

QMD Managing for Quality Webinar Series

Session #1

# Making Quality-Based Executive Decisions



Gregory H. Watson, PhD.

February 13, 2020



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# What does it take to make effective decisions at the executive level?



**“The computer is a moron. And the stupider the tool, the brighter the master must be. The dumbest tool we’ve ever had will cause managers to think through their actions.”**

**~ Peter F. Drucker (1967)**



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# What is the best way to make decisions?





# Brainstorming or “Theory Opinion”

?





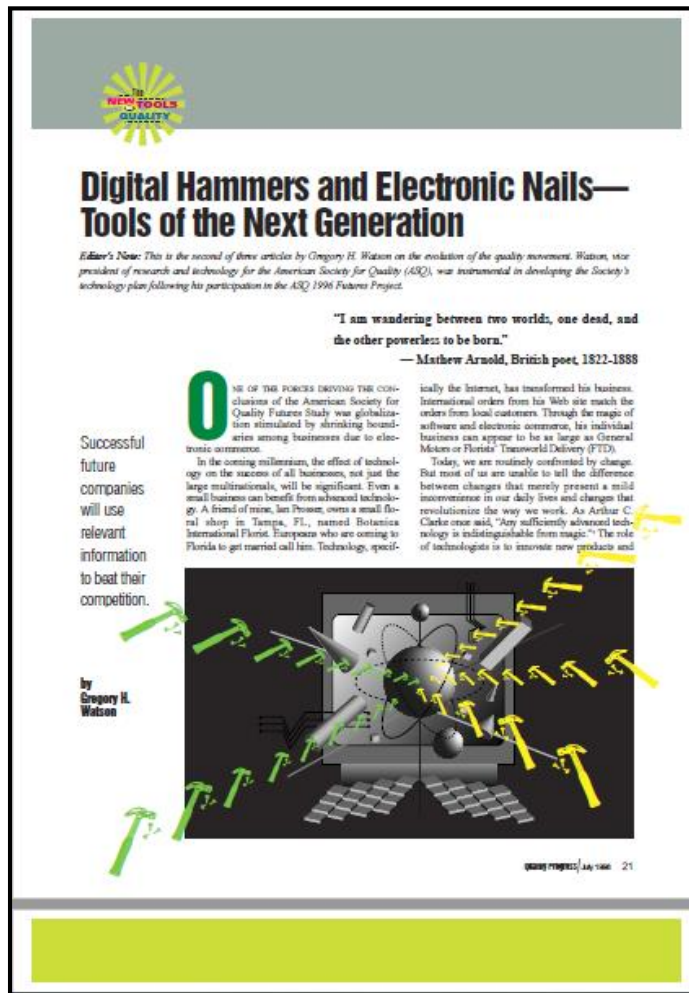
# Technology-assisted Decision-aids?



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# Did we see a Quality 4.0 techno-shift coming?



Implications of the 1997 ASQ Future Study indicated that digital technology had the potential to totally restructure the way quality professionals work.

It anticipated a technological evolution that would create what we have come to call Quality 4.0: managing for quality in the digital age.

The article suggested ways that these new and evolving technologies would change some aspects of the way that we work; however, it fell far short of clairvoyance in seeing all implications of these technological advances.

# Digitization is fundamentally changing our world!



## How shall we cope with this?



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# From 'foresight' to 'hindsight' to 'foresight' ...

