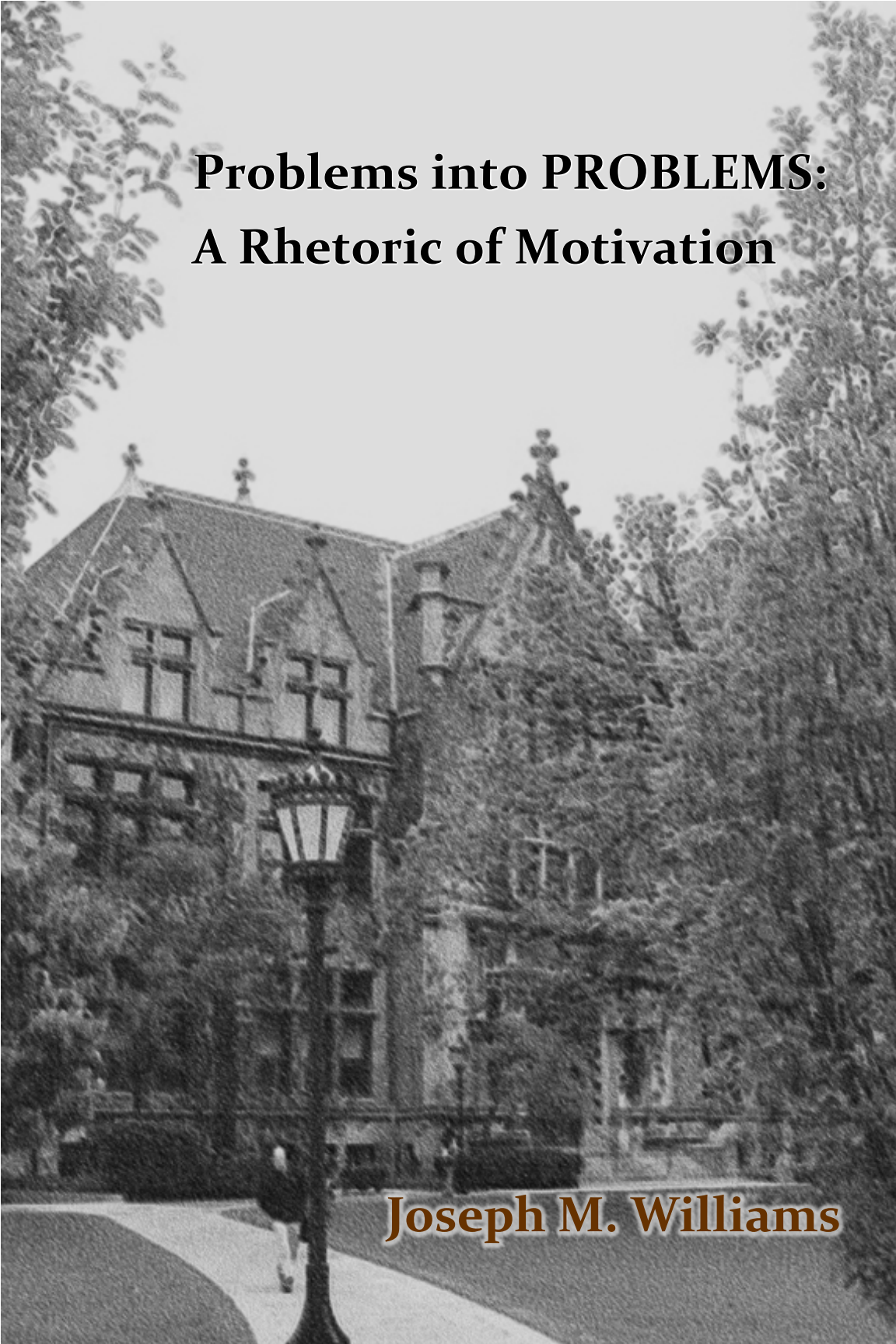
Problems into PROBLEMS: A Rhetoric of Motivation



Joseph M. Williams

PRACTICE & PEDAGOGY
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Problems into PROBLEMS: A Rhetoric of Motivation

By Joseph M. Williams

The WAC Clearinghouse
wac.colostate.edu
Fort Collins, Colorado

The WAC Clearinghouse, Fort Collins, Colorado 80523 -1052

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Series Editor's Introduction

In November 2004, Joseph M. Williams was referred to me by Nick Carbone, the New Media editor at Bedford/St. Martins and a long-time supporter of the WAC Clearinghouse. Dr. Williams had been looking for a home for a monograph he'd written about problems. "I wrote a rather lengthy piece on problem posing and matters of teaching it," he told me, noting that he had incorporated elements of his thinking about the issue into books he had written with Greg Colomb and that the entire piece had been referenced by scholars including Gerald Graff. "If there is a server somewhere where it could be downloaded, I'd be happy to send it along."

