



Navigating the Fog: A Research Agenda for the Land of Unknowingness

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How is strategic management useful in a world of uncertainty, Knightian & otherwise?

- My Confusion
 - Which of the many concepts and definitions of “uncertainty” are most useful?
 - What are the distinctive contributions of strategic management?
- A claim that it is fruitful to bring these concepts together by ...
 - Considering Risk and KU as separate dimensions that define “uncertainty regimes” facing boundedly rational decision-makers.
 - Focusing on strategic management as a system-level understanding.
- A Tentative Research Agenda that might spur discussion
 - Pragmatic ways to identify (strategic and non-strategic) decision-making approaches and assess whether they vary over uncertainty regimes.
 - Potential ways to graft, link, and possibly integrate different perspectives.





Terminological Confusion: How do the many definitions of “uncertainty” relate?

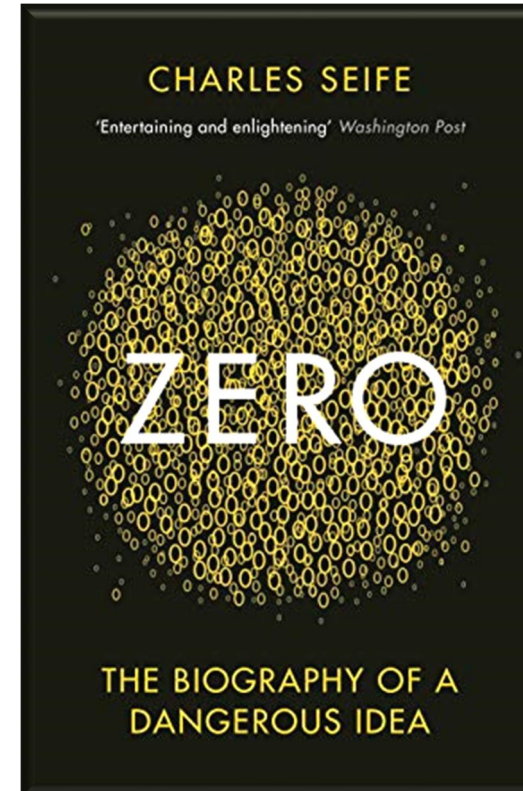
- Arend (2024: 250) lists over two dozen labels for ignorance and uncertainty (e.g., variability, unpredictability, uncontrollability, primary uncertainty).
- Apply “Unknowingness” as an umbrella term and focus on
 - “**Risk/Uncertainty**” as the objective probability of realized outcomes (c.f., Risk).
 - Knight distinguishes uncertainty from risk (where outcome probabilities are known) & argues that uncertainty is the source of entrepreneurial profit.
 - **Ambiguity** is a situation where there are conditional outcome probabilities.
 - Nishimura and Ozaki (2007) develop a model with “boom” and “slump” periods each with distinct outcome probability distributions.
 - “**Knighian Uncertainty**” where outcome probabilities do not objectively exist.
 - “Entrepreneurial judgment is decisive action about the deployment of economic resources when outcomes cannot be predicted according to known probabilities” (Boss & Klein, 2012: 38).



Definitional Confusion: Is it more fruitful to think about KU as a discrete or a continuous concept?

KU as a Discrete Concept

- KU as a label for contexts where it is impossible to assign probabilities because the situation “...is in a high degree unique” (Knight, 1921: 118).
 - If one cannot write a distribution, there is KU.
- Implications
 - Does this imply we treat KU as a limiting condition? As an extreme case of “unknowingness” (like zero or infinity on a number line)?
 - Does this inform thinking about assessments involving KU (c.f., like division by infinity)?

