in society...
and then help others make desired and more preferred changes.*

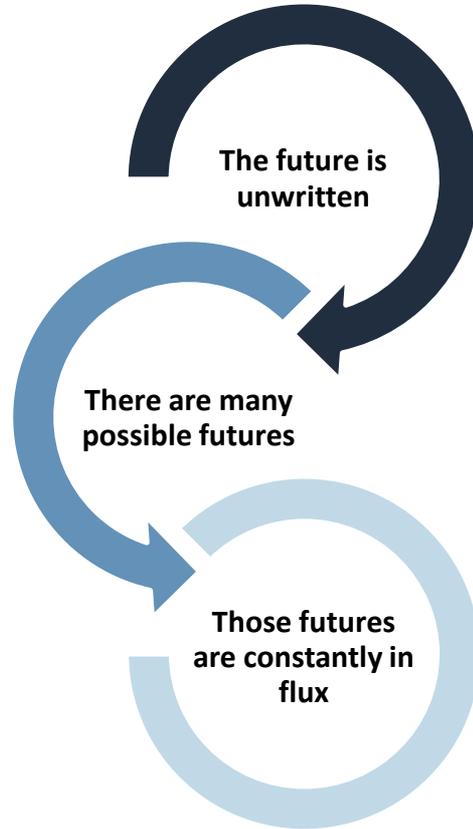
Adapted from A. Tuominen and T. Ahlqvist, 2010

“...system-changing, disruptive events are far more common than most people imagine... And yet most businesspeople behave as if they live in a continuous environment, as if their business plans and projections are going to be relatively linear.”

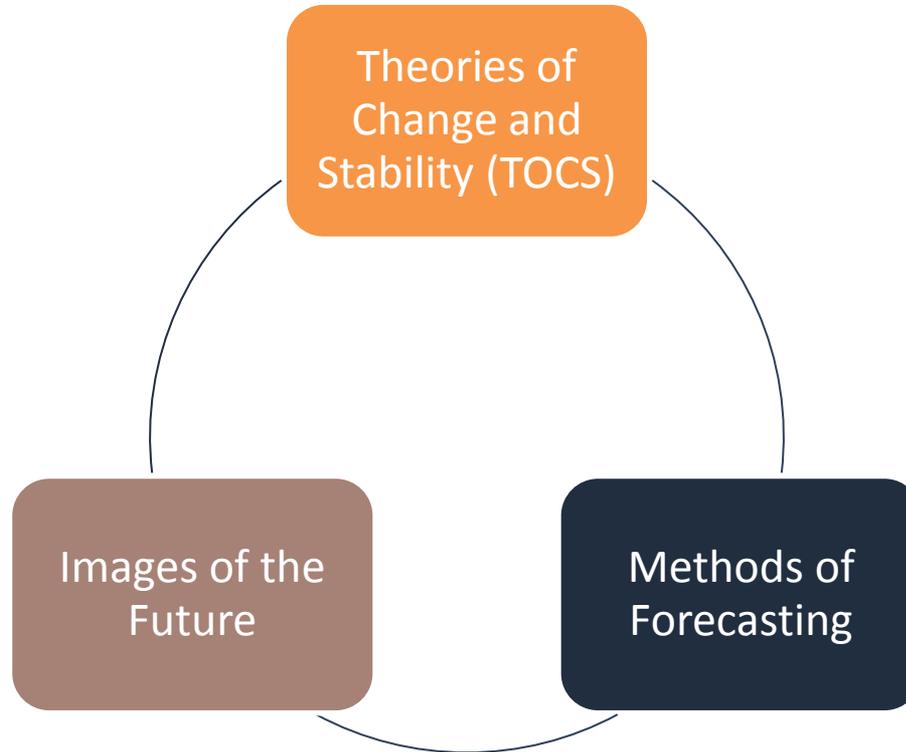
Two Complementary Aspects



3 Core Futures Precepts



3 Main Elements of Practice



Foresight:

*Insight into how and why the future
could be different from the present.*

IMAGES OF THE FUTURE

*“Awareness of ideal values is the first step in the conscious creation of images of the future and therefore in the conscious creation of culture, for a value is by definition that which guides toward a “valued” future. The **image of the future** reflects and reinforces these values.”*

