

## PBS 402C Problems Analysis and Approach : Framing the Issue

**INTRODUCTION:** In Decision Analysis we looked at the unconscious drivers that underlie most of our decision making. When we get into higher level decisions, or strategic decision making, we are generally dealing with a problem. Therefore Strategic Decision Making and Problem Solving, for our purposes here today, are synonymous. We also ended our Decision Analysis lesson with the thought that strategic decision making requires some kind of process, and that reframing can be crucial when determining exactly what the problem is.

Models can be helpful for that process... sometimes. Models are generally simplified and mechanistic. All models can be hijacked by emotions, perceptions, limitations of framing, understanding, etc. In addition, many of us, and the military mindset in general, have a tendency towards reductionism. We like to reduce complex planning or problem solving concepts into easily understood uniform tools that we can use as needed. We want a result, a tool, an immediate and tangible take-away. We sometimes tend to reverse engineer based on a desired end state - using the language of COGs, LOEs, objectives / effects - with decision points and milestones. We like to organize sequentially and to reach for the quickest, most expedient, efficient, or available solution.

However, many of the challenges we may face can stem from complex adaptive systems that do not behave in ways that follow a sequential logic; they are non-linear and emergent. This is paradoxical to most military planning and problem formulation models that are based on desired means and ends, and traditionally demand a clear and definable goal. This requires a different way of analyzing and approaching today's and tomorrow's fast moving and polymorphic challenges.

So here are our goals today, for the Problems Analysis and Approaches lesson.

1. Briefly review some models and identify their limitations
2. Identify characteristics of a strategic decision
3. Examine differences in complicated, versus complex (or wicked) problems
4. Slow down and focus on framing and re-framing

Today's lesson is NOT about identifying solutions. We are pretty good at that. Today we simply want to clearly identify issues – which is Step 1 of any problem solving or strategic decision making scenario. No matter what model or process you use, if the initial identification of an issue (Step 1) is not done well (creatively, thoroughly, from multiple angles), all other subsequent steps or phases will be pre-emptively jacked!

You have two other readings for this lesson. *Decision Making at the Strategic Level* will introduce a couple of problem solving models, and some general thoughts on what a strategic decision is. *The Critical Difference Between Complex and Complicated* will give you food for thought on how our expertise is necessary for, and works well for complicated problems but can't always help us in situations that involve complexity. The rest of **this** reading will focus on framing and reframing.

### **PROBLEM FRAMING IS ESSENTIAL**

*'If I have an hour to solve a problem, I'd spend 55 minutes thinking about the problem and 5 minutes thinking about the solution'* (Albert Einstein)

Why is framing - and just as importantly reframing – such a topic of importance?

The 1st step of nearly any Problem Solving or Strategic Decision making situation is to define the issue. Spending time consciously defining a problem is vital for successful solution finding. Without the proper framing, there is no certainty about the appropriate focus on the right issue. How a problem is framed or described can determine the kinds of options considered to address the problem, stakeholders' perceptions of its importance, and how to recognize achievement of the desired solution. Naturally, we will first define – or frame - an issue from our own point of view, based on our personal experiences, education, knowledge, perceptions, and goals.

That is where re-framing comes in. Far too often, people invest time, effort and resources in solving the wrong problem or a problem that doesn't even exist. The military is no exception.

From the Joint Special Operations University Design and Innovation course: “When addressing the most significant military challenges in the 21st century, ‘single paradigm blindness’ was the worst offender. This is where militaries employ one paradigm to generate subsequent methodologies to decision making and problem solving. The character of these methodologies is that they are non-reflective. The content and method can be critiqued, transformed, or improved, but the form (issue, event, or situation) that generates that content is unquestioned. One theorist observed that “the more we do the wrong thing right, the wronger we get.” This becomes the never-ending cycle of military strategies that get very proficient at doing the wrong things over and over.” (JSOU p.35)

When we encounter other paradigms, perspectives, or worldviews, we may dismiss them as irrelevant, not recognize them at all due to seeing through our own ‘lens’, or insist on doing things our way, because, of course, our way just makes so much sense! In some cases we may need to step back and ‘frame’ ourselves first, then go on to ‘frame’ other inputs, paradigms, etc. This helps us to better appreciate the complexity of systems, and to be more cognitively flexible than potential adversaries. (JSOU p. 46)