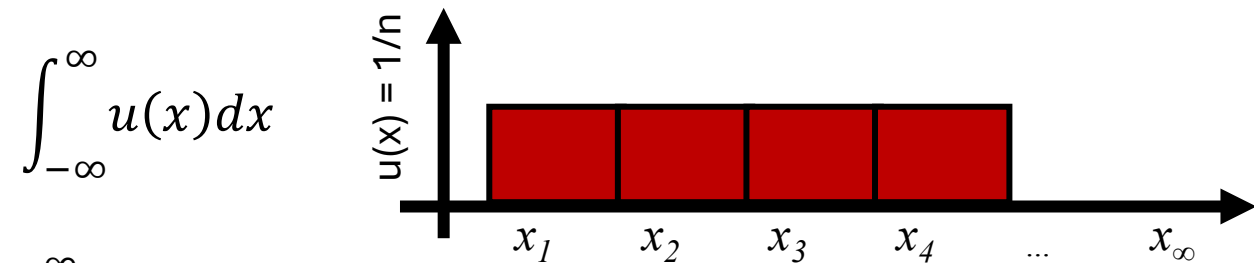


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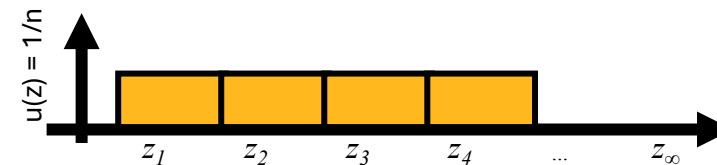
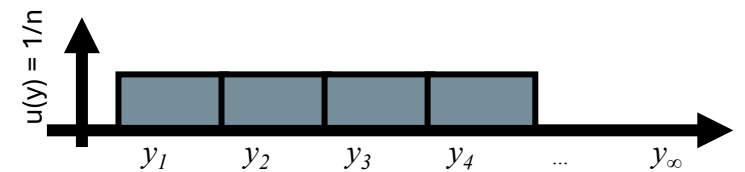
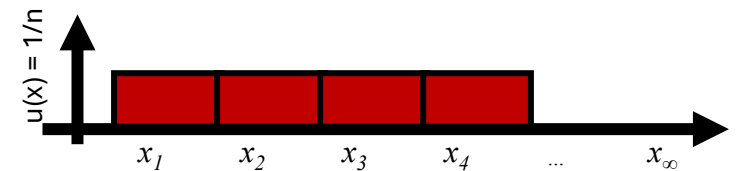
Definitional Confusion: Is it more fruitful to think about KU as a discrete or a continuous concept?

KU as a Continuous Concept

- KU as a label for contexts where it is impossible to generate a prior.
 - A uniform distribution with infinite bounds, e.g., $\text{Prob}(x_i) \rightarrow 0$ as $i \rightarrow \infty$.
- As a label for contexts where it is impossible to even state a dimension of interest.
 - Boom or bust conditions to ∞ conditions. dimensions (boom or bust conditions).
- Implications
 - Are we clear about our definitions?
 - Does a continuous representation lead to thinking about dimensions of ignorance?

