


Decision processes "Caitlin and the Pacemaker"

Which pacemaker will you choose?

Role play exercise

Another example of decision making when stakes are high and conditions are uncertain

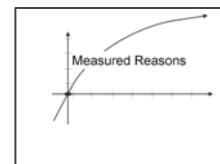


You are the parent for this example

What thinking processes did you use?

- | Tried to clarify the problem
- | Identified and analyzed relevant facts
- | Made tentative inferences about the risks
- | Examined the consequences of each choice
- | Asked questions to test your assumptions
- | Tried to find a reason to rule out one choice or the other
- | Reconsidered the whole problem to see if anything was being overlooked

System 2



Two Parallel Functioning Rational Decision Systems

SYSTEM 1

Renders quicker, holistic associational, judgments.

More automatic, reactive.

** Can block out or derive support from system 2.



SYSTEM 2

Renders considered, rule-based, serial, judgments.

More reflective, logical.

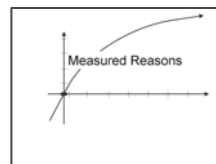
** Can bolster or over-ride system 1.

Gilovic T, Griffin D, & Kahneman D, *Heuristics and biases: The psychology of intuitive judgment*. Cambridge, UK: Cambridge University Press, 2002.

What thinking processes did you use?

System 1

- | Tried to avoid taking a risk
- | Tried to gain some control
- | Looked for something 'wrong' with one of the choices
- | Thought about other situations where you've had to make tough choices
- | Imagined what would happen with each pacemaker choice
- | Tried to avoid making a judgment



The culture of the academy

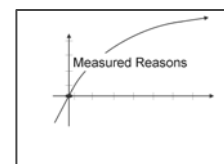
- | Dogmatic principles guide leadership
- | Clear lines of authority
- | Responsibility for the welfare of underlings
- | High accountability for completing assignments
- | Punishment for absence without leave
- | Demotions for casualties resulting from your decisions
- | Punishment or dismissal for disobeying direct commands



The culture of the academy

- | Multi-layered approval processes
- | Multi-layered appeal processes
- | Committee based decision-making
- | Annualized timelines for potential policy changes
- | High tolerance for voiced criticism
- | Time flexible workplace
- | Assignments according to rank and privilege
- | Often no direct penalty for casualties resulting from your decisions

Strategy: Know the culture of your institution.
You may want to modify the culture, but you can't ignore it.



Naturalistic decisions

novel, high stakes, uncertain problem situations

Logical and Heuristic
thinking strategies
that contribute to
every decision
process



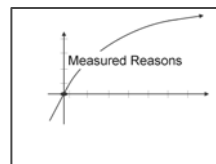
"THANKS" or "NO THANKS"

A DECISION ON THE GIFT:

Should you accept the gift? (Why?)

Who must have a voice in this decision?
(Why?)

What will you do if there is no
consensus at the university? (Why?)



Reflective and Logical Approach (System 2)

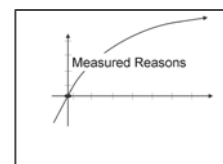
- Evaluated the potential value of the gift in some organized way
- Identified rules or procedures that might need to be followed
- Estimated costs of accepting (and not accepting)
- Listed possible consequences of accepting and not accepting
- Analyzed the likely positive and negative effects on students, faculty, the community/.....

How we err at the academy:

Error: Indulging personal desires

"This will be my legacy."

"I'll accept the gift and others will have to deal with the consequences of my decision."



How we err at the academy:

The Affect Heuristic : unreflective gut response
Error: Failing to think it through

"Take the money. Take the land."

"I'm afraid to cross this trustee."

"I can't work with this trustee."

Strategy: Acknowledge the emotional response to trusted colleagues so that you can more easily override it if that is what's best for the university.

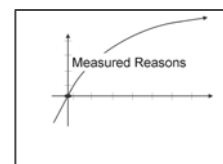
The Representativeness Heuristic The Availability Heuristic

"The last time we took a qualified gift it was a nightmare."

"This will be great for the university! Just like when we closed the highway through campus."

Error: Over-reliance on impressions of apparent similarity with previous vivid events to estimate the benefits or losses if the gift is accepted.

Strategy: Step back ...check your impressions of similarity against the facts, note differences that could make a difference in the actual outcome.



