CSC: CoR: Chapter 4: From Questions to a Problem

The 10 **salient sentence strings** presented below are lifted from the chapter as is, without modification (except, perhaps, for a bit of punctuation here or there). They are presented in order of appearance in the chapter.

Ten Salient Sentence Strings

1. That significance [, the third step in the formula outlined in the previous chapter,] might at first be just for yourself, but you join a community of researchers when you can state that significance *from your readers' point of view*. In so doing, you create a stronger relationship with readers because you promise something in return for their interest in your report—a deeper understanding of something that matters to *them*. At that point, you have posed a *problem* that they recognize needs a solution.

2. [...] a *practical* problem is caused by some condition in the world (from spam to losing money in Omaha to terrorism) that troubles us because it costs us time, money, respect, security, opportunity, even our lives. We solve a practical problem by *doing* something (or by encouraging others to do something) to eliminate or at least mitigate the condition creating these tangible costs. But to know what to do, someone first has to *understand* something better.

3. That need for knowledge or understanding raises a conceptual problem. In research, a *conceptual* problem arises when we do not understand something about the world as well as we would like. We solve a conceptual problem not by doing something to change the world but by answering a question that helps us understand it better. We usually answer these questions through research, which is why conceptual problems are also called research problems: the word *conceptual* describes their condition and costs or consequences; the word *research* refers to how we solve them.

4. [...] you need a problem that focuses you on finding just those data that will help you solve it. It might take a while to figure out what that problem is, but from the outset you have to think about it.

5. Practical problems and conceptual problems have the same two-part structure: • a situation or *condition*, and • undesirable *consequences* caused by that condition, *costs* that you (or, better, your readers) don't want to pay. What distinguishes them is the nature of those conditions and costs.

6. When you write, readers judge the significance of your problem not by the cost *you* pay, but by the cost *they* pay if you don't solve it. So what *you* think is a problem they might not. To make your problem their problem, you must frame it from *their* point of view, so that they see its costs to *them*.

7. Practical and conceptual problems have the same two-part structure, but they have different kinds of conditions and costs. • The condition of a practical problem can be *any* state of affairs that has a tangible cost for you or, better, for your readers. • The condition of a conceptual problem, however, is *always* some version of not knowing or not understanding something.

8. The cost of a practical problem is always some tangible thing or situation we don't like. A conceptual problem does not have such a tangible cost. In fact, we'll emphasize this

difference by calling the cost of a conceptual problem its *consequence*. The consequence of a conceptual problem is a particular kind of ignorance: it is a lack of understanding that keeps us from understanding something else even more significant. Put another way, because we haven't answered one question, we can't answer another that is more important.

9. The condition and the consequence of a conceptual problem are questions that relate to each other in two ways: • The answer to the first question (Q1) helps you answer the second (Q2). • The answer to the second question (Q2) is more important than the answer to the first (Q1).

10. We call research *pure* when it addresses a conceptual problem that does not bear directly on any practical situation in the world, when it only improves the understanding of a community of researchers. We call research *applied* when it addresses a conceptual problem that does have practical consequences. You can tell whether research is pure or applied by looking at the last of the three steps defining your project. Does it refer to knowing [pure] or doing [applied]?

Additional Salient Sentence Strings that I felt Compelled to Include:

11. Most research projects in the humanities and many in the natural and social sciences have no direct application to daily life. But as the term *pure* suggests, many researchers value such research more than they do applied research. They believe that the pursuit of knowledge "for its own sake" reflects humanity's highest calling: to know more, not for the sake of money or power, but for the transcendental good of greater understanding and a richer life of the mind.

12. You can also find research problems in your sources. Where in them do you see contradictions, inconsistencies, incomplete explanations? Tentatively assume that other readers would or should feel the same. Many research projects begin with an imaginary conversation with the author of a source: *Wait a minute, he's ignoring . . .* But before you set out to correct a gap or misunderstanding, be sure it's real, not just your own misreading.

13. Critical reading can also help you discover a good research problem in your own drafts. We often do our best thinking in the last few pages that we write, because there we formulate claims we did not anticipate when we started. If in an early draft you arrive at an unanticipated claim, ask yourself what question it might answer. Paradoxical as it might seem, you may have answered a question that you have not yet asked, and thereby solved a problem that you have not yet posed. Your task is to figure out what that problem might be.

14. [...] in business and government, in law and medicine, in politics and international diplomacy, no skill is valued more highly than the ability to recognize a problem, then to articulate it in a way that convinces others both to care about it and to believe it can be solved, especially by you.