<b>PERSPECTIVE</b>	
<i>Foresight 2020: The Future of Quality in the Age of Technology</i>	
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<b>Foresight 2020: The Future of Quality in the Age of Technology</b>	
<b>Author</b>	Gregory H. Watson, President, American Society for Quality, Milwaukee, Wisconsin
<b>An uncertain future</b>	There is confusion today about the future of the quality movement. Business is changing its emphasis on quality, and ownership of quality practices is also changing. Business professionals, not just quality professionals, are now using the quality tools. Many people also believe that there is a difference between Six Sigma and the quality principles. As leaders of the American Society for Quality (ASQ), we've had to ask ourselves: "What is the status of ASQ and the quality movement?"
<b>The first future study: 1995</b>	Back in 1995, ASQ conducted its first study in which we looked forward to the year 2010 and our place in it. But a funny thing happened in the meantime: the future arrived much faster than we expected. We had grossly underestimated the rapid advancements in technology, such as the Internet, and how much these changes would alter the business landscape. The technical forecasts we made were achieved almost five years ahead of our expectations. We also overestimated Japan's economic influence and underestimated China's. But the study did help us prepare for the years to come, and led us to initiate important strategic changes for the organization, including a \$2-million systems upgrade, a name change, a new organization structure, and a new research strategy. Those changes have served us well, but they are not enough. We realized that we have to look again at the forces that will shape our future, so that we can continue to play a vital role in it.
<b>The Foresight 2020 study identifies critical assumptions</b>	In August 1999 we convened a future study team, many of whom were also members of our strategic planning committee, to conduct Foresight 2020, a look ahead to that year. This study increased our understanding of our entire business environment, our customers, and ourselves. More importantly, the results of this study yielded insight into the critical assumptions we have about the quality movement and our society.  This study identified some key demographic, economic, cultural, and technical trends that will continue. We also identified eight forces that will shape our future, and from these trends and forces we created four possible scenarios. Our aim is then to develop recommendations for action plans for ourselves, our constituents, and our customers based on these scenarios. ASQ has reached an inflection point: the future growth of our organization can move in any number of directions (Figure 1 on the following page). In the '80s and early '90s interest in quality bloomed—and mem-
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Fall 2000	

In the 2000 ASQ Future Study a focus was dedicated to changes that would be instigated by technology before the year 2020.

Now in 2020, we will look back to see how the role of quality professionals will change as a result of those technoshifts that have changed and are now changing the way we work.

In the digital age of "smart systems" a challenge for quality professionals will be to coach executives in a new way of working to enable customer-delivered quality outcomes and experiences.



# Historical exegesis of quality thinking ....

**“Do not seek to follow in the footsteps of the old masters, seek instead what these masters sought.”**

**~ Matsu Basho (1644-1694)**

# How will “Managing for Quality” change?

## **Session 1    Making Quality-Based Executive Decisions**

- Session 2    Leading Transformation – Managing Improvement
- Session 3    Designing Quality as an Inclusive Business System
- Session 4    Conducting Executive Inquiries and Formulating Strategy
- Session 5    Understanding Japanese-Style Strategy Management
- Session 6    Learning to Lead Change – Triple-Loop Experience
- Session 7    Engineering Management – Designing Future Firms
- Session 8    Understanding the Financial Component of Quality
- Session 9    Reflecting on Strategic Implications of Attractive Quality
- Session 10    Discovering Profound Insights of Operational Excellence
- Session 11    Defining Quality to Apply to Everyone, Everywhere
- Session 12    Managing for Quality Amidst Digital Turbulence

# Summary of Session #1:

Executive decision-making often will rely on what economist Daniel Kahneman has called “System 1 Thinking” – this is an emotionally-based, subjective approach to making decisions that is the opposite of “System 2 Thinking” – a fact-based, objectively logical approach to making decisions. How to make good executive decisions has a very rich heritage that reaches back to the late-1930s when Chester I. Barnard, an executive in the Bell System who first addressed the issue. This presentation summarizes the major contributions since then and describes conditions needed to form quality-based executive decisions based on academic theory as illustrated by pragmatic lessons learned.

## QM/OE Focus Areas:

- **Leadership,**
- **Strategic planning,**
- **Management methods,**
- **Quality tools,**
- **Supply chain,**
- **Customer focus,**
- **Learning and development**



# Abstract of Session #1:

The objective of this presentation is to provide quality professionals with deeper insight into how to coach executives in making better decisions. One of the three categories of waste as identified by Taiichi Ohno is “muri” or waste that comes from making irrational decisions. This presentation will describe the theory for making good executive decisions and present a playbook of non-quality decisions that are typically made by executives using poor decision-making criteria. Academic foundations of this process will describe:

- Chester I. Barnard’s functions of the executive
- Herbert A. Simon’s concept of bounded rationality for executive decision-making
- Peter F. Drucker’s criteria for sound executive decisions
- Daniel Kahneman’s System 1 and System 2 approaches to executive decisions
- Noriaki Kano’s theory of attractive quality as applied to strategic decision-making
- David J. Teece’s concept of dynamic capability as related to decision frameworks

Finally, the impact of poor executive decisions on the creation of “embedded waste” in organizations will be discussed with emphasis on its capacity for defocusing the productive work that occurs in the workplace. How to coach an executive who is not effective in making strategic decisions will conclude this presentation.