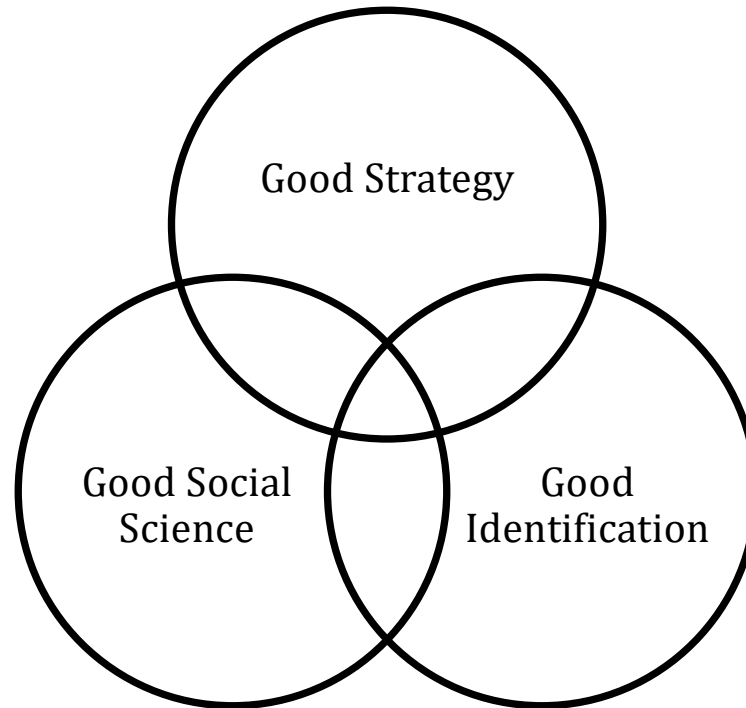


$$\iiint_{-\infty}^{\infty} u(x, y, z) dx dy dz$$





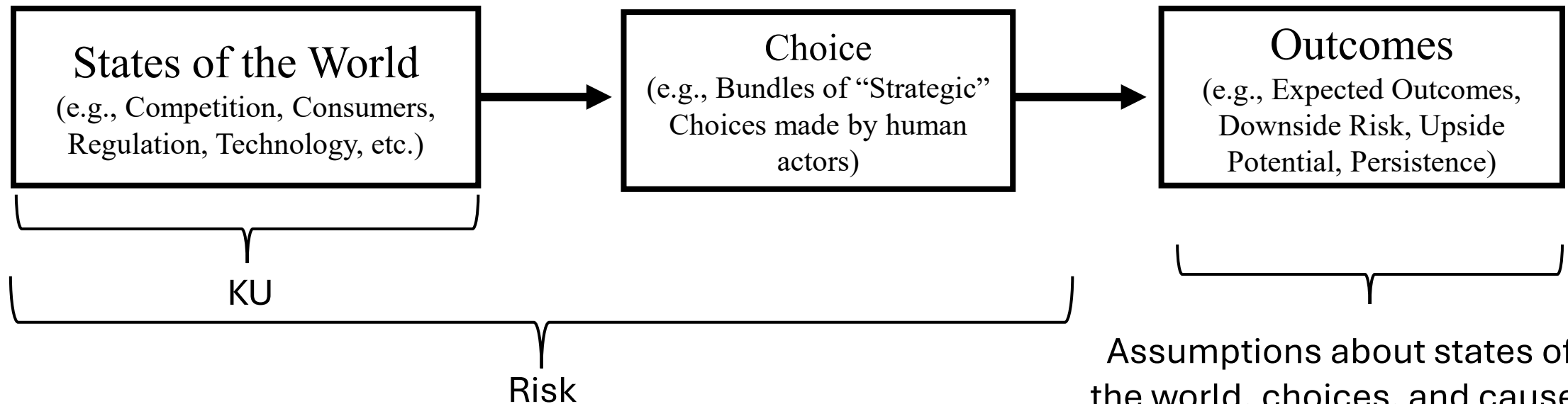
Strategic Confusion: What is strategic management's distinctive contribution to our understanding of KU?



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Assume a continuous measure of KU, driven by states of the world.

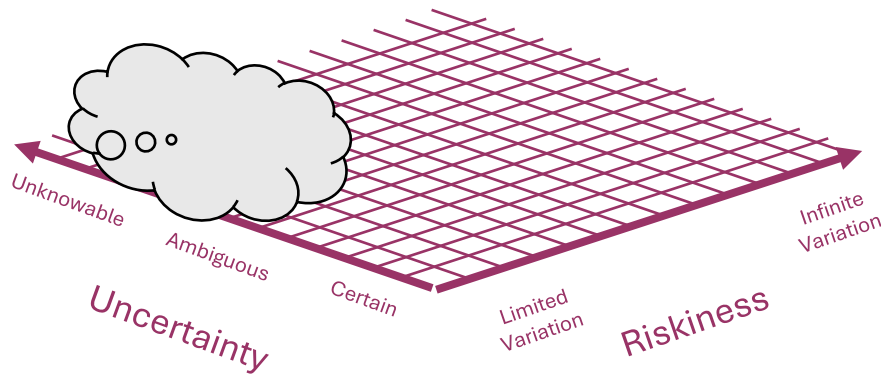


Assumptions about states of the world, choices, and cause-effect relations manifest in outcome variation