Case in point: A military unit in Afghanistan came upon a remote village where the only drinking water well was a few miles away from the village itself. Each day the women of the village would trek across the rough terrain in groups to return with jugs of water. The military unit immediately set about investing reconstruction funds to dig a new well much closer to the village, which was embraced by the village elder males as a great investment. Soon after, the well was sabotaged nightly by unknown assailants. The unit set about to capturing the terrorists who were damaging their good work, but discovered that it was the village women sabotaging their own well – there were no terrorists in the area at all. The deeper story was that the women cherished those long walks as time away from the male-dominated village social structure, where they could talk and behave more freely. This new water well disrupted these ritual behaviors and triggered entirely new problems that were completely unforeseeable to the military unit - who were interpreting reality through a Western lens. While Westerners most often desire improved user experiences such as speed and ease of access, the social construction of that village did not correlate with such a simplistic and linear cause and effect. (JSOU p.35)

### **WHY SHOULD YOU THINK ABOUT HOW THE ISSUE IS FRAMED?**

The answer is simple. Framing an issue helps structure thinking about what the problem is about and how it can be addressed. The way a problem is framed can profoundly influence the choices you make. It gives your audience a particular mindset about your issue. And mindsets are powerful; they govern future thoughts and action. Just as how a picture or painting is framed affects how we see it and how we value it, how any issue is framed similarly affects our perceptions and values. Framing the issue also involves identifying the audiences you are speaking to or for, who or what are the targets of change and who are the agents of change.

### **THE FRAMING TRAP**

In a case involving automobile insurance, for example, framing made a \$200 million difference. To reduce insurance costs, two neighboring states, New Jersey and Pennsylvania, made similar changes in their laws. Each state gave drivers a new option: By accepting a limited right to sue, they could lower their premiums. But the two states framed the choice in very different ways: In New Jersey, you automatically got the limited right to sue unless you specified otherwise; in Pennsylvania, you got the full right to sue unless you specified otherwise. The different frames established different status quos, and, not surprisingly, most consumers defaulted to the status quo. As a result, in New Jersey about 80% of drivers chose the limited right to sue, but in Pennsylvania only 25% chose it. Because of the way it framed the choice, Pennsylvania failed to gain approximately \$200 million in expected insurance and litigation savings.

The framing trap can take many forms, and as the insurance example shows, it is often closely related to other psychological traps. A frame can establish the *status quo* or introduce an *anchor*. It can highlight *sunk costs* or lead you toward *confirming evidence*. Decision researchers have documented two types of frames that distort decision making with particular frequency:

**FRAMES AS GAINS VERSUS LOSSES:** In a study patterned after a classic experiment by decision researchers Daniel Kahneman and Amos Tversky, researchers posed the following problem to a group of insurance professionals:

You are a marine property adjuster charged with minimizing the loss of cargo on three insured barges that sank yesterday off the coast of Alaska. Each barge holds \$200,000 worth of cargo, which will be lost if not salvaged within 72 hours. The owner of a local marine-salvage company gives you two options, both of which will cost the same:

**Plan A:** This plan will save the cargo of one of the three barges, worth \$200,000.

**Plan B:** This plan has a one-third probability of saving the cargo on all three barges, worth \$600,000, but has a two-thirds probability of saving nothing.

**Which plan would you choose?**

If you are like 71% of the respondents in the study, you chose the “less risky” Plan A, which will save one barge for sure. Another group in the study, however, was asked to choose between alternatives C and D:

**Plan C:** This plan will result in the loss of two of the three cargoes, worth \$400,000.

**Plan D:** This plan has a two-thirds probability of resulting in the loss of all three cargoes and the entire \$600,000 but has a one-third probability of losing no cargo.

Faced with this choice, 80% of these respondents preferred Plan D.