Dr. Williams' monograph was clearly a good fit for the Clearinghouse and, since late 2004, *Problems into PROBLEMS* has been available as a featured resource in our Teaching Exchange. Yet it offers far more – both in length and its depth of its treatment – than most of the resources offered in the Exchange. For a number of years, I pondered what to do with *Problems into PROBLEMS* and finally came upon the idea of building a new book series, Practice and Pedagogy, to serve as a home for the monograph and for similarly useful work, such as Richard E. Young's *Taxonomy of "Small Genres" for Writing Across the Curriculum*.

Dr. Williams' thoughtful analysis offers much to both writers and teachers of writing. He situates his monograph by referring not only to existing work on problem solving in rhetoric and composition, but on our treatment of problems in our writing and teaching:

> … [I]f the literature on solving such problems is thick, our understanding of how we articulate the substantive problem that occasions our efforts to solve them is quite thin. By "substantive problem" I do not mean the local and ongoing struggle toward the discovery and articulation of meaning, but the significant question whose answer justifies the effort, the problem in the world or mind whose solution repays our time spent

> writing and our readers' spent reading. We criticize the writing of our students and colleagues on many grounds, but none is more common – or devastating – than the observation that they have failed not just to solve a problem, but even to pose one that we think "interesting." And as teachers, we experience no failure more common than our inability to explain what we mean by "pose" or "interesting" or "problem" and what it is about a text that elicits such criticism.

I hope you will find this monograph as valuable and insightful as I have.

– Mike Palmquist, January 2011

Introduction

Problems Rhetorical and Substantive

For well more than a decade now, researchers have been reporting how in the act of drafting we recognize and solve rhetorical problems – how we evaluate and synthesize sources, set local rhetorical goals, then seek to achieve them. (See all of Flower, Flower et al; Carey and Flower; Kantz, Bryson et al.) But if the literature on solving such problems is thick, our understanding of how we articulate the substantive problem that occasions our efforts to solve them is quite thin. By "substantive problem" I do not mean the local and ongoing struggle toward the discovery and articulation of meaning, but the significant question whose answer justifies the effort, the problem in the world or mind whose solution repays our time spent writing and our readers' spent reading. We criticize the writing of our students and colleagues on many grounds, but none is more common – or devastating – than the observation that they have failed not just to solve a problem, but even to *pose* one that we think "interesting." And as teachers, we experience no failure more common than our inability to explain what we mean by "pose" or "interesting" or "problem" and what it is about a text that elicits such criticism (but for "interesting" see Davis, and Kaufer and Geisler, and for "problem," Carter).

Our sense of a "good problem" is most acute when we don't see one anywhere in a paper, but most immediately when we don't see one in its introduction. These two paragraphs introduced papers written in a first-year humanities course, responding to the question "What can we learn about Athenian values by comparing the appeals that the Corcyreans and Corinthians made to Athens early in Thucydides' *History*?"

> 1. In 433, Corcyra and Corinth disputed which should rule Epidamnus. Because they could not settle the conflict, they each sent representatives to Athens to appeal for its help. Corcyra emphasized how they could help Athens in the coming war while the Corinthians appealed to history and

the just thing to do. Since Athens was the birthplace of Socrates and Aristotle, it would be easy to think they would side with justice, but after debating among themselves, the Athenians decided to support Corcyra. It's important to understand the values that Athens rejected before the war, because we could be misled when they explain some of their cruel actions during the war. The speeches describe the values of justice, honor, and tradition, which the Athenians reject, and the values of pragmatism and self-interest, which they probably really believed in.