Claim that it is more fruitful to consider combinations or Risk and Uncertainty

Risk and Uncertainty as distinct dimensions of “unknowingness”



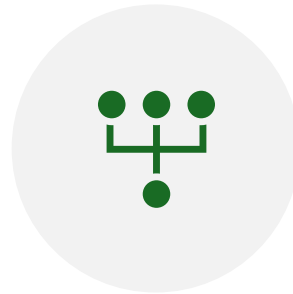
- Risk and uncertainty may simultaneously affect decisions.
 - A radical new product may face estimable risks (e.g., cost overruns or technical failures) and uncertainties (e.g., consumer acceptance or competitive responses).
- The distinction between risk and uncertainty matters (e.g., we observe different approaches being used).
- High uncertainty & low risk is infeasible
 - The limited Δ between max & min risk implies low uncertainty.



A claim that “strategy” offers a distinctive contribution



Canonical Problems
(e.g., Why do firms differ?)



Fundamental Tensions
(e.g., Should a firm make or buy a component?)



Decision Attributes (e.g.,
Commitment and/or
uncertainty implies
decisions are strategic)

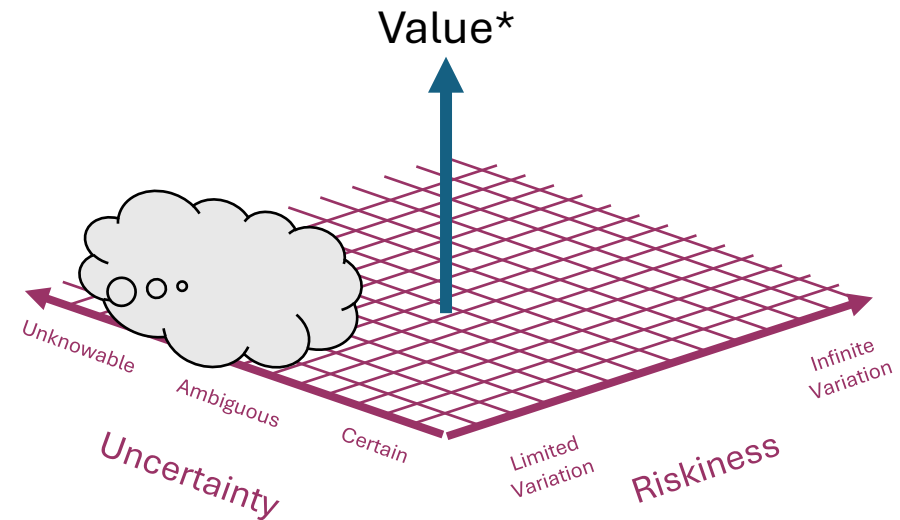


Strategy Tools
(e.g., Frameworks, mental
models, theories,
processes)



RQ 1: (How) Does value creation and capture** vary over uncertainty regimes?

- CAPM argues that variation in profit expectations (high risk) aligns with anticipated profits.
- The entrepreneurship literature often argues that Knightian (high) uncertainty explains superior performance.
- Are these confounding claims?
 - Can we identify *proxies* for risk and uncertainty to allow for comparisons in outcomes across uncertainty regimes?