The pairs of alternatives are, of course, precisely equivalent—Plan A is the same as Plan C, and Plan B is the same as Plan D—they’ve just been framed in different ways. The strikingly different responses reveal that people are risk averse when a problem is posed in terms of gains (barges saved) but risk seeking when a problem is posed in terms of avoiding losses (barges lost). *Furthermore, they tend to adopt the frame as it is presented to them rather than restating the problem in their own way.*

**FRAMING WITH DIFFERENT REFERENCE POINTS:** A problem can also elicit very different responses when frames use different reference points. Let’s say you have \$2,000 in your checking account and you are asked the following question: Would you accept a fifty-fifty chance of either losing \$300 or winning \$500?

What if you were asked this question: Would you prefer to keep your checking account

balance of \$2,000 or to accept a fifty-fifty chance of having either \$1,700 or \$2,500 in your account?

Once again, the two questions pose the same problem. While your answers to both questions should, rationally speaking, be the same, studies have shown that many people would refuse the fifty-fifty chance in the first question but accept it in the second. Their different reactions result from the different reference points presented in the two frames. The first frame, with its reference point of zero, emphasizes incremental gains and losses, and the thought of losing triggers a conservative response in many people's minds. The second frame, with its reference point of \$2,000, puts things into perspective by emphasizing the real financial impact of the decision.

So we can see how framing an issue, decision or problem from the very beginning of the process is so impactful. As stated earlier, the way a problem is framed or described can determine the kinds of solution options considered. Framing as a loss versus a gain, or with pre-determined reference points makes one picture look like a different one. In other words, the framing hints at what the issue is, who is responsible, and what possible solutions are. Successful framing can put you in a favorable position to direct the discussion of the problem and improve the chances of a successful solution.

### WHY REFRAMING?

According to Arnaud Chevalier, Professor of Economics at the University of London: *"I've been teaching complex problem solving for over five years, during which I've coached hundreds of people. I can't remember a single instance where someone's initial definition of their problem was—once they closely inspected it—the one they decided was the right one. Not once. Yet most were fairly confident that their original formulation was what they really wanted. I'm not the only one recognizing this as an issue. For instance, the Yale School of Management has an entire course on problem framing in its curriculum.*

*We tend to rush through problem framing because, well, it isn't really problem solving: 'let's get down to finding solutions', our impatient selves go, 'and quit wasting time on this'. But embarking into problem solving without proper problem framing is like driving between two unfamiliar locations without checking out the map first: we think we might get it right—and, indeed, we might—but chances are, we won't. And the cost of doing it wrong is high; so maybe construction is a better analogy: framing the problem is like deciding where to build your new house. It's important because once you've built your building, you can't change its location and that is a pretty a high cost of failure."*

A poorly framed problem can undermine even the best-considered decision. Adverse effects of framing can be mitigated by framing multiple times using multiple perspectives or strategies - Reframing.

### APPROACHES AND STRATEGIES FOR REFRAMING

- ❖ Don't automatically accept the initial frame, whether it was formulated by you or by someone else. Always try to reframe the problem in various ways. Look for distortions caused by the frames.
- ❖ Try posing problems in a neutral, redundant way that combines gains and losses or embraces different reference points. For example: Would you accept a fifty-fifty chance of either losing \$300, resulting in a bank balance of \$1,700, or winning \$500, resulting in a bank balance of \$2,500?
- ❖ Challenge assumptions. When framing a problem, we need to ask ourselves what do we know to be true and what and *how much have we assumed* to be true.
- ❖ Broaden and narrow your view. Broaden your view of the problem by questioning the more significant reasons for doing something. You may discover that the reach and roots of a problem are far beyond the level you were digging in. Also narrow your focus to make sure that your wide-ranging problem is not finally responding to a very tiny and specific cause.
- ❖ Change the perspective. Observe the problem from above as if you would be totally external to it. Think about how different ways in which the problem could be packaged. Analyze it from the perspectives of all stakeholders involved. Think about an opposing view and how you would counter it.
- ❖ Give your problem to others. When others recommend decisions, examine the way they framed the problem and challenge their assumptions. Gain some fresh insights to it before getting into creating the solution.
- ❖ Frame questions, not statements. Questions open up the framework to new streams of thoughts, whereas statements might reduce the views to the simplistic negative assumption that things are not going well. 'Our marriage is suffering' is a demoralizing statement. 'How can we make our marriage be great again' is a question opening the door to successful problem-solving.
- ❖ Become a problem-maker. Still not able to pin it down? Turn it on its head and instead try to focus on how to create the problem. Creativity always comes from addressing an issue from a different angle or perspective.
- ❖ Think hard *throughout* your decision-making process about the framing of the problem. In other words, even though you may not have accepted your initial frame and have considered alternative perspectives, continue to check back on it. At points throughout the process, particularly near the end, ask yourself how your thinking might change if the framing changed (metacognition - Thinking about thinking!).