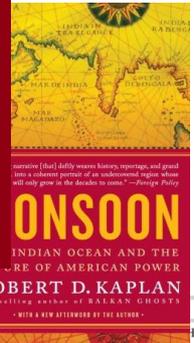
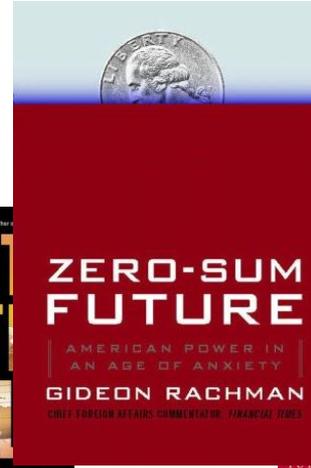
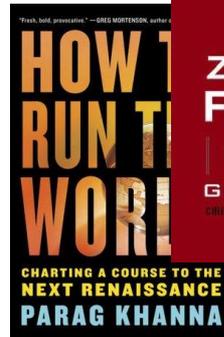
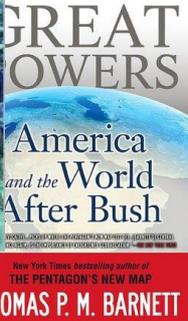
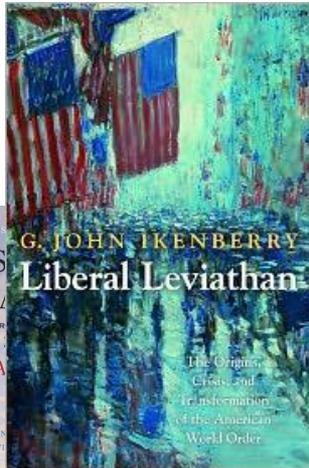
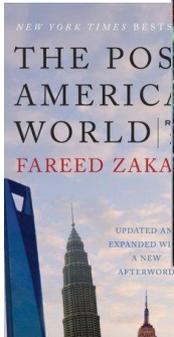
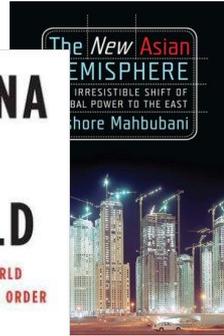
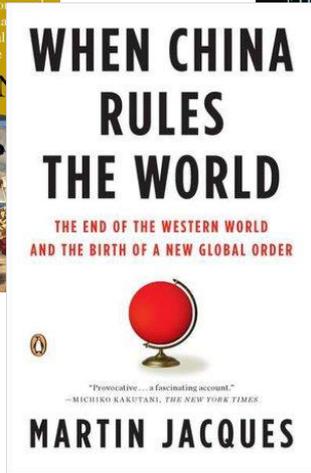
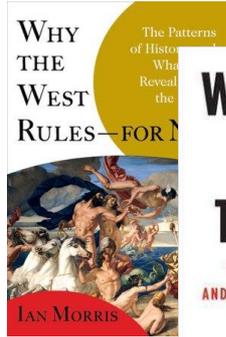
The Dominance of Imagery



Images of the future frame expectations and priorities



Dominant images reveal the conflicts that decision makers *expect* and thus *foster*



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 image 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 nonrepresentative 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.