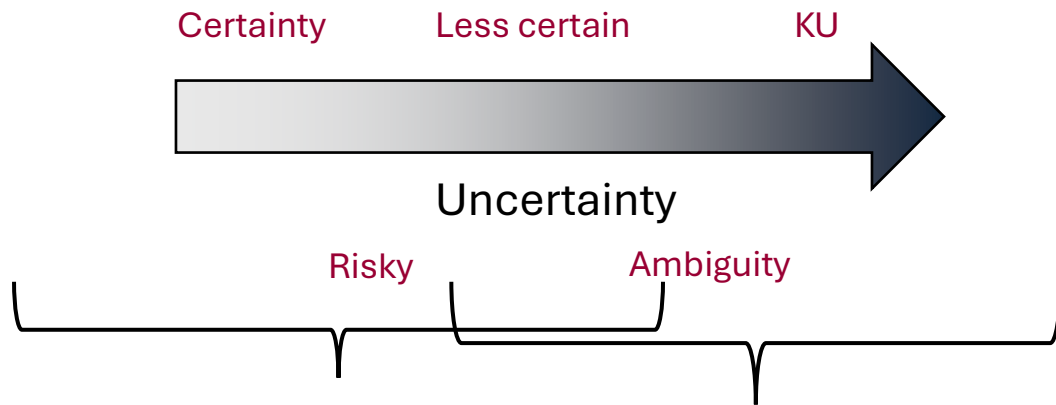
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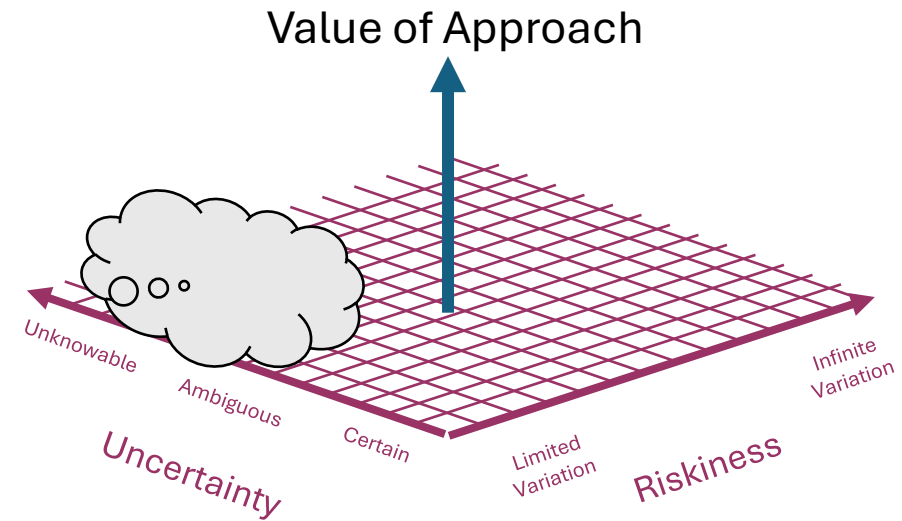
* See discussion in Ghemawat (2016: 11) regarding the value of deliberation as a function of commitment and “uncertainty.”

** In addition to notions of value creation and relative value capture, also consider measures of average performance, downside risk, & upside potential.

RQ2: Can we better map strategy theories and tools to uncertainty regimes?



Traditional Tools	“Strategic” Tools
NPV	RBV/SFM
Decision Trees	Real Options
Expected Utility Theory	Scenario Planning
...	...



Where are today's tools most valuable?