# Learning Objectives for Session #1:

## **Learning Objective 1:**

Understand distinctive approaches for making executive decisions from a psychological perspective and how executives make business decisions.

## **Learning Objective 2:**

Discover the principles taught by leading management thinkers: Chester I. Barnard, Herbert A. Simon, Peter F. Drucker, Daniel Kahneman, Noriaki Kano, and David J. Teece and how to apply them to improve your ability to coach executives toward improved quality-grounded decisions.

## **Learning Objective 3:**

Learn how executives perceive their role and responsibilities.

# Making Quality-Based Executive Decisions

Part 1: Introducing Executive Decision Making (EDM)

Part 2: Evolution of Thinking about EDM

1. Chester I. Barnard
2. Herbert A. Simon
3. Peter F. Drucker
4. Daniel Kahneman
5. Noriaki Kano
6. David J. Teece

Part 3: The Importance of EDM for Quality Professionals



# Making Quality-Based Executive Decisions

## Part 1:

## Introducing Executive Decision-Making (EDM)

# Introduction

Executive Decision-Making (EDM) is a cognitive process involving psychological considerations and describing a mental process of decision-makers in response to shifts triggered by situational dynamics imposed from the organization's internal and external environments.

Exceptional performance in EDM requires insight into the situation and ability to make sense from the various signals emanating from it. Those signals provide inputs that define the future potential performance from which will evolve changes in the organization as it seeks to fulfill its purpose and achieve its goals.

Thus, developing EDM requires a cross-disciplinary approach to a process of strategic choice regarding options for future direction. This process must be inclusive, and it should not be confined to a myopic perspective.

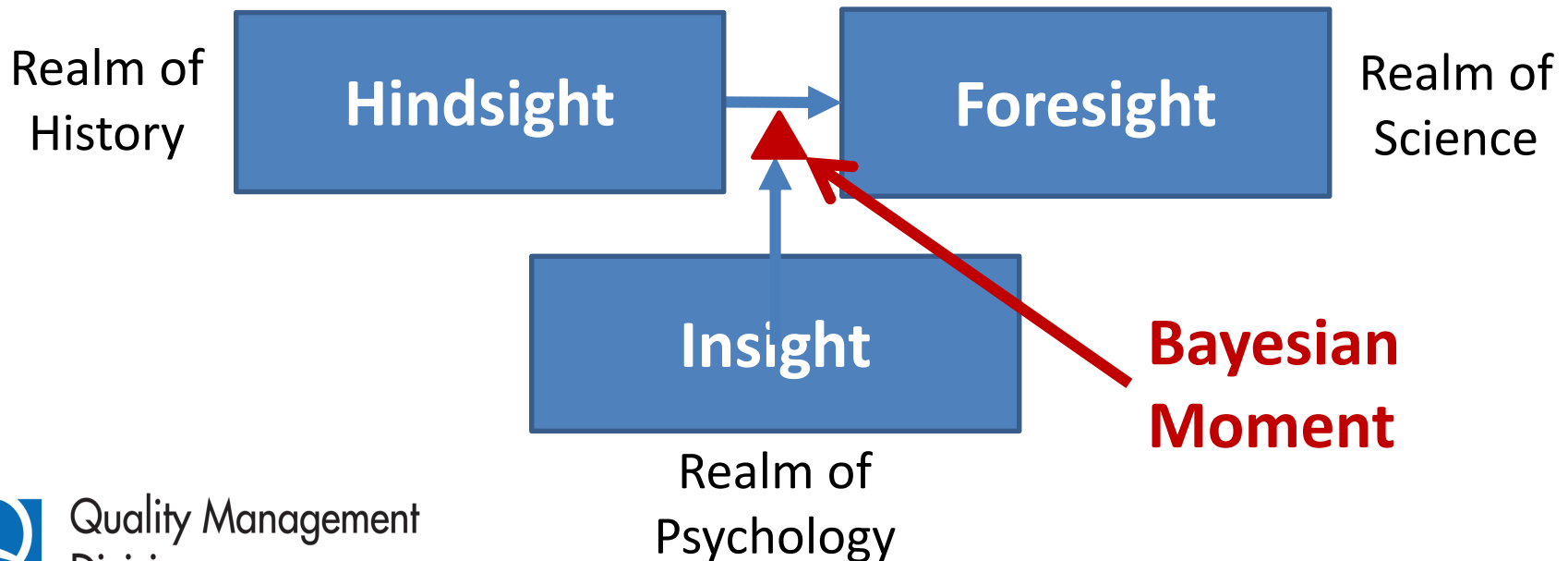
A cross-disciplinary integration using a structured approach should create the insight contained in the psychology element in Deming's System of Profound Knowledge and apply the theory of knowledge using a systems approach to variation investigation to improve executive decision outcomes.

