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## BA 301

BA 301 Spring 2011  
Chapter 1 - Position

Research &amp; Analysis of Business Problems

## Term Paper Hints

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- The process is more important than the solution.
  - Research and gather data – good data, not just any Google result that comes up in the top ten.
    - The first research you do should be general research about the company – background.
    - Uncover problems.
  - Brainstorm lots of alternative solutions.
  - Use the tools to make a good decision.
  - Put a plan in place for implementation.
  - Don't wait until the last minute.

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## Group Presentation Topics

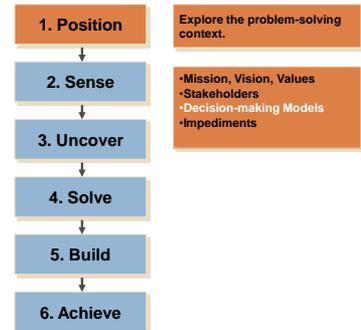
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- University budget issues
- Low graduation rates
- PSU brand/school reputation
- Student morale/happiness/satisfaction

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## PSU Problem Solving Process

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## Understanding Decision Making

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## What Affects Decision Making?

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- The personality/style of the decision maker
- Complexity or urgency
- The scale, scope or potential impact
- Type – strategic or tactical
- Accepted decision models
- Personal or organizational bias

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## Decision-Making Styles

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- Rational thinking
  - ▣ Using knowledge, skills and experience
  - ▣ Applying logic to reach conclusions
  - ▣ Analyzing issues to understand the whole picture
- Intuitive thinking
  - ▣ Conclusions by hunch
  - ▣ Being led by emotion and sensitivity
  - ▣ Using imagination to create new ideas

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## Rational or Intuitive

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- Gene Hackman was?
- Denzel was?

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Look at the chart: say the  
Color not the word

Black	Blue	Green
White	Green	Red
Green	Aqua	Yellow
Yellow	Pink	Tan
Red	Yellow	White

Example produces a Left/Right brain conflict  
The right brain tries to say the color  
The left brain tries to read the color  
<http://OfficeSpam.ChattaBlogs.com>

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## Sometimes, Just Trust Your Instincts

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## Types Of Decisions

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- Programmed
  - ▣ Things that have occurred often enough such that you can have rules and guidelines.
  - ▣ Examples?
- Non-programmed
  - ▣ Situations that are unique, poorly defined, unstructured, have important consequences, or all of the above.
  - ▣ Examples?

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## Decision-Making Models

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- There are a number of accepted models for organizational decision-making:
  - ✓ The Classical Model (rational)
  - ✓ The Administrative Model
  - ✓ The Political Model
- Why does it help to understand these models?
  - ▣ It helps to understand organizational tendencies when faced with decision-making in the context of problem-solving.
  - ▣ For example, if you assume a rational model when the political model is more prevalent, you may encounter roadblocks and difficulties.

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## Decision-Making Models

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Classical	Administrative	Political
<ul style="list-style-type: none"> <li>-Clear-cut problems and goals</li> <li>-Condition of certainty</li> <li>-Full information about alternatives and outcomes</li> <li>-Rational choice by individual for maximizing outcomes</li> </ul>	<ul style="list-style-type: none"> <li>-Vague problems and goals</li> <li>-Condition of uncertainty</li> <li>-Limited information about alternatives and outcomes</li> <li>-Satisficing choice for resolving problem using intuition</li> </ul>	<ul style="list-style-type: none"> <li>-Pluralistic; conflicting goals</li> <li>-Condition of uncertainty &amp; ambiguity</li> <li>-Inconsistent viewpoints; ambiguous information</li> <li>-Bargaining and discussion among coalition members</li> </ul>

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## Sometimes...

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- Decision opportunities are like garbage cans:
  - Problems and solutions are dropped into the "can" independent of one another
  - Problems, solutions and decision-makers are not necessarily related to one another
  - Often it seems as if the solutions, the time needed, and the problems rely on chance alignments for completion.
- The real-world is often not rational, and decisions are made "seat of the pants."

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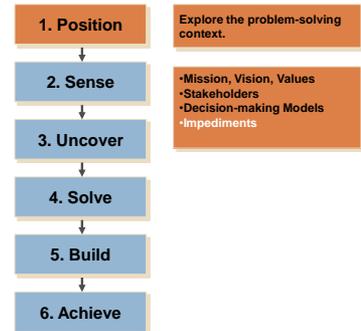
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## PSU Problem Solving Process

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## Smart People Can Make Bad Decisions

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- Intuition, gut feel, experience, instinct – good or bad?
  - Patterns, rules of thumb, prioritization
  - Quicker problem solving & decision-making
  - Good in automatic processes
- But, it can often lead to the wrong solution
  - Cognitive bias can lead to inaccurate and irrational decisions – **judgment error**

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## Cognitive Bias

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- Cognition is the process of thought.
  - To become acquainted with...
- Cognitive Bias is our tendency to make errors in judgment based on cognitive factors – things we know or understand, or think we know or understand.
- Cognitive Bias might distort the way we perceive reality.

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## What Can We Do To Avoid it?

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- Recognize how easy it is to make simple mistakes by using intuition alone.
- Learn to spot the most common decision-making biases.
- Learn simple methods for combating these biases in judgment.