How we err at the academy:

Dismissing a perceived problem:

Errors: poor problem definition, unsound inferences
underestimate the opposition (the optimistic bias heuristic)

"That's nothing we need to worry about."

"Your concern is nothing new."

"That problem will never happen to us."

Strategy: First, take time to analyze the problem. Then, either address it courageously, or declare it an issue that will not be addressed and live with the consequences

How we err at the academy:

Seeking 'good enough' but not 'best' answers
(the Satisficing heuristic)

Error: Underestimating "good enough"

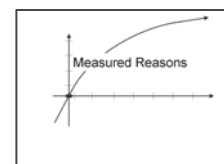
"Let's take the gift and develop the consensus vision later."

"We'll talk with the trustee but wait on the campus dialogue"

"Find me two or three science departments that I can hook into this deal."

Strategy: The Simulation heuristic coupled with fact finding.

If it's a possible 'go' then, map the problem with timeline and resource commitment.

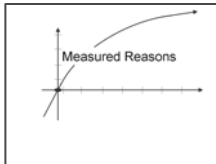
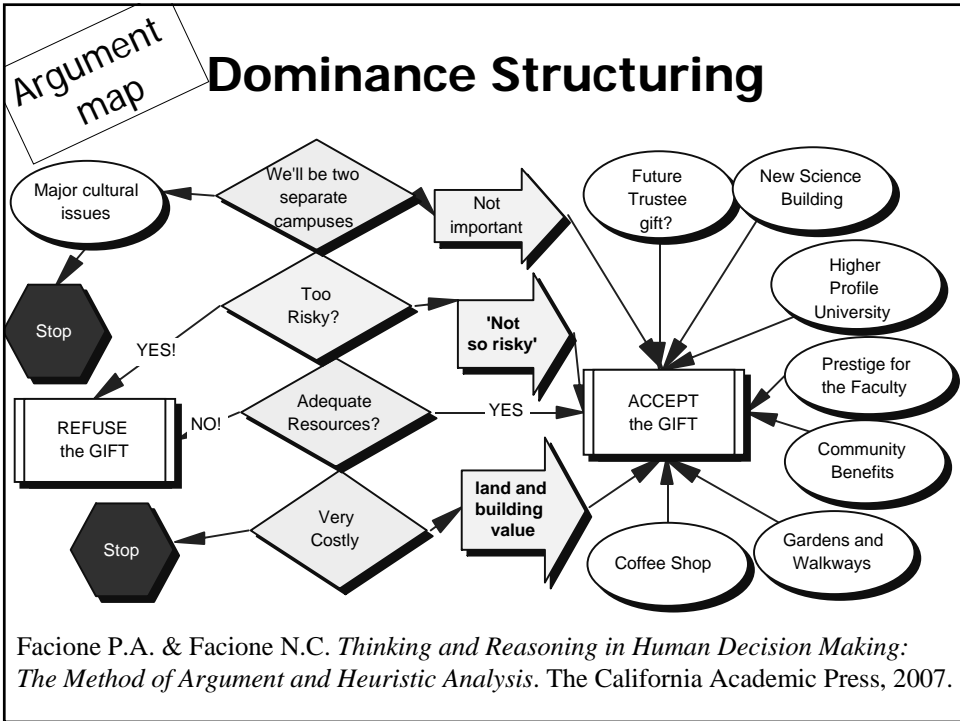


How we err at the academy:

The "Illusion of Control" heuristic
 Error: Overestimating control of the outcome

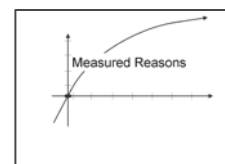
"We'll make this work even though...."
 "We can get her to accept our counter-proposal."
 "Don't worry, in time the faculty will come to support this."

Strategy: Watch for this error by the thinking team.
 Stay with the evidence and the argument for success.
 Establish markers for evaluation: success and cautions.
 Change or reverse course when the evidence indicates.



Strategies to mitigate thinking errors in the academy

- | Appropriate use of both heuristic reasoning and logical and reflective (critical) thinking
- | Be on guard against premature dominance structuring around suboptimal judgments
- | Be courageous enough to reverse judgments when valid evidence or arguments present (truth-seeking)
- | Think out loud with your trusted advisors
- | Adapt to the reality that everyone is using both System 1 and System 2 thinking all the time.



