



IMPROVED FORECASTING THROUGH A DIFFERENT FOCUS

‘Is it the fault of paint and brushes
when we cannot paint like
Rembrandt?’

A world map is centered in the background, rendered in a light blue color against a darker blue grid. The map shows the continents of North America, South America, Europe, Africa, Asia, and Australia.

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- The Issue & Some Quotes -

- “The scientific method as we normally use it no longer works because almost everything is significant.” — Alex Pentland (MIT)
- “70 to 80 percent of the results found in the machine learning literature...are probably wrong...[researchers] didn’t have a dialogue between intuition and the causal processes that generated the data.” Alex Pentland, 2012 (Emphasis added).
- “All models are wrong.” Frans Valk (GE Risk)
- “Intuition is nothing more than recognition.” Kahneman 2011 (Nobel Laureate)

- A Few Quotes More -

- “Intuition is nothing but the outcome of earlier intellectual experience.” Albert Einstein (Isaacson, 2007).
- “all models are at bottom tools for approximate thinking...the important question...about any model is how wrong it is likely to be, and how useful it is despite its assumptions.” Madigan (PWC).
- “THE [CURRENT] CHALLENGE IS TO FIGURE OUT HOW TO ANALYZE.” Pentland 2013 (Emphasis added)

Actually, that Last Quote is Wrong; ...and VERY Concerning.

- The challenge is getting better in the realm of human synthetic and syncretic (changing forms) judgment about specifically embedded and entangled systems
AND
- Integrating insights of technical/arithmetic methods.
- For human-involved systems, that means holistically judging how different 'bias systems' play in particular – not statistically general – cases and their contexts.

For NORMAL Futures Foresight and Forecasting, excellence involves....

- Synthesis (not merely analysis): Deep & broad “knowledge of the board,” “patternist” thinking, intuition, insight & seeing how things are embedded and entangled as “syndromes.”
- Focusing on the ‘change processes’ of different bias systems → How THAT SPECIFIC syndrome responds to change pressures.

For EMERGING CRISIS (LSLIRE^{Herget}) Foresight and Forecasting, excellence involves...

- Seeing likely syncretism (changing forms) in a specifically embedded & entangled syndrome.
- Knowing – during & post crisis - ITS resilience profile: What it seeks to protect, how, why, and what it permits to change (or cannot stop from changing). Examples: USA 'just in time firing' mindset. Israel's reaction to Intifada.

WHY?: Nobody has an 'average' heart attack...or financial meltdown.

- Human-involved systems are not “free.”
- Their past, present & futures - their crises - are contextually specific, particularly embedded, entangled and emergent phenomena.
- Poland = “An attempt not to speak German.”
- Approximate thinking tools do not get you to a specific understanding of their particular futures.

On Leveraging the Great Advances in Technology & Arithmetic Capability...Correctly:

- On the current love of models: “Science is like a drunk looking for his keys under a lamppost because the light is better there.” David Lazer (Quoted in Weinberger 2011).
- “a multiple agents based model is only an adjunct for what the analyst has in mind.” Illachinski 2007
- ‘Big data’ (everything) is simply too confusing
→ Don’t run multiple models to get best ‘fit’.

Our Broad Discussion Goals Are:

- Illuminate why someone usually 'gets it right' when the mass of experts / analysts fails. = What are they doing differently?
- Address some core problems with a 'big data' analytics & model-centered approaches in gaining good FUTURE change foresight.
- Give YOU some tools (and tasks) to get better.

The Key Words were “has in mind” That Means...

- Improving YOUR individual capacity to assess and judge well, which is at least as important as our new technological and arithmetic advancements.
- In fact, forecasting models have about a 100% failure rate when something foundational is changing in the operational environment: SOME People don't.
- Overreliance on models seems to be getting worse.

• Dr. Kevin Madigan 2013 (PricewaterhouseCoopers).

Three Specific Goals Address:

- How to use CURRENT information and analysis systems / approaches better to understand emerging futures. (Review of that “Paint and Brushes” quote).
- Holistic knowledge about normal change processes within/among societies to foresee / forecast system-specific crisis emergence.
- System-specific resilience profiles to judge normal → post-crisis “old water flowing in new banks.”

Operational Best Practice involves:

- The synthesis, in the mind of one person, of a proper “Knowledge of the Board.” Kahneman, 2011
- Joining technical-arithmetic tools with insightful wise human judgment → Building ‘String.’ (See Kant)
- Building String means: INTERNAL ↔ EXTERNAL holistic logics → HOW & WHY is THIS PARTICULAR system thusly Entangled, Embedded, Emergent?
- Using mainstream FAILURE as a crisis timing tool.

