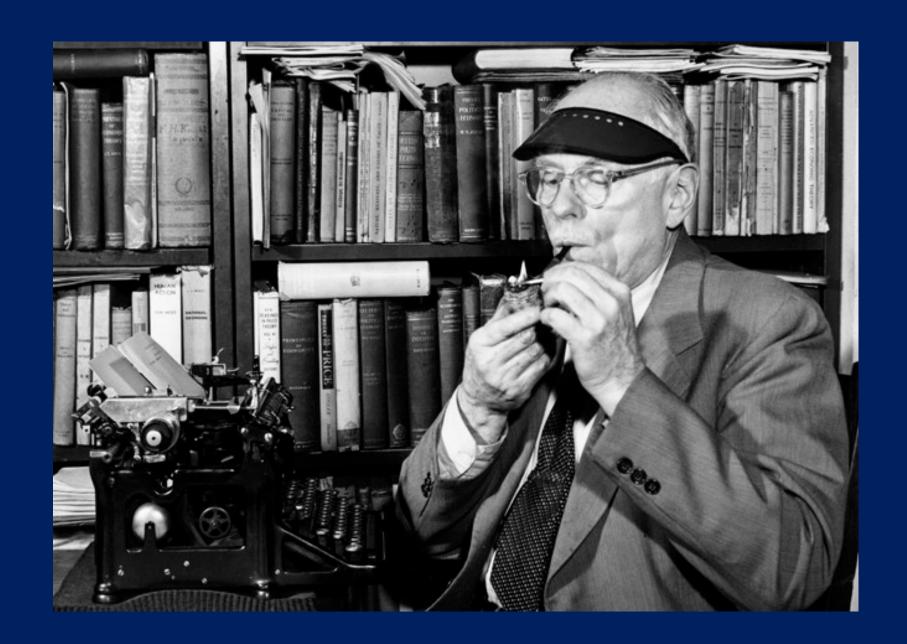
How is Strategic Management Useful in a World of Knightian Uncertainty?

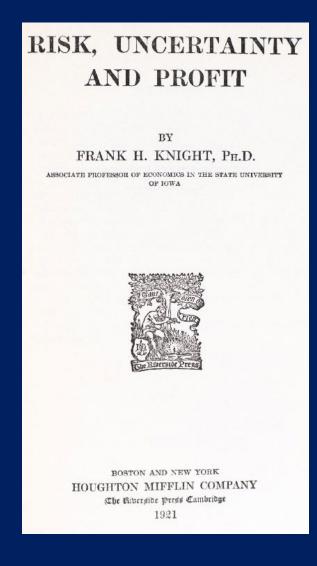












Ontological grounding of the argument (nondeterminism; the future is "inherently unknowable").

Classification as a key instrument of foresight (the basis of probability estimates).

When we cannot classify ("uncertainty"), we form an "image" of the future, base our actions on this image, exercise "judgment."

[CITATION] Risk, uncertainty and profit

FH Knight - 1921 - Houghton Mifflin





RISK, UNCERTAINTY AND PROFIT

BY FRANK H. KNIGHT, Ph.D.

ASSOCIATE PROFESSOR OF ECONOMICS IN THE STATE UNIVERSITY



BOSTON AND NEW YORK HOUGHTON MIFFLIN COMPANY The Riverside Press Cambridge 1921

[CITATION] Risk, uncertainty

FH Knight - 1921 - Houghton Mifflir

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gument (nonrently

nt of foresight es).

rtainty"), we base our actions nt."



Why care about KU?

Real-world decision-making (Kay & King, 2020); may have become increasingly important (Furr & Eisenhardt, 2021).

Insight into "outlier returns": Projects, investments, strategies that are engulfed by KU are partly shielded from competition because others are unaware of their return implications (or disagree).

KU **closely connected** to ideas on theories (Felin & Zenger, 2017), representations (Levinthal, 2011), or judgment (Foss & Klein, 2012).

What is it?

Subjective probabilities (Ramsey, Van den Steen).

Ambiguity (Ellsberg, Gilboa).

Unforeseen contingencies (Kreps, Dekel) / unawareness (Zeckhauser, Schipper).

The state space is created, not given (Shackle, Machina).

"No object Ambiguity Unforesee (Zeckhause The state s



nawareness

e, Machina).

What has been done?

General KU literature

More than **700** articles since 1921 (Dorabat, McCaffrey, Foss, & Klein, 2024).

Very heterogeneous litt (from highly technical attempts to e.g. reconcile KU w/ Bayesianism to verbal management litt.).

Strategy

Not much, yet; approx. 20 articles that explicitly talk about KU.

"Uncertainty is what uncertainty does."

Editors' Comments: Should Management Theories Take Uncertainty Seriously?

Sharon Alvarez, Allan Afuah and Cristina Gibson

EDITORS' COMMENTS: SHOULD MANAGEMENT THEORIES TAKE UNCERTAINTY SERIOUSLY?