2. When Corcyra and Corinth disagreed over control of Epidamnus, they went to Athens to ask for help. The Corinthians appealed to Athens' sense of justice, while the Corcyreans appealed to their self-interest. When we think of justice we think of Socrates and Aristotle, so it would be easy to think that the Athenians would side with Corinth. But they sided with Corcyra. We have to understand the values that Athens rejects and accepts, because we could be misled about their real motives when they appeal to justice to defend some of their actions later in the war. Athens rejected the Corinthian values of justice, honor, and treaties, and accepted the Corcyrean values of future self-interest.

We might tell the writer of the first that when he found his substantive problem he solved a rhetorical one, the other that she has a rhetorical problem because she has not yet found a substantive one. But we ought not be surprised if the nuances of that usage escape them (indeed, it is a distinction not clearly, much less consistently made in much of the published literature on rhetorical problem solving). So as not to confound rhetorical problems with substantive ones, I will refer to a difficulty in general and to the local on-line struggles to create text in particular as small-p "problems"; to the substantive problems that occasion the struggle as PROBLEMS, specifically as we *articulate* them in introductions as justification for claiming our readers' time. My substantive PROBLEM in this paper has to do with problems and their articulation as PROBLEMS, particularly in introductions; among my local rhetorical problems as I wrote this paragraph was constructing an introduction that distinguished problems from PROBLEMS clearly.

Work on Introductions and Problems

The slight practical knowledge we have about introductions comes from the standard handbooks, most of which trivialize the slim legacy of classical advice about forensic *exordia* into banalities like "State what you are going to talk about" and "Catch the readers' interest with an anecdote or fact," as if in the real world we choose what to read on the basis of whether

our interest is piqued in the first sentence or two. That may be true as we browse through a popular magazine, but who reading these words has stopped reading a student paper because it opened in a boring way? In our professional worlds, most of what we read we read because we must, regardless of its opening charms. And as for formulating PROBLEMS, I know of only two texts that usefully address the matter at all, but both talk around their cognitive structure and neither explains how to articulate them persuasively (Flower, 1989; Young, Becker, and Pike). Two do address the structure of introductions, but both aim at technical writers and do not consider how the rhetorical articulation of a PROBLEM maps onto its cognitive structure (Mathis and Stephenson, Anderson). The rest that I have seen are not just useless, but often counterproductive.

Theoretical studies have gone only a bit further. Rhetoricians have debated at length the ontology of what I think they would call the problematic of a situation in the form of what Bitzer (1968, 1980) has called the "exigence" of the situation that demands a rhetorical response. But they have left what counts as exigent substantially undefined, as if it were a primitive in the system (see also Patton, Scott). In composition studies, the problem of articulating PROBLEMS in introductions has been pursued hardly at all. Hashimoto has unpacked the banality of most textbook advice. Another study contrasts how problems are defined in information sciences and in the philosophy of science, but does not distinguish a PROBLEM from a problem or address the articulation of either (Carter).[1]

Two other studies, both quite important, I think, have examined the ways that introductions to journal articles socially construct PROBLEMS in different fields (Bazerman, MacDonald), but neither decomposes the general concept of problem in a way that lets us understand how its cognitive structure informs its rhetorical articulation. The notion of PROBLEM lurks behind the inquiry into novelty by Kaufer and Geisler, but they do not attempt to map what counts as novel into its articulation (though as I will suggest later, there are analogues in their discussion of novelty and the components of a PROBLEM). In a series of useful studies, John Swales and his colleagues have mapped introductions in scientific, technical, and, more recently, in academic texts (Swales, 1984, 1985, 1990, 1992; Dudley-Evans, Crooks, Harris; for a more general discussion of problems see also Hoey and Jordan, 1984, 1988).

While Jordan, Hoey, and especially Swales broke important ground in this area, articulating PROBLEMS is, I think, a problem richer than even

these careful and detailed accounts suggest. And I know of only one study that examines how the introduction to a student paper influenced judgments about its author (Berkenkotter, Huckin, and Ackerman). But their methodology derives from Swales', does not address the underlying concept of PROBLEM, and is, I think, in one crucial regard, mistaken.[2]

The Consequences of our Ignorance

This gap in our understanding has exacted a cost on the performance of our students.