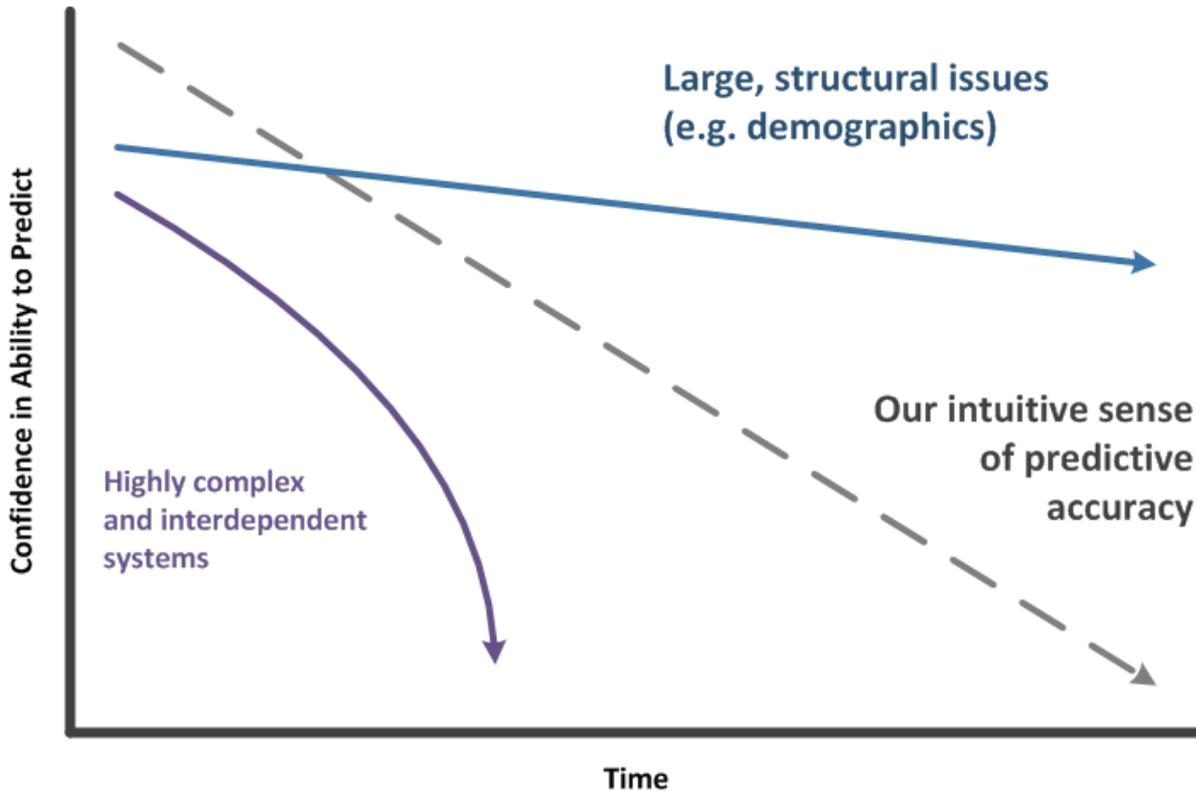
This image encompasses the various “new middle ages” analogies that have periodically gained ground since the 1970s. The stable, normalized society of sovereign states unravels, leaving behind multiple forms of polities with a new multiplicity of cross-cutting identities, loyalties, and power relationships.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



Assumptions about how the world works

BLACK SWANS

Confidence and Prediction



Types of Surprises

- Blind Spots: places where you're not looking
- Black Swans: low probability, high impact
- Wild Cards: random, external to the domain



The classic black swan

The fragility of knowledge and the limitations on our ability to use experience and past observations to *know* the future.