# What is the “Bayesian Moment” of time?

“Hindsight supplements foresight: a view backward often adds materially to a view forward.”

~ Walter A. Shewhart (1939)

*Statistical Method from the Viewpoint of Quality Control*  
[Editorial comment made by W. Edwards Deming.]

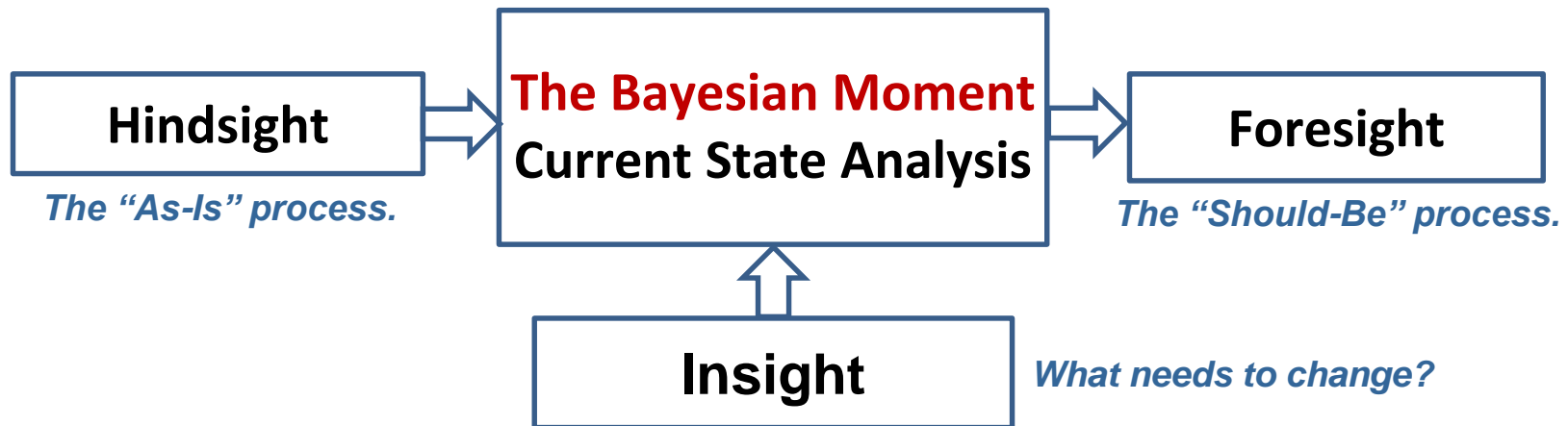




# Living in the Bayesian Moment:

Interpreting history: being present - seeing the future!

Insight is gained by reflective study:



**The Bayesian Moment:** Insight transforms Hindsight into Foresight to permit improvement planning for the future.

# Why is EDM so important?

- Executive decision making (EDM) occurs as a current state analysis applying the insight input of a Bayesian moment, where alternative choices are considered for future action based on the current state of historical evidence gained in pursuit of profound knowledge.
- Shewhart laid a foundation for this mental model for a scientific approach to EDM by applying the “Shewhart Cycle.”
- Deming’s concept of profound knowledge also supports EDM.
- EDM supports the strategy management process of executives.
- The Theory of Profound Knowledge operates in the Bayesian Moment to evaluate alternative choices using scientific methods.

# Making Quality-Based Executive Decisions

## Part 2:

## Evolution of Thinking about EDM

# Chester I. Barnard

## The Function of the Executive



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# Chester I. Barnard: Functions of the Executive



Chester I. Barnard (1886-1961)

President, New Jersey Bell Telephone (1927-1949)

**The Functions of the Executive** (1938)

**Mind in Everyday Affairs** (1938)

**Organization and Management** (1948)

"The fine art of executive decision consists in **not** deciding questions that are **not** now pertinent, in **not** deciding prematurely, in **not** making decisions that cannot be made effective, and in **not** making decisions that others should make."