First, posing and solving PROBLEMS is what most of us do, but most of our students, both undergraduate and graduate, seem unaware of not just how to pose a PROBLEM, but that their first task is to find one. As a consequence, they often seem just to "write about" some topic, and when they do, we judge them to be not thinking "critically," to be writing in ways that are at best immature (Berkenkotter, Huckin, and Ackerman), at worst incompetent. Yet many of our students who do not seem to engage with academic PROBLEM-solving, in fact, do. Their problem is that they are ignorant of the conventional ways by which they should reveal that engagement; ours is that we have no systematic way of demonstrating to them the rhetoric of doing so.[3]

Second, students who do not understand how to articulate a PROBLEM lack a heuristic that would help them not just articulate one, but even know how to go about looking for one that their readers might judge "interesting" even once they articulated it. We have no systematic way to show them how to do that either.

Third, the introduction to any text profoundly influences how we interpret and evaluate the rest of it (Kieras 1978, 1980; Meyer 1977, 1985), but we do not understand how a writer's initial formulation of a PROBLEM influences how we evaluate its solution. If we do not understand how an introduction shapes a reader's response to what follows it, we cannot create a pedagogy that shows students how to anticipate those responses.

And there are costs to our theorizing: The formal analyses by Swales and others rest on an empiricist methodology based on counting and categorizing, so we do not know whether introductions have a text structure explicable by an account of discourse more robust than one based on accumulating examples and generalizing from them. We have no way to

understand the structure of introductions in the context of other or larger structures.

My object is thus both conceptual and pedagogical: I will describe how we articulate PROBLEMS in prototypical introductions, in order to offer a heuristic not only for articulating a PROBLEM persuasively, but for finding or inventing one in the first place.[4] This pedagogical objective rests on a structural account of problems and PROBLEMS that both reflects and reinforces a view of discourse structure more complex than that ordinarily used in composition studies, but not so fine-grained as to be useless for practical application. In Part I, I will describe how the cognitive structure of a problem informs the rhetorical structure of its articulation in introductions. In Part II, I will describe (i) how introductions influence judgments of whole texts, (ii) how some students have responded to a pedagogy that teaches an explicit rhetoric of PROBLEM formulation, and (iii) what it is about one kind of PROBLEM that makes it so difficult for them (and us) to engage with it. In Part III, I will discuss some practical issues in teaching PROBLEMS and suggest further research.

Part I. The Structure of Problems and PROBLEMS

1. Cognitive Structure

Four Definitions of Problem

It is difficult for our students to grasp what we mean by "problem," much less an "interesting" one, partly because we and they use the word in contradictory ways. First, in the ordinary language of our ordinary thinking, we associate "problem" with something unpleasant and difficult: indigestion, a dead battery, AIDS, Bosnia. But in our academic discourse, we use "problem" in at least three other ways.

- In its most trivialized form, a "problem" is something like "If four people can paint three walls of a room in two hours, how long would it take . . . ," an exercise that ideally measures, diagnoses, and teaches, but is more often a routine task with an algorithmic solution, something close to a five-paragraph essay.
- Among cognitive scientists, a problem is typically conceived of as a task, because their principal interest is in how rats and people solve problems, not in how they find or experience them, an objective that I think explains why they standardly resort to the metaphor of a space to be traversed, as a "gap which separates where you are from where you want to be" (Hayes). While this definition implicitly makes present point A less desirable than hoped-for point B, cognitivists do not build into their definition of "problem" the same negative feeling associated with "problem" in our ordinary language; beyond the mental effort entailed in solving one, for them a problem is devoid of affect. It simply defines the space through which someone or something tries to get from here to there, either literally as through a maze or figuratively through the calculations necessary to get to the cube root of 5.

- In the philosophy of science, problems are also spatially metaphorized, but often not just *as* a space between here and our goal, but as what is *in* that space. A problem is constituted by "obstacles or difficulties in the way of reaching goals" (Nickles) ; "a hurdle that we must surmount in order to achieve a goal" (Hattiagandi). More to our purpose, philosophers of science are interested in the problems that motivate our intellectual lives. Thus they are interested in problems not as any task, much less as unpleasant situations in our daily lives, but as significant intellectual projects defined by social and historical constraints and whose successful solution will be assessed by a community of discourse – the "problems" of evolution, quantum mechanics, mind vs. body. Such problems are variously characterized as "Explanatory Ideals [minus] Current Capacity" (Toulmin); as "a demand that a certain goal be achieved plus constraints on the manner in which the goal is achieved, i.e., [community defined] conditions of adequacy on the problem solution" (Nickles); as research projects ". . . constituted by constraints set by background theories" (Sintonen) – the problems we think of not as troublesome but as the *raison d'être* for the life of the mind.