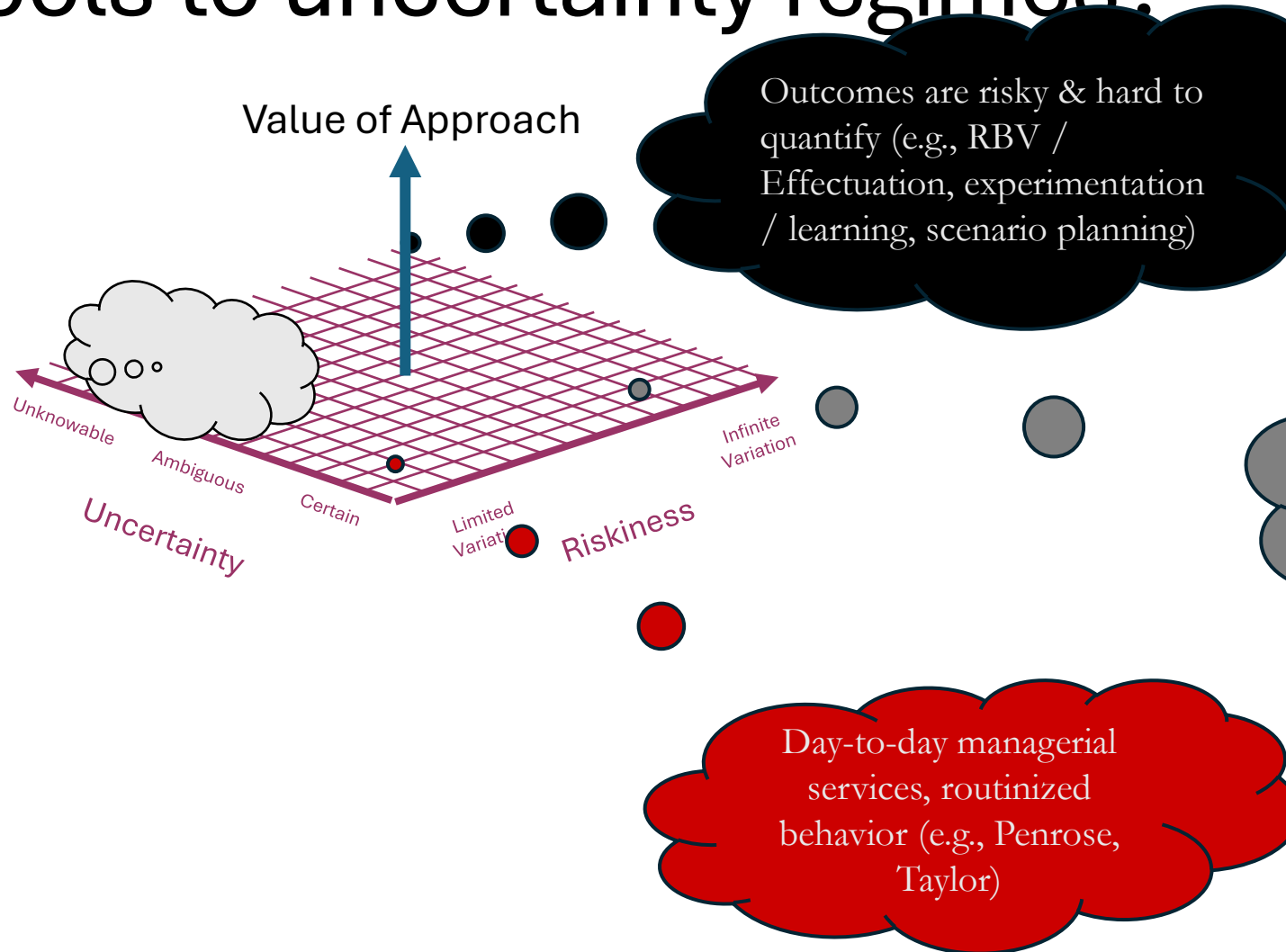


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* For example, the four levels of residual uncertainty in Courtney (2001) or discussions by Schoemaker (1993?)
** See discussion in Ghemawat (2016: 11) regarding the value of deliberation as a function of commitment and “uncertainty”



RQ2: Can we better map strategy theories and tools to uncertainty regimes?

