# McCombs Knowledge To Go



## August 9, 2011



# **Influence and Problem Solving**



#### Gaylen D. Paulson, Ph.D. gaylen.paulson@mccombs.utexas.edu



# Today's Agenda

 Briefly look at some ideas behind CREATIVITY and INNOVATION

to

- Examine and promote PROCESSES rather than OUTCOMES
- Draw upon a variety of disciplines and literatures
  - Management, Psychology, Decision Making, Communications, Economics...
- Consider some of the pitfalls and problems
- Do a couple of quick problem solving exercises

YOUR GOAL: Identify 2-3 ideas that might prove useful

# **Problems & Opportunities**

Problem: A gap between the *current* state and a *desired* state

#### Problem solvers seek to...

- Create and Innovate to bridge the gap!
- Do it better, cheaper, faster
- Optimize solutions to maximize gains
- Enjoy the process

(to

Profit and Build Shareholder Value!

#### • Complicated vs. Simple vs. Complex Problems

#### Complex Problems may possess...

- Unclear Boundaries and Definitions
- Multiple Paths to Solutions
- Multiple Functional Solutions
- No one "right" answer, but DEGREES of quality and benefits



## **Society & Innovation**

#### Do we reward problem solvers??



- "Consistency is the last refuge of the unimaginative." Oscar Wilde
- But what about conformity?
- When does different = good?
- Do we stamp out creativity in adults?

#### We're told..."Think Outside the Box!"



# **Innovation & Creativity Basics**

<u>Creative Idea</u>: A novel solution to a problem that adds value and stretches a domain

# Innovation: The implementation of creative ideas, processes or solutions

#### Three Hallmarks of Creativity: (Guilford)

- <u>Fluency</u> strength in numbers; prolific generation yields likelihood of more good ideas emerging
- <u>Flexibility</u> greater range in the kinds of ideas generated, rather than simply variations on a theme
- <u>Originality</u> differences from what others have, or are generating; uniqueness
- +...
- <u>Recognition</u> (?) experts within the domain deem the ideas to be valuable

# **Creativity Factors**

#### Promoting Forces

- Child-like Curiosity
- "Luxury of Opportunity"
  - Environmental Factors
  - Mood

(to

- Off-task activities
- Domain-specific Access and Knowledge
- Focus & Discipline persistence
- Luck Right Person, Right Time, Right Setting

#### Inhibiting Forces

- "Cognitive Arthritis" (Thompson)
- Need to focus on basic needs, putting out the dayto-day fires
- Denial of information or access
- Limited attention, breadth of interests
- Bad Luck... ugh

Can you promote!?

(see Csikszentmihalyi)

# A very challenging problem in Interpersonal Problem Solving

(to

- Recognize that sometimes your choices are NOT independent of others'... your decision needs to become a function of others' choices
- Consider the following exercise...



- Submit an integer between 0 and 100
- The winner is the person whose guess is closest to two-thirds the mean of all submissions
- For example, given the bids: 30, 61, 80
  - Mean = 57
  - 2/3 \* Mean = 38
  - Winning bid is 30
- What is your guess!?
  - Take one minute, ponder
  - Submit



- Level 1: "I have no idea. This is random, so I'll guess 50."
- Level 2: "Wait, I can outsmart these other folks. If they randomly guess 50, I'll be a step ahead of them and guess 33."
- Level 3. "Hold on. Most of these folks are pretty smart. If they try to outsmart everyone else, they will probably guess 33. So I'm going to get ahead by guessing 22."
- Level 4. "Oh oh. Most of these other players will figure out how this game works. They will think that most people will guess 33, and will guess 22. Therefore, I should guess about 22\*2/3=15.

Alternative logic:

Math Gurus: "One could continue multiplying by 2/3's ad infinitum. The limit of this function is 0 (or 1, depending on rounding rule), so I shall choose 0. Isn't that obvious to everyone?!"



Winner = 2/3\*(average of all guesses) = 2/3\*28 = 19

**Our Pattern of Guesses:** 



#### McCombs Knowledge To Go

- Financial Times contest...
  - Prize: two business class tickets London-NY
  - Number of Entrants: 1382
  - Average guess: 18.9
  - Two-thirds of the Average: 12.6.
  - 31 entries with winning guess of 13
- One kid who won was asked how he picked his number...
  - His Response: "I asked my dad what number he would guess, then submitted 2/3 of that."