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## Judgment Error #1

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- Rank order the following causes of death in the United States between 1990 and 2000, placing a 1 next to the most common, etc.
  - Tobacco
  - Poor diet and physical inactivity
  - Motor vehicle accidents
  - Firearms (guns)
  - Illicit drug use
- Now, estimate the number of deaths caused by each of these during that timeframe.
- Availability Bias (**a cognitive bias**)
  - Things that are more "available" to us, are likely to be interpreted as more frequent or important.
  - Managers doing performance appraisals often fall victim to this bias.

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## Judgment Error #2

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- Mark is finishing his MBA at a prestigious university. He is very interested in the arts and at one time considered a career as a musician. Where is he more likely to take a job?
  - In arts management?
  - With a consulting firm?
- Representativeness Bias
  - Many people overlook the "base-rate" data when making these types of judgments.
- Prospective entrepreneurs spend too much time imagining their success and far too little time considering the base rate for business failures.

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## Judgment Error #3

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- Think about the last four digits of your social security number.
  - How many doctors are there in New York?
  - Research shows that there is typically a 0.4 correlation between your answer and the SSN number.
- This is an anchoring bias – the brain is "anchored" to a number or idea.
  - Think about how this affects negotiation...
  - Who threw out the first number?
  - What about salary negotiations?

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## Judgment Error #4

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- Look at this series of numbers. It conforms to a rule. What is the rule? Propose a new set of numbers.
  - 2, 4, 6
- The rule – three ascending numbers.
  - **Confirmation bias** – a tendency to collect confirming rather than disconfirming information.
- Think about buying a new car, hiring a new employee, starting research on a new product line?

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## Judgment Error #5

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- Consider these facts:
  - 80 percent of students believed they were in the top 30 percent of safe drivers.
  - A survey asked 829,000 high school students to rate their own ability to "get along with others," and less than 1 percent rated themselves as below average. Further, 60 percent rated themselves in the top 10 percent, and 25 percent rated themselves in the 1 percent.
- This is **Overconfidence bias** – most of us are overconfident in our estimation abilities, and do not acknowledge our true uncertainty.

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## Judgment Error #6

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- Consider the following:
  - What is the probability of tossing a “tail”?
    - 0.5
  - What is the probability of HHHHH?
    - $0.5 \times 0.5 \times 0.5 \times 0.5 \times 0.5$
  - After four heads in a row, what is the probability of a fifth head?
    - 0.5 (counterintuitive to many people)
  - **Probability bias** – intuition overcomes rationality

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## Avoiding Bias

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1. **Do not** jump to conclusions.
2. **Do not** assume a relationship is a cause; record and test your decision outcomes.
3. **Do not** base your conclusion only on your experience.
4. **Do not** just look to support your case; look for non-supporting evidence too.
5. **Do not** fall prey to overconfidence; get confidence evidence and ranges.

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## Some Other Biases

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- Selective search for evidence
  - A tendency to gather facts that support certain conclusions but disregard others that support other conclusions.
- Selective perception
  - We tend to screen out evidence that we do not think is relevant.
- Wishful thinking (optimism)
  - We tend to see things positively – this distorts our thinking and perception.
- Groupthink
  - Peer pressure to conform to the opinions of the group.

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[http://en.wikipedia.org/wiki/List\\_of\\_cognitive\\_biases](http://en.wikipedia.org/wiki/List_of_cognitive_biases)

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- **anchoring** - the tendency to rely too heavily, or “anchor,” on one trait or piece of information when making decisions.
- **bandwagon effect** - the tendency to do (or believe) things because many other people do (or believe) the same.
- **base rate** - the tendency to base assessments on personal beliefs (see also [base rate neglect](#) and [representativeness heuristic](#))
- **base rate fallacy** - the tendency not to compensate for one's own cognitive biases.
- **confirmation bias** - the tendency to search for or interpret information in a way that confirms one's preconceptions.
- **contrast effect** - the enhancement or diminishment of a weight or other measurement when compared with recently observed contrasting object.
- **disconfirmation bias** - the tendency for people to extend critical scrutiny to information which contradicts their prior beliefs and accept uncritically information that is congruent with their prior beliefs.
- **endowment effect** - the tendency for people to value something more as soon as they own it.
- **hyperbolic discounting** - the tendency for people to have a stronger preference for more immediate payoffs relative to later payoffs, the closer to the present both payoffs are.
- **illusion of control** - the tendency for human beings to believe they can control or at least influence outcomes which they clearly cannot.
- **impact bias** - the tendency for people to overestimate the length or the intensity of the impact of future feeling states.
- **just-world phenomenon** - the tendency for people to believe the world is “just” and so therefore people “get what they deserve.”
- **loss aversion** - the tendency for people to strongly prefer avoiding losses than acquiring gains (see also [sunk cost effect](#))
- **mere proximity effect** - the tendency to express undue liking for things merely because they are familiar with them.
- **cultural anchoring** - the tendency for cultural symbols of certain colors to affect affective reasoning.
- **planning fallacy** - the tendency to underestimate task-completion times.
- **prospect theory effect** - the tendency to make risk-averse choices if the expected outcome is positive, but risk-seeking choices to avoid negative outcomes.
- **rosy retrospection** - the tendency to rate past events more positively than they had actually rated them when the event occurred.
- **selective perception** - the tendency for expectations to affect perception.
- **status quo bias** - the tendency for people to like things to stay relatively the same.
- **von Restorff effect** - the tendency for an item that “stands out like a sore thumb” to be more likely to be remembered than other items.

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