But for our purposes, all of these definitions are flawed. Our ordinary language definition makes problem a holistic, internally unstructured condition or event: "My problem is _____.[fill in the blank with a single noun – alcoholism, poverty, depression] " It does not suggest how to decompose a problematical situation into elements that we can articulate as a PROBLEM. Worse, it implies that problems always have negative associations: When we ask a friend staring glumly into his beer what the problem is, we do not expect as a lugubrious response, "If two trains 40 miles apart leave their stations at the same time . . . " or "Fertility images in Yucatan between 300 and 600 AD."

Unlike cognitivists, philosophers of science address only problems that we consider "interesting," but along with cognitivists, they decompose "problem" into components – Place A, Place B, the distance between them, the obstacles therein, and so on. But that cognitivist or philosophical spatial figure structurally contradicts ordinary usage: In ordinary usage, we identify a problem not as the *space between* A and B nor even as the obstacles therein, but as *state A itself*. In ordinary usage, "the problem of AIDS" *is* AIDS, not "the gap between" having and not having it. Having AIDS is one problem; discovering its cure is another; and then actually traversing that

gap and overcoming the obstacles – i.e., getting rid of AIDS – is a different one yet. (And problems such as "Two trains leave their stations . . ." are wholly irrelevant to our concern, because they epitomize what it is about some problems that is least interesting – they have already been solved.)

So not only can we find no common denominator among these definitions; the senses of "problem" that we associate with "algorithmic," "bad," and "interesting" contradict one another, and none of them decompose a problem into its elements in a way that suggests how might we articulate them. So it is not surprising that students associate their ordinary language sense of problems as nasty or routine with our academically privileged definition of problem as interesting, and that as a consequence they are not infrequently baffled by what we mean when we say that they have a problem because they do not have one.

A Definition of Problem: Two Necessary Elements

We need a definition of "problem" that helps us decompose what we feel is a problematical situation into parts in a way that lets us articulate those parts in the statement of it as a PROBLEM, particularly in introductions. Such a definition should subsume both "bad" and "interesting" problems, and it should provide a heuristic that not only helps us look for a PROBLEM in mere accumulated knowledge, but lets us find one, construct it, and then evaluate its potential interest to a community of readers.

I begin with two situations not rhetorical and so not yet, in my terms, PROBLEMS:

1. On my way to get married, I get a flat – no spare, empty road. If I am late, my intended leaves me. She is rich and generous; I am in debt. Do I have a problem?
2. At the empty church, listening to the radio, I hear my lottery number announced – I have won a million dollars. I have only to appear on TV to pick up the check. Do I have a solution to at least one of my problems?

The default answers to both questions would seem to be yes, but could be no: If I didn't want to get married under any circumstances but was willing to only because I promised, my flat tire is no problem; indeed, it is a solution. And if I am hiding from the mob because they want five million minimum or my legs, then getting the one million is no solution, but a new

problem. I transformed a problem into a solution and a solution into a problem by changing the relationship between two components that are both necessary for the existence of either a problem or a PROBLEM (but not sufficient for the latter, a third component being still necessary for that):

> **Problem-component 1**: There must be a "de-stabilizing" condition. This condition can be literally *any state of affairs* – from a flat tire to winning the lottery – so long as it entails an effect of the kind next described as Problem-component 2.
>
> **Problem-component 2**: That de-stabilizing condition (hereafter just "Condition") must entail consequences that are undesirable to the person who claims the problem. Call these undesirable consequences of the Condition its "Costs." My flat tire is a Condition whose entailed Cost is that I lose my intended (if I really want to get married); my winning and picking up a million is a Condition whose entailed Cost is that the mob takes it and also breaks my legs.

By this definition, *just* having some painless but deadly disease that will kill me tomorrow is not alone a problem; it is not necessarily even a Condition in a problem. My deadly disease is the Condition of a potential problem *if and only if* that Condition entails for me a Cost that I want to avoid. I might not want to die tomorrow, but I am unlikely to worry about it now if I am scheduled to hang this afternoon.