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# Barnard on management as an art:



It is a rare old dog that can learn new tricks, and the art of management and dealing with affairs is no exception. Almost exclusively the management talent in this country, both in business and in politics, “plays by ear” and I am sure it would be true in this field as it is in music, for example, that there are many who can do very well by ear whose art would be ruined if they attempted to learn at a late stage to play by note. This is something, of course, that I could hardly say to anyone who had not taken the interest which your letter shows.

... Management is an art, will always be one, can never be completely understood, and the greatest artists, with possibly very rare exceptions, will be unable to understand what they are doing in a scientific sense, or to explain it to others (Chester I. Barnard, in a letter to A.A. Lowman, President, Northwestern Bell Telephone Company, March 23, 1939).

# Barnard on intuition in decision-making;



*“Executives do not enjoy the luxury of making their decisions on the basis of orderly rational analysis but depend largely on intuitive or judgmental responses to decision-demanding situations.”\**

“I have found it convenient and significant for practical purposes to consider ... mental processes as ‘non-logical’ and ‘logical.’ By ‘logical processes’ I mean conscious thinking which could be expressed in words or by other symbols, that is, reasoning. By ‘non-logical processes’ I mean those not capable of being expressed in words or as reasoning, which are only made known by a judgment, decision, or action.”

~ Chester I. Barnard, *The Mind in Everyday Affairs* (1936)

Herbert A. Simon (1987), “Management Decisions: Intuition and Emotion,” *Academy of Management*, pp 57-64.

# Barnard on the “zone of indifference”

“...there exists a **"zone of indifference"** in each individual within which orders are acceptable without conscious questioning of their authority... The zone of indifference will be wider or narrower depending upon the degree to which the inducements exceed the burdens and sacrifices which determine the individual's adhesion to the organization. It follows that the range of orders that will be accepted will be very limited among those who are barely induced to contribute to the system.”

***“We have an agreement in principle. The question is, do we all have the same principles?”***



# Herbert A. Simon

## Bounded Rationality in EDM



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# Herbert A. Simon – Bounded Rationality



Herbert A. Simon (1916-2001)

Nobel Laureate in Economics

**Administrative Behavior** (1947)

**Organizations** (with James G. March (1958))

**Models of Bounded Rationality** (1982, 1997)

**Reason in Human Affairs** (1983)

**The Sciences of the Artificial** (1996)

**An Empirically-based Microeconomics** (1997)

**Bounded rationality** is the premise that was advanced by Simon stating that all decisions are constrained by three limitations on the quality of the decision:

1. The integrity of the information used to support the decision.
2. The competence of the decision-maker.
3. The degree of urgency under which the decision must be made.



# Artificial Intelligence as an aid to intuition:

Simon understood intuition as a form of pattern recognition. The cognitive formation of rules or mental constructs based on the historical observations of former experiences.

Thus, intuition creates heuristic rule-based structures that observe repetitions in events observed or noticed which fit a familiar pattern.

Herbert A. Simon (2003), "Artificial Intelligence as a Framework for Understanding Intuition," *Journal of Economic Psychology* 24:2, pp 265-277.



# Processing of Decision Premises:

Organizations are a “hierarchy of decisions – a complex network of decision processes.” Every decision involves selection of a goal and a relevant behavior related to it.

According to Herbert Simon all human decisions are made based on a model that has three premises:

- 1. *Intelligence Activity*:** problem-finding or recognition this search is conducted in one of three methods: structured, structured ad hoc, or structured continuous search.
- 2. *Design Activity*:** developing alternative solutions.
- 3. *Choice Activity*:** analyzing alternatives and choosing one.