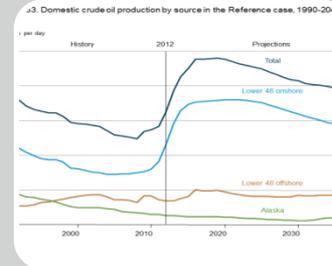
Real Life Black Swans



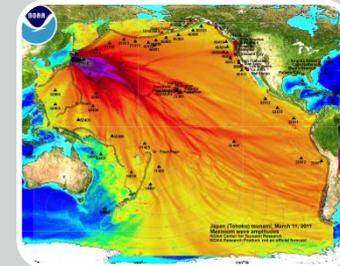
Fall of
USSR



East Asian
financial
crisis

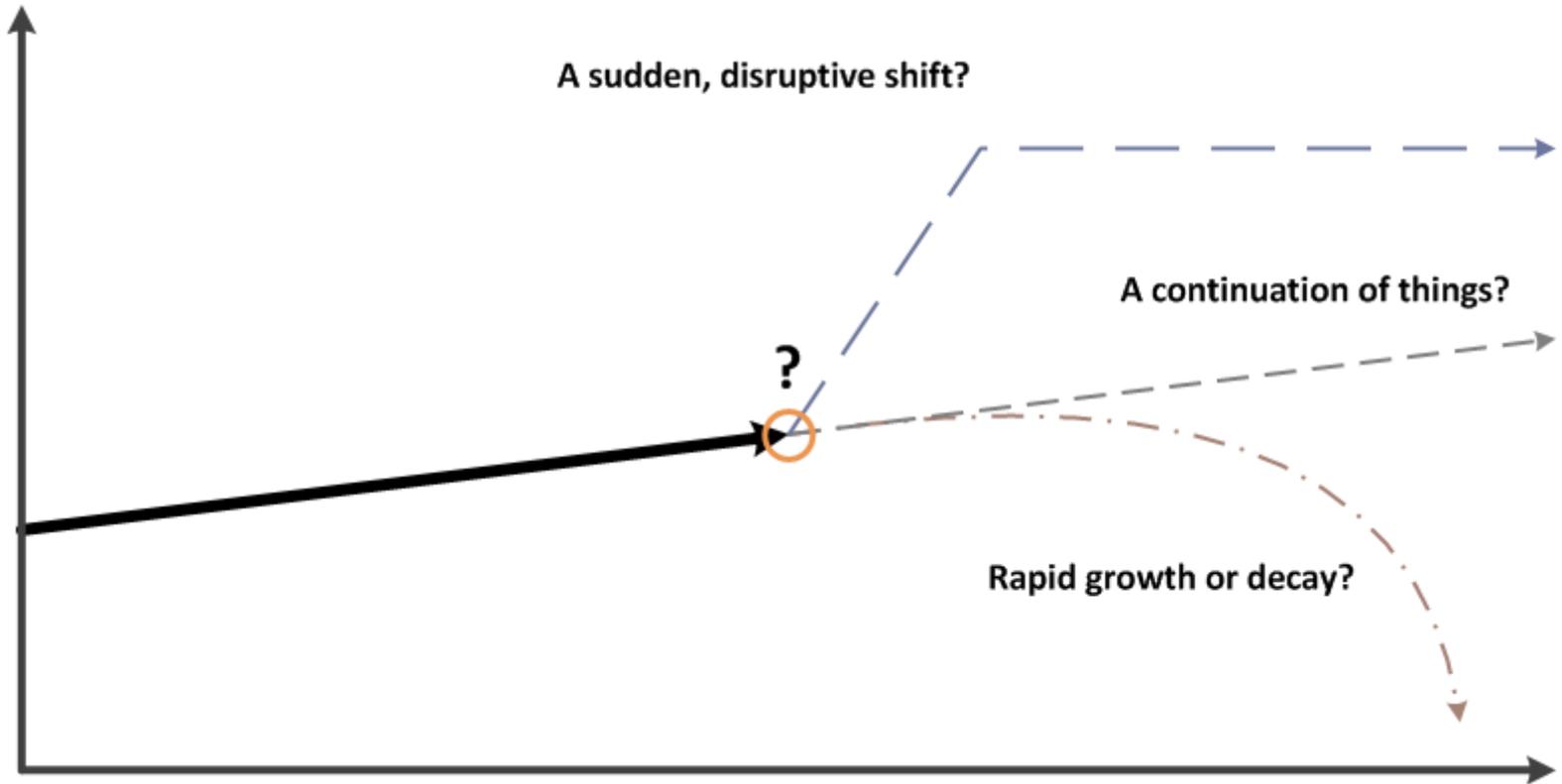


US
fracking
revolution



2011
tsunami
and
Fukushima

Disruption and Discontinuous Change



Assumptions/
Perceptions



Blind Spots

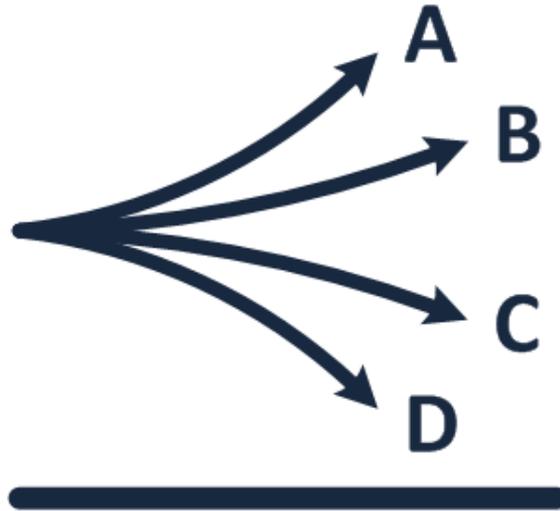


Vulnerable to black
swans

Exploring the many possibilities that are our futures

SCENARIOS

Scenarios: *Possible Futures*



Descriptions of alternative possible futures.

Different Uses for Scenarios

Forecast Possibilities



- *Moving forward from the present*
- Miss the complex dynamics of the real world
- Miss the developments and emergent patterns that models *can't* predict

Provoke New Thinking

- *Leap to the future*
- Allow us to consider possibilities that linear reasoning won't reveal
- Enable us to consider things outside of standard models

Carnegie Scenarios

Most likely

Least likely

Status Quo Redux

- Constrained but ongoing economic and political competition alongside continuing cooperation in the Asia-Pacific region.