The January 2018 issue of the Academy of Management Review included a call for papers for a new Special Topic Forum (STF) on the causes and consequences of Knightian uncertainty, titled "The Implications of Uncertainty for Management and Organization Theories." This STF will be coedited by Sharon Alvarez (University of Pittsburgh), Allan Afuah (University of Michigan), Giovanni Gavetti (Tuck School of Business at Dartmouth), Cristina Gibson (University of Western Australia), Joe Porac (New York University), and David Teece (University of California, Berkeley).

So why do we need an STF on Knightian uncertainty? In these Editors' Comments we suggest that while the concept of uncertainty has been important at various times in various management research disciplines, it has fallen out of favor in many of these disciplines. But both recent empirical and theoretical developments in these disciplines—and some practical realities that organizations face today—suggest that it is time for uncertainty to retake its place as a central concept in organization and management theory.

EARLY APPLICATIONS OF KNIGHTIAN UNCERTAINTY IN MANAGEMENT THEORY

As "Knightian uncertainty" suggests, Frank Knight (1921) was among the first social scientists to distinguish between risk and uncertainty. For Knight, a decision setting was risky when decision makers did not know, with certainty, what a decision outcome would be but did know the possible outcomes associated with a decision, along with the probability those outcomes would occur, at the time the decision was made. Un-

profits are possible. Without uncertainty, there are no profits (Barney, 1986).

Uncertainty played a role in the work of other economists of Knight's generation, including Coase (1937). Indeed, some current commentators have suggested that an important difference between Coase's original transaction cost model and Williamson's (1975, 1985) version of transaction cost economics is that the former focused on the role of Knightian uncertainty in managing economic exchanges, whereas the latter has focused instead on complexity and information asymmetry (Spender, 2018). Other early economists who studied the causes and consequences of uncertainty included Hayek (1945) and Shackle (1949).

Although not as early as economists such as Knight and Coase, early organization theoristsincluding Simon (1947, 1972), Burns and Stalker (1961), Cyert and March (1963), Lawrence and Lorsch, (1967), Thompson (1967), and Barnard (1968)—were interested in the role of uncertainty in business, as were early organizational behavior scholars, including Roethlisberger and Dickson (1939), Duncan (1972), and Galbraith (1973). Initially, organization theorists were primarily interested in the organizing implications of uncertainty—how uncertainty affected organizational structure, decision-making rules, and so forth. Organizational behavior scholars, however, were more interested in the individual causes and consequences of uncertainty-how it affected decision making, team dynamics, behavioral response repertoires, social expectations, perceptions of fairness in a firm, and so forth (Downey & Slocum, 1975; Van den Bos, Wilke, & Lind, 1998).

By 1978 Mintzberg had concluded that scholars

Academy of Management Review, Vol. 45, No. 4

Special Topic Forum The Implications of Uncertainty: For Management and Organization Theories

To Shape or Adapt: Knowledge Problems, Epistemologies, and Strategic Postures under Knightian Uncertainty

Violina Rindova and Hugh Courtney

Academy of Management Review, Vol. 47, No. 3 Articl

Heuristic Methods for Updating Small World Representations in Strategic Situations of Knightian Uncertainty

Alberto Feduzi, Philip Faulkner, Jochen Runde, Laure Cabantous and Christoph H. Loch

Academy of Management Review, Vol. 49, No. 2 Article

When Subjective Judgments Lead to Spinouts: Employee Entrepreneurship Under Uncertainty, Firm-Specificity, and Appropriability

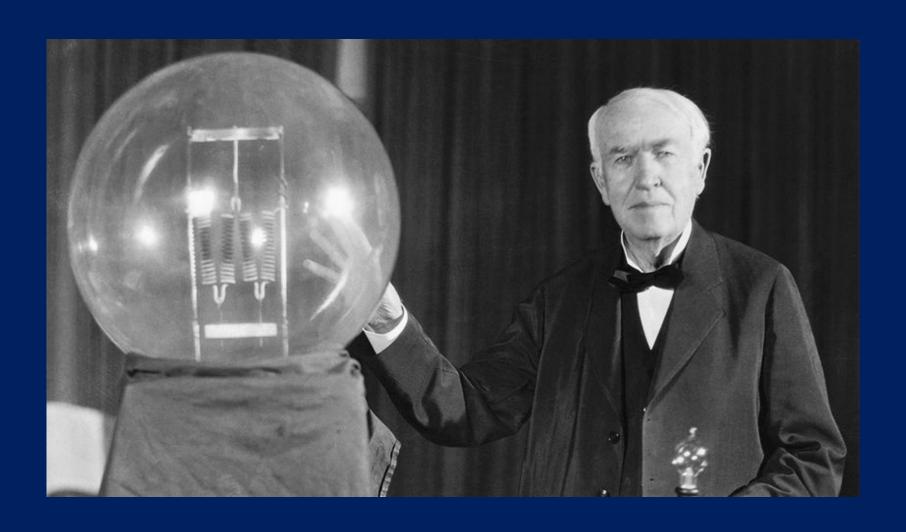
Aseem Kaul, Martin Ganco and Joseph Raffiee