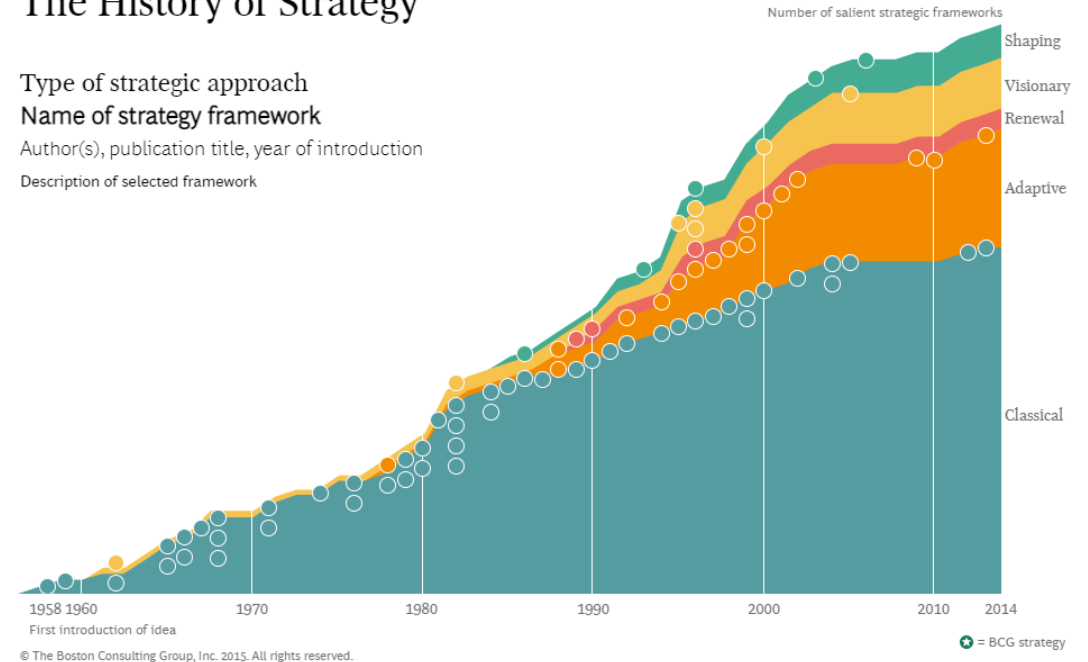


RQ 3: Can we map strategic & non-strategic frameworks to uncertainty regimes?

- Use policy capturing methods to assess whether “strategy” frameworks (because they require less quantified data) are more useful than “non-strategy” frameworks in certain regimes?
- Whether “dynamic” strategy frameworks more useful than “static” frameworks in uncertainty regimes characterized by higher risk/uncertainty?
- Whether the selection of frameworks affected more by familiarity (e.g., training, experience) or uncertainty regimes?

The History of Strategy

Type of strategic approach
Name of strategy framework
Author(s), publication title, year of introduction
Description of selected framework



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RQ 4: Can we better assess when to use different thinking approaches?*