Asia-Pacific Cold War

- Deepening regional bipolarization and militarization, driven by a worsening US-China strategic and economic rivalry in Asia

Pacific Asia-Pacific

- Increased US-China and regional cooperation and tension reduction

Asian Hot Wars

- Episodic but fairly frequent military conflict in critical hotspots, emerging against a cold war backdrop as described in the Asia-Pacific Cold War scenario

Challenged Region

- A region beset by social, economic, and political instability and unrest separate from US-China competition

Unpacking Assumptions

- Variables are classic macro-level elements from mainstream security discourse
- State-centric
- Issues like climate change relegated to least likely scenario
- Implicitly linear technology forecasts
- No consideration of technological revolutions

Upshot: Fairly Conservative Scenarios

While details change, the “security landscape” is always easily recognizable

The scenarios entertain no meaningful systems change

These were attempts at “forecasting” rather than “provocation”

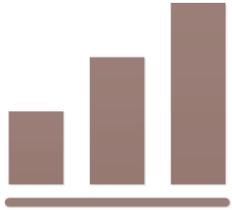


http://commons.wikimedia.org/wiki/Category:Jenga#/media/File:Jenga_distorted.jpg

Attacking Assumptions

Overtuning assumptions in order to explore for black swans and blind spots.

Futures Approach to Scenarios



Trends

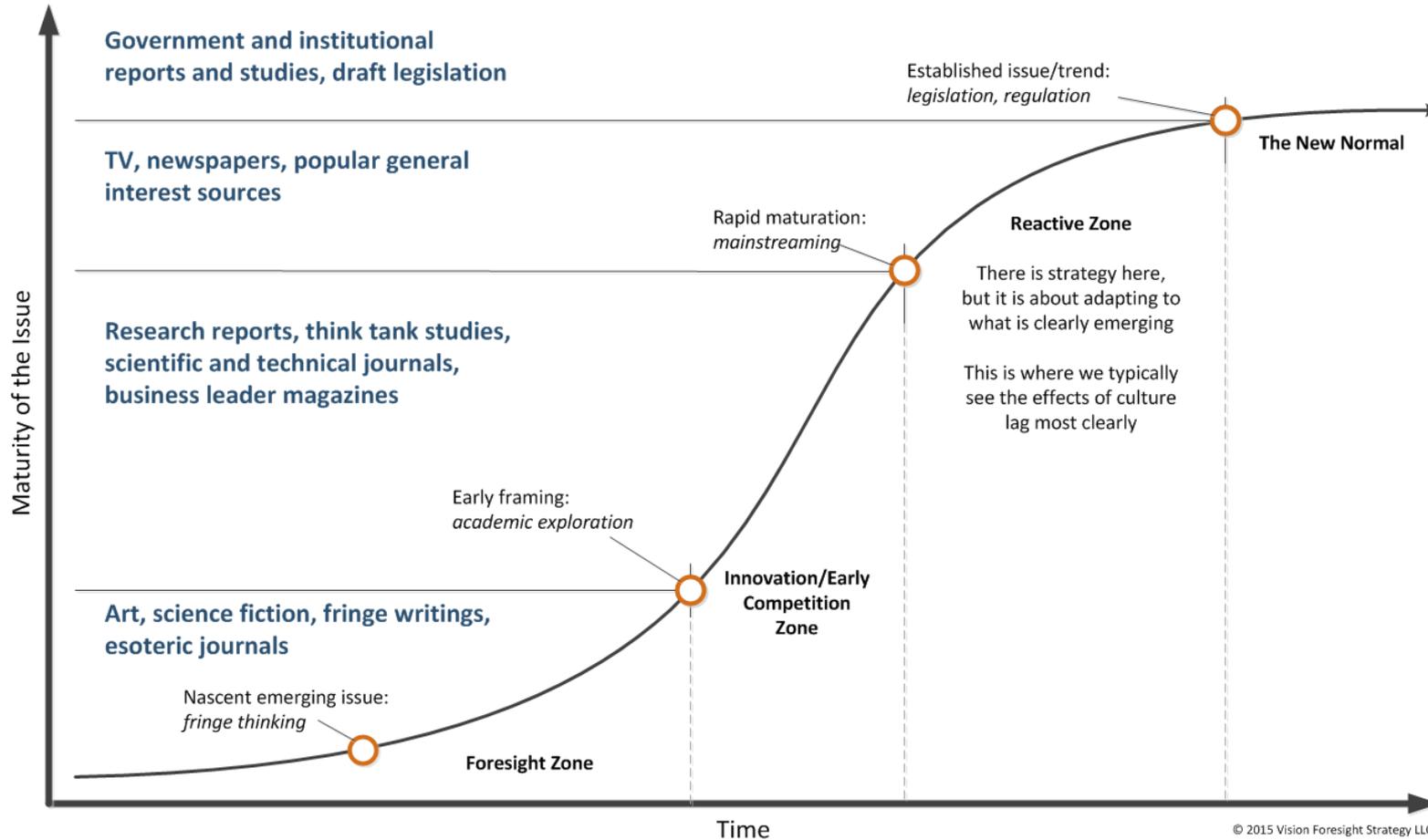


Emerging Issues



Theories of Change and Stability

Emerging Issues Analysis



A Sampling of Emerging Issues



Anonymous



Hybrid airships



Digital fab



Bioproduction



Cryptocurrency



IoT



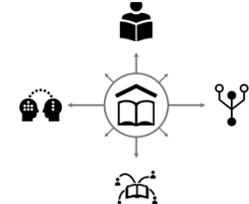
UAVs for HA



Cubesats



IBM Watson



Adaptive Learning

Targeting Assumptions

- Complex issues – *Confluence of Crises*
- Non-state actors – *Crowdsourced Order*
- Tech revolutions – *The Sixth Wave*
- Disruptive technology – *Quantum dark*

Confluence of Crises

A confluence of climate change, natural disasters, and non-state actors produce a fractured regional order.

- Climate change, IDPs, and refugees
- More frequent and severe events
- Rise in nationalism, protectionism
- Proliferation of violent non-state actors: insurgencies, piracy
- Rise of human trafficking, black markets; recruiting for VNSAs