Tangible problems of the world such as flat tires, broken legs, and deadly diseases are, as we shall see, structurally identical to what we call conceptual problems, but are, in a few crucial ways, different. As suggested, the Condition of a tangible problem can be literally any state of affairs (in *Paradise Lost*, the existence of God was a problem for Satan) and the Cost of a tangible problem is almost always defined by a consequence that makes the person who has the problem unhappy. On the other hand, the Condition and Cost of conceptual problems are quite different. The Condition part of a conceptual problem is always defined by a relatively small group of words that refer to a cognitive state we name ignorance, misunderstanding, error, paradox, discrepancy, puzzle conflict, dispute, disagreement, and so on, words that imply some gap in knowledge or flaw in understanding. We imply the Condition to a conceptual problem in a question that implicitly defines the range of our ignorance or misunderstanding: how many stars are in the sky? why do cats rub their jaws against things? did Latin epics influence the creation of *Beowulf*?

But that gap in knowledge or flawed understanding is part of a conceptual problem *if and only if* not finding the answer to the question

entails a Cost I do not want to bear. That Cost, however, is also defined by a gap in knowledge or flawed understanding *at a higher level of significance for the person asking the question.*

"How many stars are in the sky?" I don't know, but I thereby have no problem, because to be candid, I don't care that I don't know. I wouldn't mind knowing, but my ignorance of their number is no Condition to any conceptual problem that I can articulate, because I can think of no Cost that *I* bear if I go to my grave not knowing.[5] But for an astronomer, not knowing the number of stars in the sky is the Condition to a profound conceptual problem because the Cost of not knowing that number means that astronomers do not know something *much more important*: how much matter is in the universe? and not knowing how much matter is in the universe means that they don't know something more important yet – will the universe continue to expand into eventual oblivion or collapse back into itself and start over? In other words, what is not a problem for me might be a big one for someone else, who might be able to persuade me that I *should* have a problem with the number of stars in the sky.[6]

A rough heuristic to identify Conditions and Costs is to insert the question "So what?" between the sentences that we think state a Condition and the sentences that we think state its Cost. If a "So what?" is plausibly elicited by the prior sentences and plausibly answered by the following ones, if we do not feel compelled to ask once again, "So what?" but rather "Oh, I see," we have identified Conditions and Costs at least to our own satisfaction.

> The hole in the ozone is widening. *So what*? I might get cancer. *Oh, I see.*
>
> I have a flat tire. *So what*? I won't get married. *Oh, I see.*
>
> I won a million. *So what*? When I pick it up, the mob will break my legs. *Oh, I see.*
>
> I have a disease called exanguinary urotoma. *So what*? I will die.*Oh, I see.*
>
> I don't know how many stars there are in the sky. *So what*? Until I know, I can't
>
> calculate the total mass of the universe. *So what?* What do you mean "So what?"

As we shall see, the trick is identifying Costs to the satisfaction of our audience.

We can complicate this definition: Moving from A to B, from ignorance to knowledge, from flawed understanding to better understanding, must be difficult, unobvious, take thought, etc (Gagne). But as John Dewey put it, whenever anything "no matter how slight and commonplace in character – perplexes and challenges the mind so that it makes belief at all uncertain, there is a genuine problem, or question" (13). But in our terms, the perplexity or challenge that makes belief uncertain enough to constitute an "interesting" problem must entail a Cost to leaving that perplexity or uncertainty unresolved, and that Cost must be greater than the Condition that exacts it. So for our purposes, Dewey's definition stipulates only half the matter – the de-stabilizing Condition. In addition to the Condition of perplexity and challenge, there must be a Cost to leaving the perplexity unresolved, to leaving the challenge unmet. But before that problem rises to the level of a PROBLEM, that Cost must be exacted on someone other than ourselves: it must be recognized and acknowledged as a Cost exacted on our readers.

Transforming a Problem into a PROBLEM

Before we can articulate a problem rhetorically as a PROBLEM we require this third element – a community of readers who acknowledge and accept that the Cost has an impact on *them*. If I were obsessed with eliminating a gap in knowledge about the number of trees on the island of Zanzibar, I might have a problem if not finding out exacted on me the Cost of sleepless nights. But it would be a problem with no rhetorical dimension, because so far as I know, no one but me would pay the Cost of not knowing. But my purpose here is to describe the *rhetorical* structure of a substantive academic and professional problem that we articulate for readers as a PROBLEM that *they* might find not just "interesting," but as something in which they might recognize *an interest*, something in which they have a stake. Therefore, the third component:

> **Problem-component 3**: There must be a community of readers who perceive the Cost as undesirable *to themselves*, readers who are not just interested in a topic, but who have – or we believe should have – an interest in a problem being solved. (Crucial here is the distinction between just "*being* interested in" and "*having* an interest in.")

