Chapter 3 - Problem Restatement (excerpt)

A man awoke one morning to find a puddle of water in the middle of his king-size water bed.

To fix the puncture, he rolled the mattress outdoors and filled it with more water so he could locate the leak more easily.

But the enormous mattress, bloated with water and impossible to control on his steeply inclined lawn, rolled downhill, smashing into a clump of thorny bushes that poked holes in the mattress’s rubbery fabric.

Disgusted, he disposed of the mattress and its frame and moved a standard bed into his room.

The next morning he awoke to find a puddle of water in the middle of the new bed.

The upstairs bathroom had a leaky drain. Mistaken cause and effect.

It happens all the time.

He defined the problem as “How can I fix the leak?”

His analysis was guided by that definition — by that statement — of the problem. As it turned out, he had defined the problem incorrectly.

He should have asked, “What is the source of the water on my blanket?”

He should have made a distinction between the problem and its symptoms.

Had he done so, his analysis would probably have considered alternative sources and revealed the source to be not the water bed but a leaky drain in an upstairs bathroom.

How we define a problem usually determines how we analyze it. It sends us in a particular direction. And how we analyze a problem — the direction we take — absolutely determines whether we find a solution and what the quality of that solution is.

We frequently discover, based on information and perceptions gained midway through the analysis, that the initial problem statement was far off the mark.

We can find examples all around us of people whose narrow definition of a problem caused their analysis to be shortsighted, overlooking alternative and possibly more beneficial solutions.

Take the case of two parents concerned about their teenage son’s poor grades in high school.

FATHER: “He just doesn’t apply himself.”
MOTHER: “I know. He really isn’t interested. His mind wanders.”

* These notes are intended for personal use as a study guide to accompany the book.
FATHER: “I’m tired of harping about it all the time.”
MOTHER: “Me, too. It doesn’t seem to have any effect.”
FATHER: “Maybe he needs tutoring in how to study.”
MOTHER: “Lord knows it wouldn’t hurt. He has terrible study habits.”
FATHER: “I’ll call the school tomorrow and arrange something.”
MOTHER: “Good. I’m sure it will help him.”

The parents are pleased.

They have defined the problem, arrived at a solution, and are taking corrective action.

But are “lack of interest” and a “wandering mind” really the core problem?

Will tutoring the son in how to study resolve it?

Perhaps. But the parents may be addressing only symptoms of a deeper problem.

Chances are the son himself doesn’t know what the problem is. He knows only that he isn’t motivated to study. But why isn’t he? What is the real problem?

Here’s another example: The parking lot outside an office building is jammed with workers’ cars.

Management decide to tackle the problem, so they convene a working group and charge it with devising different ways to redesign the parking lot to hold more cars. The working group does its job, coming up with half a dozen different ways to increase the lot’s capacity.

In this case, management defined the problem as how to increase the lot’s capacity, and the solutions they sought were accordingly restricted to that statement of the problem.

Nothing wrong with that, is there? After all, the lot is jammed. Obviously, more parking space is needed.

But there are other ways to view (state) the problem, such as how to reduce the number of cars in the parking lot. (Options for doing that might be carpooling, moving elements of the company to other locations, and eliminating jobs to reduce the number of employees.)

Every problem, from major ones, such as abortion and national health care, to mundane ones, such as an overdrawn checking account, can be viewed from multiple conflicting perspectives.

And what drives these differing perspectives?

Biases and mind-sets, those unseen killers of objective truth, determine our perspective of any problem.

That perspective in turn drives our analysis, our conclusions, and ultimately our recommendations.

Another constraint is that the moment we define a problem our thinking about it quickly narrows considerably.
It’s those mental traits again: patterning, focusing, seeking explanations, looking for supportive evidence, and so on.

Given the tremendous influence of biases on our thinking, it makes good sense at the outset of the problem-solving process (before we begin seriously analyzing the problem) to deliberately strive to identify and examine our biases as they relate to the problem at hand. What we learn may surprise us and put us on the track to solutions.

Although identifying and examining biases is the rational, common sense thing to do and will obviously greatly benefit our analysis and lead to better solutions, I know from personal experience and from observing others that attempting to make ourselves aware of our biases is extremely difficult, if not impossible.

Let’s face it, the human mind by design works to conceal the biases that drive our thinking. Circumventing that design is a formidable task.

So if identifying our biases through introspection is impracticable, what are we to do? How are we to cope with these mental traits when defining a problem?