Continuously step back to see that big picture. As evidence surfaces, you will probably face the tradeoff of continuously improving your problem statement versus complying with logistical constraints (time, money). You should decide whether to integrate these changes in that light—realizing that the longer you wait to make a change, a decision, or address a problem, the more ‘expensive’ it is.

*“When a decision makes sense through several frames, it’s probably a good decision.” (J.E. Russo, 1989)*

This continuous big picture check-in is especially important when dealing with complexity, because complex problems usually are what Rittel and Webber call wicked problems: you sometimes don’t find out what the problem truly is until you are one-third of the way through its resolution.

### WHAT’S A WICKED PROBLEM?

In 1973, design theorists Horst Rittel and Melvin Webber introduced the term "wicked problem" in order to draw attention to the complexities and challenges of addressing planning and social policy problems. Unlike the “tame” problems of mathematics and chess, the wicked problems of planning lack clarity in both their aims and solutions. In addition to these challenges of articulation and internal logic, they are subject to real-world constraints that prevent multiple and risk-free attempts at solving. As described by Rittel and Webber, wicked problems have 10 important characteristics:

- 1) **They do not have a definitive formulation** – the information needed to understand or describe it depends on having an exhaustive inventory of all the conceivable solutions ahead of time.
- 2) **They do not have a “stopping rule.** In other words, these problems lack specific criteria that signals when they are solved.
- 3) **Their solutions are not true or false, only good or bad / better or worse.** Different stakeholders judge the ‘solutions’ through different value sets.
- 4) **There is no way to test the solution to a wicked problem.** Results and consequences may outweigh intended benefits.
- 5) **They cannot be studied through trial and error.** Their solutions are irreversible so, as Rittel and Webber put it, “every trial counts.”
- 6) **There is no end to the number of solutions or approaches to a wicked problem.**
- 7) **All wicked problems are essentially unique.**

8) **Wicked problems can always be described as the symptom of other problems.** A good deal of mutual and circular causality is involved, and there are many causal levels to consider.

9) **The way a wicked problem is described determines its possible solutions.** The choice of explanation will drive the nature of the resolution.

10) **Planners, that is those who present solutions to these problems, have no right to be wrong.** Whereas a researcher can test various hypotheses, planners are liable for the consequences of the solutions they generate; the effects can matter a great deal to the people who are touched by those actions.

Climate change, for example, is a wicked problem. It avoids straightforward articulation and is impossible to solve in a way that is simple or final. This is borne out by our changing conversations around climate science and conservation, the unique regional factors that determine the local consequences of climate change, and our ability to present endless possible solutions (as well as the irreversibility of these solutions).

Think about it. How many ways can YOU think of to frame the issue of climate change? How might accumulating more information and exposure on the topic change your approach to, and your framing of it? How might working through a solution change your mind along the way as to the wisdom of the solution?

## CONCLUSION

In his book, *Team of Teams*, Gen Stanley McChrystal writes about the complexity in combatting ISIS, an ever-changing, adaptive adversary in an extremely harsh and complex environment, and how that complexity confounded established processes and efficiencies of the much better trained and equipped American military. It was, and remains, a wicked problem. He stated: *“There’s a temptation for all of us to blame failures on factors outside our control. There is also comfort in doubling down on proven processes, regardless of their efficacy. Few of us are criticized if we faithfully do what has worked many times before, but feeling comfortable or dodging criticism should not be our measure of success. There’s likely a place in paradise for people who tried hard, but what really matters is succeeding. If that requires you to change, that’s your mission.”*

The key is to start with low confidence in your problem statement and to let it increase if evidence indicates that you should. So keep the big picture in mind through metacognition and remember, it isn’t about being able to prove you were right from the beginning – it’s about adapting, learning, and being ‘as right as you can be’ along the way.

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