Academy of Management Review, In-Press | Article

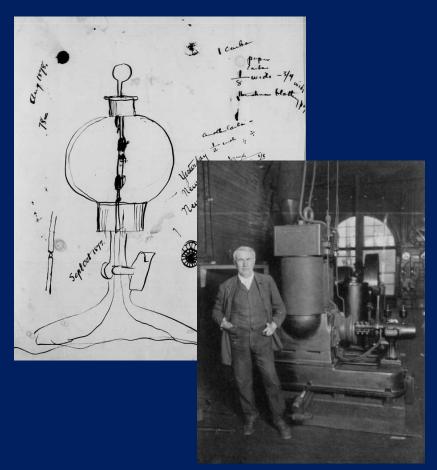
Are the Futures Computable? Knightian Uncertainty and Artificial Intelligence

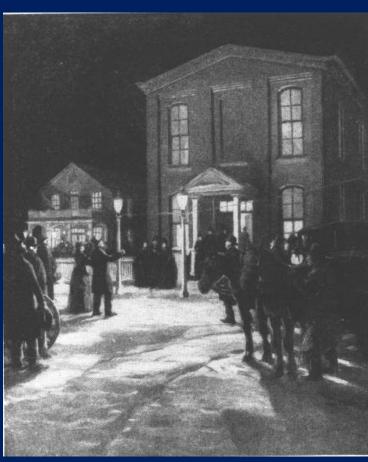
David M. Townsend, Richard A. Hunt, Judy Rady, Parul Manocha and Ju hyeong Jin

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



The real innovation: The electric lightning ecosystem





EDISON'S NEWEST MARVEL.

SENDING CHEAP LIGHT, HEAT, AND POWER BY ELECTRICITY.

Illuminating Gas to be Superseded-Edison Notving the Problem of Dividing the Too Great Brilliancy from an Electric Machine.

Mr. Edison says that he has discovered how to make electricity a cheap and practicable substitute for illuminating gas. Many scientific men have worked assiduously in that direction, but with little success. A powerful electric light was the result of these experiments, but the problem of its division into many small lights was a puzzler. Gramme, Siemens, Brush, Wallace, and others produced at most ten lights

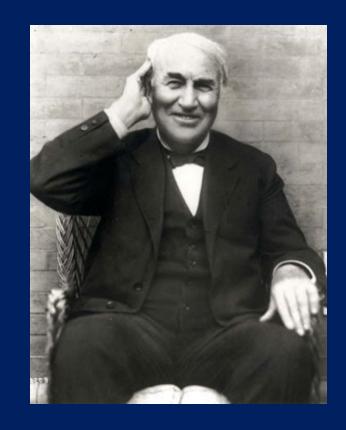
MISCELLANEOUS CITY NEWS

EDISON'S ELECTRIC LIGHT.

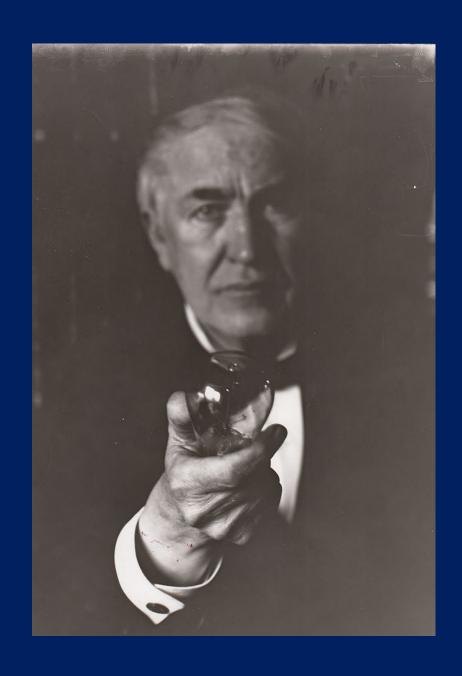
"THE TIMES" BUILDING ILLUMINATED BY ELECTRICITY.

Edison's central station, at No. 257 Pearlstreet, was yesterday one of the busiest places down town, and Mr. Edison was by far the busiest man in the station. The giant dynamos were started up at 3 o'clock in the afternoon, and, according to Mr. Edison, they will go on forever unless





As a time-travelling strategy prof, what would you tell Edison in 1878?



Edison would draw on the **experimentation** of others and the inputs of his associates (the "muckers").

Built a comprehensive **theory** of an **ecosystem** (Felin & Zenger, 2017) ("in a week"; *The Sun*, 1878).

Engaged in **cognitive leadership** (Foss, Schmidt, & Teece, 2023, 2024) partly based on **analogy** to build **legitimacy**, convince customers, suppliers, complementors to join.

Etc.

But Edison also

Faced uncertainty that could only partially be reduced by experiments ("non-empirical uncertainty"; Al-Naijjar & Weinstein, 2015).

Built a **superior** (?) theory/repr. in a world of KU.

Made an **abductive leap** from few data pts to an entire theory.

But Edis Faced u experin Weinste Built a s Made a theory.



educed by nty"; Al-Naijjar &

orld of KU.

a pts to a entire