However much *we* might not want to bear the Costs of a Condition, if our readers perceive no Cost to *them*, then they have no problem and we have no PROBLEM, which constitutes a rhetorical problem for us, if we have an interest in their sharing our problem. This third component thus

requires either that our readers already know that they have the PROBLEM we pose (an exigence that seems to exist in the objective situation), or that by an act that parallels their willing suspension of disbelief when we ask them to read a fiction, they must will themselves (i.e., we must persuade them) to suspend their skeptical indifference to a PROBLEM that they did not know they had, and at least for the space of time it takes to read our introduction, be willing to imagine having it (the exigence that we construct for them and that they must play along with).

In either case, however, a PROBLEM is always socially constructed: if our audience already knows about the problem, then it has been constructed for us; if not, we have to construct a PROBLEM so that our readers will be not just interested in our PROBLEM, but have an interest in its Cost and thus in its solution.[7]

Here is the schematic structure of a substantive PROBLEM:

As I wrote this, I was wrestling with lower-case-problems, trying not only to articulate but to discover, define, and refine my upper-case-PROBLEM. It is a commonplace in our field that this act of writing helps us solve our problems, but a paradox that I will address below is that by helping us discover our solution, writing also helps us discover and define our PROBLEM. Unfortunately, it is difficult for our students to recognize even the possibility that solving a rhetorical problem might help them create a substantive PROBLEM, much less articulate it well, for at least three reasons:

- First, we must know the kinds of problems that our community of readers is likely to entertain as plausible. In regard to a tangibly pragmatic problem like AIDS, we can be reasonably sure that our widest community recognizes it as a *tangible, practical* problem that could become the basis for a *research* PROBLEM. But when we ask our students to write about what happened in *Hamlet* or ancient Greece, they have no tangible problem that pragmatically motivates them to formulate a conceptual problem that will motivate their research PROBLEM about either of those topics, much less know what conceptual problems a community of discourse will think plausible, much less "interesting" about them. Not until they become advanced students are they likely to be part of any

community of discourse that defines itself by having an interest in problems involving either *Hamlet* or Greece, problems that we expect them to articulate in their papers as PROBLEMS.

- Second, many students do not understand in the first place that a central object of education is not just to acquire information; as many fail to understand that it is also more than to learn to solve problems. Only a few come to us inclined to *look for* problems and then articulate them pro-actively. And so most of our students become, at best, reactive solvers of problems presented to them; at worst, passive purveyors of received knowledge.
- Third, even when they overcome these obstacles, few of them understand the structure of a problem and the rhetoric of its articulation as a PROBLEM.

There is little we can do about their lack of knowledge of any community of discourse beyond their own narrow one; acquiring that knowledge and joining any community takes time (though I will suggest how we can provide them with transitional communities of discourse in which their own problems can evolve into PROBLEMS). But in any context, we can encourage our students to understand that finding and posing problems is important and to help them understand why writing about some kinds of problems is so difficult. But to do that, we must first understand how the structure of a problem informs the structure of a PROBLEM, particularly as we formulate it in an introduction.

2. Introductions and the Rhetorical Construction of a PROBLEM

A First Approximation

This two-part structure of a problem directly informs its articulation as a PROBLEM. A minimally explicit introduction states both a causal Condition and its consequent Cost (though as we shall see, one or both may be implied). Since a problem implies a solution, an introduction must refer to it as well, either by stating its GIST or by implicitly offering a PROMISE that such a GIST will be forthcoming (I hereafter fully capitalize when I refer to some functional element of an introduction realized in words).

A minimally explicit introduction thus requires two elements, the statement of a PROBLEM and a RESPONSE to it, typically its SOLUTION. The statement of the PROBLEM in turn consists of its two necessary constitutive elements, COST and CONDITION:

> [(Recently, the thinning of the ozone layer has allowed sunlight to reach the earth unfiltered.) **CONDITION** (As a result, we are going to have more cancer and higher medical costs.) **COST**] **PROBLEM** [We can avoid these consequences only if we ban chemicals that degrade ozone.**GIST OF SOLUTION**] **RESPONSE**

As noted, the simplest way to locate CONDITIONS and COSTS is to determine between which two sentences or groups of sentences we might plausibly insert "So what?"