- "Professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole: so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth, and higher degrees."
  - J.M. Keynes, General Theory Ch. 12

#### Some Barriers to Creative Problem Solving

- Children often are perceived to be much more creative than adults... true??
- WHY??
  - Barriers include:
    - Education Functional Fixedness
    - Knowledge & Experience Status quo, Norms, Past successes
    - Socialization "right" way, conformity
    - Poor problem definition...
      - "The formulation of a problem is often more essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old questions from a new angle, requires creative imagination!" Albert Einstein

# **Early Keys for Problem Solving**

- Problem DEFINITION: Knowing exactly what you're facing, and why the problem presents
- DANGERS:
  - Overconfidence
    - No problem, no cognitive effort!
  - Assumptions of Independence
    - Should a manager implement major changes upon arrival?

#### Challenge:

- Effects generally have more than one cause, and causes will generally have more than one effect
  - Critical to first understand WHY something is done this way today
  - Presume some level of rationality in the solutions that are currently being implemented





#### Creative Problem Solving Opportunities... Example

- MULTIPLE ISSUES vs. SINGLE ISSUES
- "Strict Alternation" turn taking
  - A, B, A, B, A, B...
- "Balanced Alternation" taking turns taking turns
  - More fair for the 2<sup>nd</sup> party to get to go twice?!
  - A, B, B, A, A, B, B, A...
  - OR... A, B, B, A, then random flips for turns...
- NOT always envy-free or efficient, and may be possible for people to game the system, or to cheat!
- "Adjusted Winner" assign points to each side
  - Ex. Course Registration
  - Ex. Divorce: House, SUV, Corvette, Boat, Cabin, Investments

### "Adjusted Winner"

- Divorce & Asset Division: House, SUV, Corvette, Boat, Cabin, Investments
- Each given 100 points to allocate (independently)
- Perhaps they make their valuations as follows:

HIM	ASSET	HER
15	House	40
5	SUV	15
20	Corvette	5
20	Boat	5
35	Cabin	5
_5	Investments	<u>30</u>
100	TOTALS	100



#### BUT... caveat...

A Billionaire Divorce -- And Not a Lawyer in Sight Tim and Edra Blixseth Try A DIY Split 'With Dignity'; They'll Share the Three Jets (WSJ, Jan 2, 2007)



# Costs & Benefits of Problem Solving

- We love ELEGANT SOLUTIONS
- The ability to identify solutions to challenging problems is highly prized in organizations
- As we advance professionally, the problems we face are more challenging
- We need to be constantly seeking ways to become more innovative and creative

# **Enhancing Personal Creativity**

- Be Curious... Avoid "Cognitive Arthritis"
- Search for the unusual and surprising, take note
- Set optimistic goals, and pursue them
- Carve out time for thought; Douse distractions
- Create an environment for yourself that works
- Allow for time off-task when thoughts/ideas can ferment
- Develop a specialty, but keep your eyes open
- Be Complex... creative people are characterized by paradox!

(De Bono, Csikszentmihalyi, Thompson, Bransford & Stein)

# **Please Give Back to McCombs!**

This webinar has been brought to you by the McCombs MBA & BBA Alumni Advisory Boards, coordinated by alumni for the benefit of the Alumni Network.

Please get involved with the Alumni Network!

All alumni benefit when we work together to build the quality and value of the Alumni Network and the McCombs brand.

Time:	Get involved in your local club
Talent:	Mentor another alumni or speak at a future webinar
Treasure:	Make a donation to McCombs

www.mccombs.utexas.edu/alumni



Suggested fund: *MBA or BBA Alumni Excellence Funds* Please use response code *KTG* 

Online survey link: <u>https://mccombs.qualtrics.com/SE/?SID=SV\_6Q0Uj64sjaWi7K4</u> Send me your feedback -- <u>jmbock@gmail.com</u>

Save the Date for the 2<sup>nd</sup> Annual Alumni BBQ Event in Austin: September 10, 2011 at 3 pm / BYU game at 6 pm