I recommend an indirect approach, which is to restate (redefine) the problem in as many different ways as we can think of.

We simply shift our mental gears into a divergent mode (more easily said than done, I realize) and start pumping out restatements without evaluating them. The key here, as in all divergent thinking is letting the ideas flow freely, without attempting to justify them.

The aim of problem restatement is to broaden our perspective of a problem, helping us to identify the central issues and alternative solutions and increasing the chance that the outcome our analysis produces will fully, not partially, resolve the problem.

Sometimes restating the problem is difficult because the original statement was poorly articulated.

All the more reason, then, to more clearly define it. One can generally gain most of the benefits of restating a problem in five or ten minutes. However, those minutes are quality time where analysis is concerned.

A problem restatement session will rather quickly, almost magically, focus on the crux of a problem — the core issues — and reveal what the problem is really all about, leaving our biases in the dust, so to speak.

Identifying the crux of a problem saves immense time, effort, and money in the analytic phase.

Sometimes restating a problem points to a solution, though usually it shows there is more than one problem and helps identify them.
If, as is often the case, we are analyzing a problem for someone else’s benefit, it is best to generate the problem restatements from that person’s perspective.

Most important of all, restatements should, whenever possible, be put into writing so we — and our consumer, if the problem is owned by someone else — can study them.

Keep in mind, however, that the goal of problem restatement is to expand our thinking about the problem, not to solve it.

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Pitfalls in Problem Definition

There are four common pitfalls in defining problems:

1. **No focus—definition is too vague or broad.**
   
   Example: What should we do about computers in the workplace?

2. **Focus is misdirected—definition is too narrow.**
   
   Example: Johnny’s grades are slipping. How can we get him to study harder?

3. **Statement is assumption-driven.**
   
   Example: How can we make leading businesses aware of our marketing capabilities?

4. **Statement is solution-driven.**
   
   Example: How can we persuade the legislature to build more prisons to reduce prison overcrowding?

Techniques for Problem Restatement:

1. **Paraphrase:** Restate the problem using different words without losing the original meaning.
   
   Initial statement: How can we limit congestion on the roads?
   
   Paraphrase: How can we keep road congestion from growing?

   Trying to say the same thing with different words puts a slightly different spin on the meaning, which triggers.

2. **180 degrees:** Turn the problem on its head.
   
   Initial statement: How can we get employees to come to the company picnic?

   180 degrees: How can we discourage employees from attending the picnic?
Taking the opposite view of a problem is a surprisingly effective technique, for it not only challenges the problem’s underlying premises but directly identifies what is causing the problem.

In the example, the answer to the 180-degree statement may be that the picnic is scheduled at a time when employees will be at church or are otherwise engaged in important personal activities. If so, scheduling around those activities would be one way to get employees to come to the picnic.

3. **Broaden the focus**: Restate the problem in a larger context.

Initial statement: Should I change jobs?

Broaden focus: How can I achieve job security?

Note that the answer to the initial statement is a yes or no and immediately cuts off consideration of alternative options.

4. **Redirect the focus**: Boldly, consciously change the focus.

Initial statement: How can we boost sales?

Redirected focus: How can we cut costs?

This approach demands the most thought and creativity.

It is often the most difficult but also the most productive.

5. **Ask “Why”**: Ask “why” of the initial problem statement. Then formulate a new problem statement based on the answer. Then ask “why” again, and again restate the problem based on the answer. Repeat this process a number of times until the essence of the “real” problem emerges.

Initial statement: How can we market our in-house multimedia products?

Why? Because many of our internal customers are outsourcing their multimedia projects. Restatement: How can we keep internal customers from outsourcing their multimedia projects?

Why? Because it should be our mandate to do all of the organization’s multimedia. Restatement: How can we establish a mandate to do all of the organization’s multimedia?

Why? Because we need to broaden our customer base. Restatement: How can we broaden our customer base?

Why? Because we need a larger base in order to be cost effective. Restatement: How can we become more cost effective?

Why? Because our profit margin is diminishing.

Restatement: How can we increase our profit margin?
A principal problem has emerged: How to obtain a mandate to do all of the organization’s multimedia projects.

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Restating a problem several different ways is a divergent technique that opens our mind to alternatives.

Restating a problem invariably serves to open it up, revealing important perspectives and issues we otherwise might have overlooked.

Grammar matters: A valuable tip when restating problems is to make them simple, positive, and in active voice.

*The mind works more easily and quickly with simple, positive, active-voice sentences than with complex, negative, passive-voice sentences.*

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