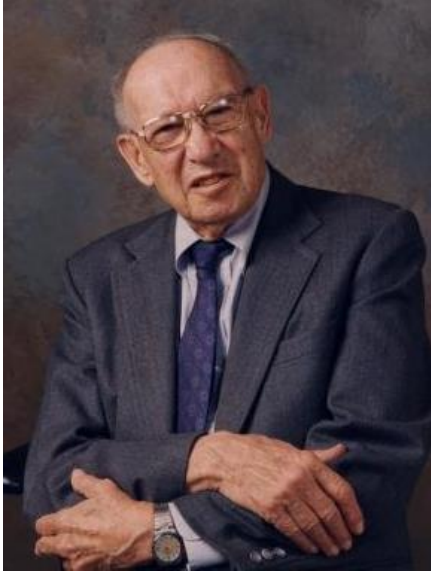
# **Peter F. Drucker**

## **Criteria for Sound Executive Decisions**



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# Peter F. Drucker – The Job of the Executive



Peter F. Drucker (1909-2005)

**The Concept of the Corporation (1946)**

**The Practice of Management (1954)**

**Managing for Results (1964)**

**The Effective Executive (1967)**

**Management, Tasks, Responsibilities (1973)**

**Innovation and Entrepreneurship (1987)**

**“The important and difficult job is never to find the right answers, it is to find the right questions. For there are few things as useless – if not dangerous – as the right answer to the wrong question.”**

# Drucker on Executive Decision-Making – 1:

“Effective executives do not make a great many decisions. They concentrate on what is important. They try to make the few important decisions on the highest level of conceptual understanding. They try to find the constants in a situation, to think through what is strategic and generic rather than to “solve problems.” They are, therefore, not overly impressed by speed in decision making; rather, they consider virtuosity in manipulating a great many variables a symptom of sloppy thinking. They want to know what the decision is all about and what the underlying realities are which it has to satisfy. They want impact rather than technique. And they want to be sound rather than clever.”



## **Drucker on Executive Decision-Making – 2:**

“Effective executives know when a decision must be based on principle and when it should be made pragmatically, on the merits of the case. They know the trickiest decision is that between the right and the wrong compromise, and they have learned to tell one from the other. They know that the most time-consuming step in the process is not making the decision but putting it into effect. Unless a decision has degenerated into work, it is not a decision; it is at best a good intention.”

“Make decisions by the right people, in the right way, and at the right time. Effective decisions result from a systematic process, with clearly defined elements, that is handled in a distinct sequence of steps.”

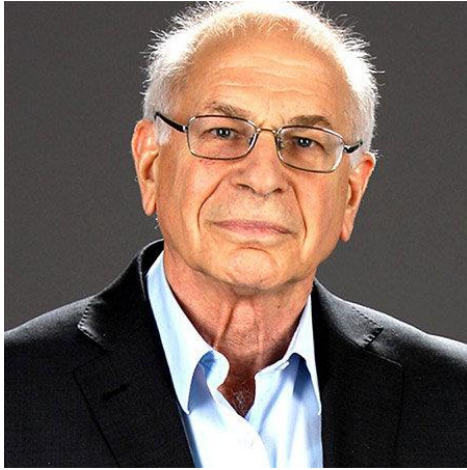
# Daniel Kahneman

## System 1 and System 2 Thinking



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# Daniel Kahneman – Thinking, Fast and Slow:



Daniel Kahneman (1934-)  
Nobel Laureate

**Thinking, Fast and Slow (2011)**

While Barnard identified both thinking modes and Simon focused on rational decision-making's influence by emotion, Kahneman blended these two ideas into a theory about rational and emotional decision-making systems:

**System 1:** Intuitive, emotionally-based subjective decisions.

**System 2:** Logical, analytical, rationally-based objective decisions.

***Executive decisions are best made if System 2 rules inform System 1 executive decisions.***

# Noriaki Kano

## Attractive Quality as a Strategic Enabler

# Noriaki Kano – Theory of Attractive Quality:



Noriaki Kano 狩野紀昭 (1940-)  
Japanese Quality Professor

“Theory of Attractive Quality” (1984)\*

“Quality activity can only begin if top management is conscious of the critical need for organization wide commitment to quality and its own responsibility for introducing such activity. ”

“Improving all attributes of quality will not lead to satisfied customers as not all attributes are equal in their eyes. Some quality attributes will increase the value to customers because they are attractive and do not detract even when their physical fulfillment is not strong.”