- The “New” (Old) Upshot -

- Wise assessment always WAS holistic. Contra the claim of a “new” ‘Big Data’ generated problem.
- Pentland’s 2013 “almost everything is significant” comment YIELDS a syndromes view of change and futures requiring a dialogue with the creation of data
- Madigan (PWC) recently commented that he was unsure whether assessment has improved overall with all the math and models. See also Aristotle.

We are Somewhat ‘Barking up the Wrong Tree’ ... Again.

- ‘Big Data’ as “Encyclopaedism” revisited.
- Defined as “...the rhetoric and techniques of comprehensive compilation” (König and Woolf, 2013)
- The Arithmetic (atomism-randomness-math) vs. Sociology (embedded whole systems) issue revisited.
- The answer is not either/or...But a nuanced BOTH.

Why?

- Because each method gives only one imperfect (wrong) view. Every arithmetic and qualitative method is 'wrong', yet useful despite its faults.
- Because the problem is not getting all the data, but wise synthesis / syncretism of information at hand.
- Because endlessly looking for a better technology (paint and brushes) is a waste of time if you cannot paint wonderfully → LEARN TO PAINT BETTER.

LSLIRE/Black Swan Assessment Background Reading

- Werther, Guntram, with Thomas Herget. 2013. *Recognizing When Black Swans Aren't: Holistically Training Management to Better Recognize, Assess and Respond to Emerging Extreme Events*. Society of Actuaries Monograph.
- Werther, Guntram. *When Black Swans Aren't: On Better Recognition, Assessment and Forecasting of Large Scale, Large Impact, and Rare Event Change*. Risk Management and Insurance Review, 2013, Vol. 16, No. 1, 1-23.

What is a Black Swan vs. LSLIRE?

Black Swan



Probably Not



For Most Crises: It's "When in the Course of Human Affairs" NOT 'When Random Stuff Happens.'



Ideas, goals, WAYS, actions (and technologies) have foreseeable human affairs consequences.

Modern Tribal Conflict...



Hezbollah Drone over Israel



Where did THAT come from?

Maynard Hill flies his model aircraft across North Atlantic.

New things get “repurposed”



Gain Deep Understanding of How
Things Work → Internal Dynamics



Some Core Problems With Big Data

- Events have ‘internals’ as well as ‘externals.’
- “There’s models all over the place.” in Silver 2012
- Need to make sense of numerous patterns Pentland

A Result → “Big Data Shrinks to Grow” Quentin Hardy, NY Times, Jan. 1, 2014

What is the Better Way?

- How did earlier judges of human affairs get it right without computers, advanced math etc.?
- How current serially CORRECT experts do it.
- LAST, how do we USE the fact that most people will miss the next LSLIRE emergence?

Lessons Of Successful 'Old Guys':

- Foreseeing Path, Thread, String, Enabling Logistics... and “old water flowing in new banks” in foresight.
- What did Kant, Berlin, Hayek, Tocqueville (and many other ‘classic’ thinkers)...on down to Confucius, Buddha etc. have in common? → “Experience” → String, thread, path, way → Example: Hayek on path.
- Example: Kant’s *Critique of Judgment* links empirical evidence to idea (concept) by way of JUDGMENT.

Some Lessons Of Successful 'Contemporary Era' Serial Judgment:

- Nate Silver's comments on weather forecasters...Use technology plus experience plus constant re-judging.
- Kurzweil's enabling logistic, Berlin's beyond analysis experience & Kahneman's Knowledge of the Board.
- Wall Street Journal's 'Best on the Street' forecasters.
- How Rick Rescorla 'gets' both WTC AND 9-11 when the Intelligence Community does not.

GOOD NEWS: Most Experts and Probably
ALL Models WILL MISS the Next LSLIRE

- How do YOU use that HIGH probability (fact?) to your comparative advantage?
- Analyst COGNITIVE dissonance, model failure dynamics, and modern best practice.
- Since the ONLY THING YOU CAN BE SURE OF is that most models and analysts WILL MISS CRISIS EMERGENCE → Study dissonance!

The Way Forward?

- Repeat best practice holistically synthesizes formal arithmetic and human evaluation via judgment.
- It is syncretic, focusing on how/why syndromes change in their particular way (their specific embedded and entanglement features in action)
- Success is multiple disciplinary and multi-perspective (within BIAS system), experiential (intuitive) thinking.

This Conclusion Ought to Change...

- How we train people in the risk and futures forecasting professions (universities, etc.).
- How you practice at the higher levels of competence → Models are only tools.
- How we 'do' intelligence gathering and assessment of systems' change & futures.

How Do We Know?

- The current mainstream methods keep failing when we need them most: “Our methods worked until the didn’t.” Kutner 2011
- 60-70% of the machine learning (big data) conclusions are “probably wrong.” Pentland 2012
- We too often fail to listen to, and often punish, correct people while following the above off a cliff.
- People who get it right repeatedly exist, and they exhibit common characteristics, orientations and behaviors.

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Any Discussion?

- Thank You -