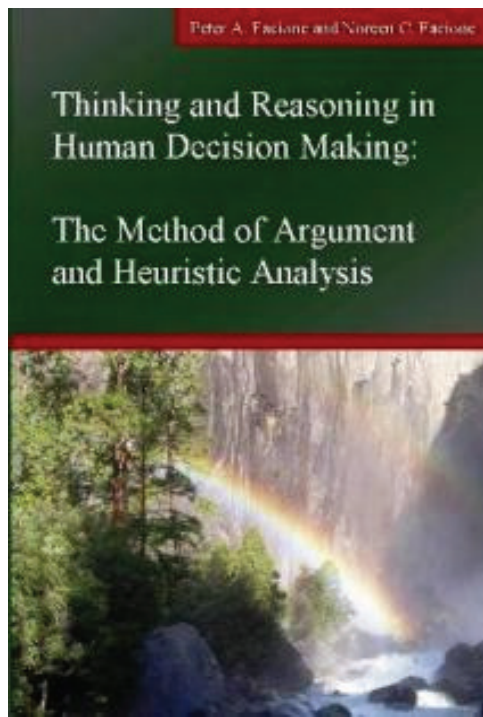
“Thanks” or “No Thanks”

You are the president of a rural private university with enrollments hovering around 4500. You and your faculty speak with pride about the liberal arts flavor of your undergraduate programs and your respected set of masters level professional programs in business, education, and nursing. But with enrollments essentially stagnant, it has become increasingly difficult to fund a series of vital institutional needs as well as the expected annual salary increases. An influential trustee, who happens to be a local real estate developer, is prepared to donate a 10-acre parcel of land located in a larger real estate project she has been developing. The larger project is master planned for manufacturing and light industry uses. Your 10 acre gift would be in a prime location on that larger site.

The trustee says that she intends that her gift be used to establish a “Research Park.” She explains that she sees your institution as her “magnet tenant.” Your institution’s being there will help her attract other businesses to her development project. The location is about 10 miles from your main campus, which is a ‘University Town.’ When others on your senior management team first heard of the prospective gift, they suggested that the 10 acres could work better as a branch campus. But on hearing this, the trustee became adamant that her interest is not in having undergraduate students in residence. She wants a university research park with its own governance board. Her purpose for the research park is to stimulate the local economy. The trustee will build a 60,000 square foot building for you on the 10 acres.

The local economy currently is built on resource extraction (oil, timber and coal), tourism (skiing and golf resorts), farming (dairy and fish) and light manufacturing (aluminum mobile homes, boats, sporting goods and storage buildings). The nearest population center of 50,000 or more people is 5 miles away from the 150 acre industrial park that your trustee is developing. The county and state are growing in population since a surprising number of wealthy retired professionals from other more populous states have relocated there in recent years.

Your Task: As president you must (a) decide whether or not to accept this gift of 10-acres and a building for a university research park; and, at the same time, (b) who should have a voice in the decision, (c) what you will do if there is no consensus.



Thinking and Reasoning in Human Decision Making: The Method of Argument and Heuristic Analysis

by Peter A. Facione and Noreen C. Facione

If your work does not require a deep understanding of how human beings make decisions, and how those decisions can be predicted and influenced, then this book is not for you.

From theory to illustrative case studies, this groundbreaking volume describes a new methodology for explaining and predicting human decision making. The method of argument and heuristic analysis, based on the latest scientific findings from studies of human reasoning, combines both quantitative and qualitative research designs. Use of this

method takes the study of human reasoning to a deep and authentic level. The decision mapping techniques presented in this volume enable one to display visually the flow of a reasoning process and to examine the influence of the reasons and heuristics which shape human decision-making.

This new volume emerges from decades of research into human decision making. It offers a scientifically grounded and very widely applicable methodology for explaining and predicting human decisions. The method accounts for the reasons actually used by decision makers to make naturalistic decisions. This approach provides objective methods for evaluating the logical strength and appropriate reliance on thinking heuristics. The focus is on high risk, time limited judgments made under conditions of uncertainty. Using this new approach one can explain unwarranted confidence in poor reasoning and persistence in defending poor judgments when there is ample evidence to the contrary.

Using this approach, professionals and scholars can map human decisions in leadership, business, military, health care, and human interpersonal situations. And they can craft ways of predicting and addressing errors through interventions designed to respect and build upon those elements in human thinking and reasoning which can become the basis for better judgments in all those contexts.

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