# Kano's Theory:

**Attractive Quality**

*Miryokuteki Hinshitsu*

(魅力的品質)

Unspoken Quality

Characteristics

Differentiated Quality

Competitive Quality

Spoken Quality  
Characteristics

Commodity Quality

**Must-be Quality**

*Atarimae Hinshitsu*

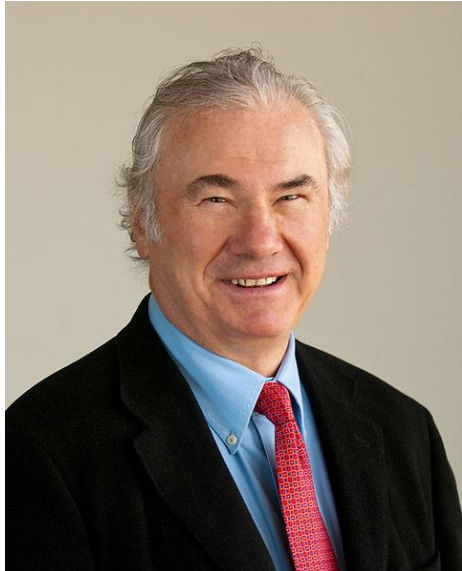
(当たり前品質)

Unspoken Quality  
Characteristics

# David J. Teece

## Dynamic Capability Decision Framework

# David J. Teece – Dynamic Capabilities:



David J. Teece (1948 – )

Professor of Business, U.C. Berkeley

**Economic Performance and the Theory of the Firm (1992)**

**Technology, Organizational Capability and Strategy (2008)**

**Strategy, Innovation and Theory of the Firm (2011)**

**Dynamic Capabilities and Strategic Management (2011)**

***“Dynamic capability”*** describes a relationship of innovation with competition in new product development by advancing technology: it advances “the firm’s ability to integrate, build, and reconfigure internal and external competences to thus address rapidly changing environments”

# Dynamic capability and executive oversight:

Dynamic capabilities are threefold:

- (1) Capacity to sense and shape the opportunities and threats that face an organization;
- (2) Ability to seize opportunities and make decisions that will implement the needed change for the organization to remain competitive; and
- (3) Stamina to maintain competitiveness through a continual enhancing, combining, protecting, and as necessary, reconfiguring the business enterprise's tangible and intangible assets.

The development and exercise of internal dynamic capabilities is at the core of sustainable success for an enterprise.

**Requirement:**

**Astute executives who learn how to exercise leadership through quality!**

# Making Quality-Based Executive Decisions

## Part 3:

## Importance of EDM for Quality Professionals

# Take-away Summary:

The evolving role of quality professionals will migrate toward becoming mentors and coaches to their organizational leaders. In this capacity it is important to understand how to guide their process and how to support their decision-making through sound data presentation formulation of recommendations, execution of the focused improvement projects, and communication with to the organization.

In an interview Peter Drucker was asked: “How can we convince CEOs to “do” quality?” His answer was intriguing and educational. He said:

“It is not your job to train your CEOs. They are bright people and can understand quickly what needs to be accomplished. However, it is the job of staff to clearly report necessary information that CEOs can easily assimilate and understand, so they may draw their own conclusions.”



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Thank you

Gregory H. Watson, PhD.

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# Further reading on the subject:

1. Chester I. Barnard (1938), *The Functions of the Executive*, (Boston: Harvard University Press).
2. Herbert A. Simon (1947), *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*, (New York: The Macmillan Company).
3. Peter F. Drucker (1967), *The Effective Executive* (New York: Harper).
4. Peter F. Drucker (1967), "The Effective Decision," *Harvard Business Review*, 45;1.
5. Peter F. Drucker (1967), 'The Manager and the Moron,' *McKinsey Quarterly*, December.
6. Daniel Kahneman (2011), *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux).
7. Noriaki Kano, et. al. (1996), "Attractive Quality and Must Be Quality," *The Best on Quality*, vol. 7 (Milwaukee: ASQ Press), pp. 165-186.
8. David J. Teece (2009), *Dynamic Capabilities and Strategic Management* (London: Oxford University Press).
9. Gregory H. Watson (2019), "Using the Kano Model as a Basis for Strategic Thinking," *Journal of Quality & Participation*, 42:3.
10. Gregory H. Watson (2018), *The Theory of Profound Knowledge: An Inquiry into Quality and Strategic Management* (Stillwater, OK: Oklahoma State University).



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# Future QMD Webinars, 6:00 pm ET

(unless noted otherwise)

## Managing for Quality Webinar Series by Dr Gregory H. Watson:

- No. 1: "Making Quality-based Executive Decisions" February 13, 2020
- No. 2: "Leading Transformation – Managing Improvement" March 12, 2020
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- No. 4: "Strategy Inquiry, Formulation, and Deployment" April 28, 2020
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