- Still-stable states more forceful in closing their borders



Crowdsourced Order

Empowered non-state actors begin crowdsourcing a rules-based order in the Indo-Pacific.

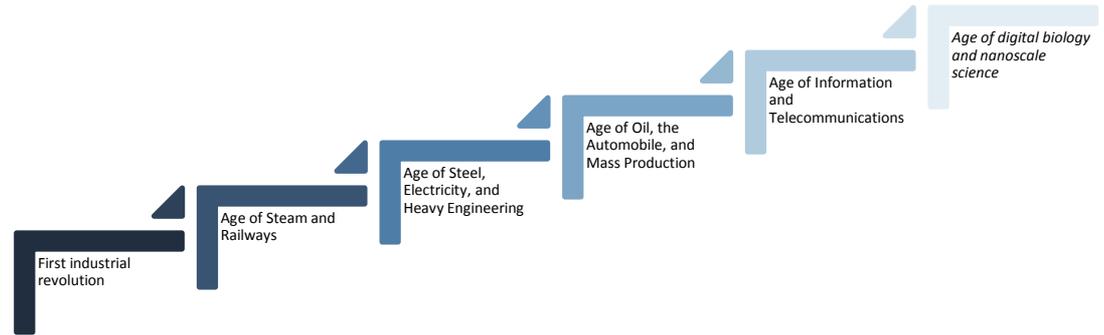
- Empowered, non-violent non-state actors want to exercise greater influence
- Competing Chinese and US agendas seen as destabilizing
- Proliferation of “DIY ISR” networks
- Open source, transparency
- Greater, more effective collaboration between NSAs than between states
- Crowdsourcing, crowdfunding
- Private companies solving complex social challenges
- Non-national, non-state navy



The Sixth Wave

A technological revolution of digital biology and nanoscale science rewires global economic life.

- Digital fab, bioproduction, and automation
- Powerful means of production diffuse across communities
- Nanoscale science enable cheap substitutions of precious metals
- Political economies of resource-rich states with poor governance are undermined
- Attempts at anti-technology repression, control of information
- Disruption to global industrial models, trade and shipping patterns, geopolitics



Quantum Dark

Cryptography and autonomous organizations create a new layer of social, economic, and political complexity.

- Quantum computing and cryptographic technology
- Smart contracts and distributed autonomous organizations
- Crypto-citizens, dark nations
- Dark tools proliferate across the developing world, serving BoP needs
- Corporations try to use dark tools to exert greater control over consumers
- Individuals, groups, and companies evade state surveillance and control



Anticipating – and shaping – future opportunities

COOPERATION AND CONFLICT

Shared Foresight and Multistate Cooperation

	Cooperation
<i>Confluence of Crises</i>	Shared challenges, interdependence; Creating regional resilience, anti-fragility
<i>Crowdsourced Order</i>	Extending capabilities and influence through NSA partners
<i>The Sixth Wave</i>	Leapfrogging economic well-being; Supporting development and diffusion of new economic models
<i>Quantum Dark</i>	Anticipating new hidden – and autonomous – layers of economic life

Towards New Images of the Future



Mahalo.