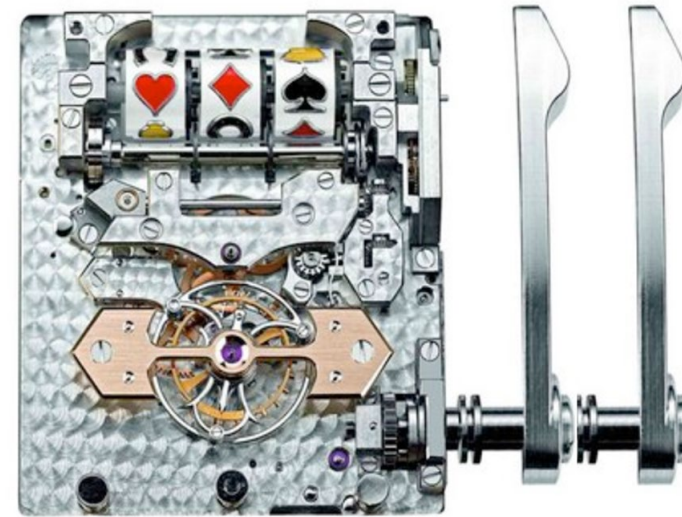
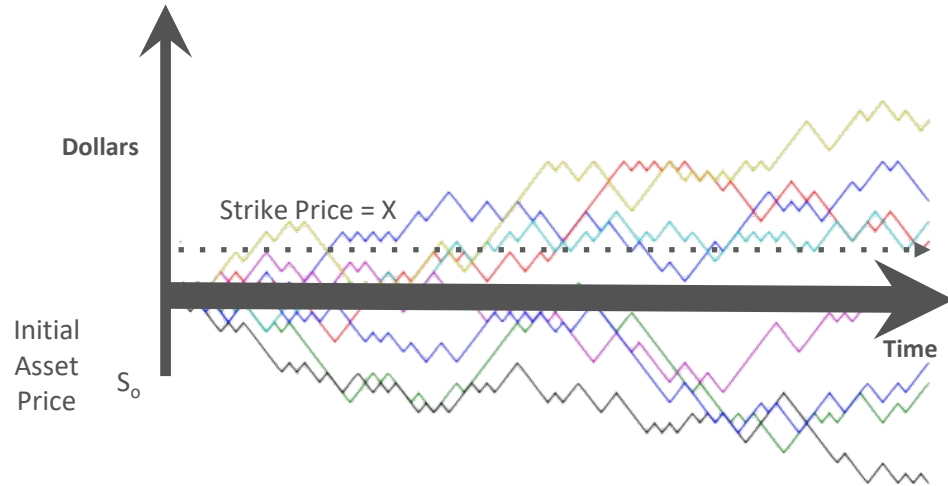
	System 1	System 2
Characteristics	Fast, effortless, unconscious, can be emotional, associative, looks for patterns, looks for causation, creates stories to explain events	Slow, effortful, conscious, can be logical, deliberative, can use abstract algorithms and concepts for analysis
Advantages	Speed of response in a crisis, uses heuristics, easy completion of routine or repetitive tasks, creativity through associations: Useful for routine situations	Allows reflection and consideration of the “bigger picture” options, weighs pros and cons, can use logic, math, statistics explores consequences: Potentially useful for novel and especially complex situations
Disadvantages	Injects many thinking traps (biases) into the decision process. Not so useful for novel and especially complex situations	Slow, can take a lot time, requires effort and energy that can lead to decision fatigue, depends on learned ideas and concepts of analysis Useful but slow

* System 1 and 2 thinking is used as an example of one comparison. A more pragmatic way of making this comparison may be between Barbara Minto’s (1981) logical approach and Kenichi Ohmae’s (1982) more flexible decision-making approach or any number of broader thinking interventions.





RQ 5: Can we recombine concepts via uncertainty regimes to build new theories?*



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* We don't address KU but have shown how prospective volatility and noise (PU & CU) affect decisions

So, how is strategic management useful in a world of uncertainty, Knightian & otherwise?

➤ Confusion

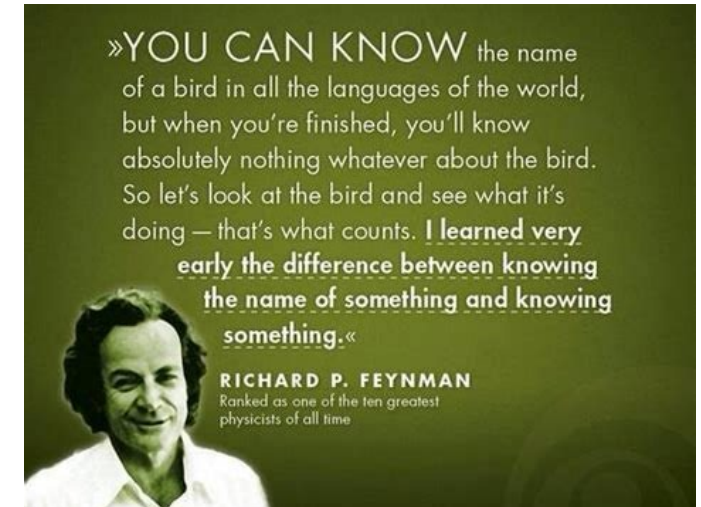
- Define then refine ... our understanding of “unknowingness” and strategic management

➤ Claims

- Uncertainty regimes may clarify what we mean by “unknowingness.”
- A holistic, system-level, perspective may help clarify strategic management’s distinctive contribution.

➤ Promise

- Taking our classic definitions and frameworks seriously suggests research questions and tests that highlight some of the distinctive contributions of strategic management.



**Thank you for
your time and attention!**

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