> The thinning of the ozone layer is allowing sunlight to reach the earth unfiltered. [*So what?*] We are going to have more cancer and higher medical costs. [*Oh, I see.*]

No lesson is more crucial and more difficult for any of us to learn than that readers may not accept our first answer. When a reader again asks "So what?" to the statement not of the Condition but of what we think is a Cost self-evident to anyone, that reader, however implausibly, does not perceive how she will bear what *she* will count as a Cost, and so we have still failed to articulate a PROBLEM:

> The thinning of the ozone layer allows sunlight to reach the earth unfiltered. [*So what?*] We are going to have more cancer and medical costs. [*So what?*] You will pay higher taxes and maybe die.

If at this point our audience had said not "Oh, I see" but again "So what?", we would have to acknowledge that she may never recognize what we think is her self-interest. The number of times we have to answer the question "So what?" is a metric of understanding the implications of a PROBLEM. By charting the points at which different readers stop asking "So what?" and say "Oh, I see," we define the concentric circles of wider and narrower communities of interest, which help define communities of discourse: nothing more clearly defines a community than its shared understanding of what it wants to avoid.

Typical introductions elaborate these elements in such detail and so variously (an issue we shall address in a moment) that their structures rarely stand out in the crisp relief that this formal analysis suggests: Typical introductions may describe Conditions briefly and Costs in detail, or vice versa; they make the SOLUTION explicit or only sketch it; they may explore

relationships among Costs and Conditions, with Costs becoming Conditions that exact yet more Costs. This simple structure may also be obscured by two more components that I will also discuss in a moment. Indeed, under certain circumstances, a problem may seem not to be expressed completely at all, but its structure may nevertheless be reconstructed in the mind of the reader. In short, I simply claim that despite apparently great surface differences, the rhetorical articulation of all conceptual PROBLEMS is (or more accurately, perhaps, should be) informed by this conceptual structure of a problem.

The first approximation of the underlying rhetorical structure of an *introduction* to a PROBLEM-solving text will thus look like the structure of a problem, but now the left-to-right order represents prototypical sequential ordering.

PROBLEM		**SOLUTION**
CONDITION	COST	

Variations

We can re-arrange these elements: The elements in the ozone introduction might be ordered like these (Condition is italicized, Cost boldfaced, SOLUTION ordinary font):

COST 1 - CONDITION 2 - SOLUTION 3:

We are going to have more cancer and higher medical costs because *recently, the thinning of the ozone layer has allowed sunlight to reach the earth unfiltered*. We can avoid these consequences only if we ban chemicals that degrade ozone.

SOLUTION3- CONDITION2 - COST1:

We must ban chemicals that degrade ozone because *recently, the thinning of the ozone layer has allowed sunlight to reach the earth unfiltered*. **As a result, we are going to have more cancer and higher medical costs.**

SOLUTION3- COST1- CONDITION2 :

We must ban chemicals that degrade the ozone **because we are going to have more cancer and increased medical costs** *as a result of a thinning ozone layer allowing sunlight to reach the earth unfiltered.*

CONDITION2 - SOLUTION3- COST1:

Recently, the thinning ozone layer has allowed sunlight to reach the earth unfiltered. We must ban chemicals that degrade ozone **because we are going to have more cancer and higher medical costs**.

COST1- SOLUTION3- CONDITION2 :

Because we are going to have more cancer and higher medical costs, we must ban chemicals that degrade ozone. *Cancer will occur because recently the thinning ozone layer has allowed sunlight to reach the earth unfiltered.*

But while in principle free, the order of these elements is highly constrained. The most common order is: PROBLEM - SOLUTION, and within PROBLEM, CONDITION - COST. First, if the point of a text is to explicate a SOLUTION to the PROBLEM and the writer locates that point at the beginning of the text, then a statement of the GIST of that SOLUTION will predictably be expressed close to the end of the introduction. The point sentence of any unit of discourse prototypically appears in one or both of only two places: at the end of its introductory segment or at the end of the whole (Colomb and Williams 1986, Williams and Colomb, 1991). Furthermore, that order is supported by narrative logic: a PROBLEM seems temporally to create the need for its SOLUTION. If the SOLUTION conventionally appears at the end of the introduction, then that allows only two possible orders:

CONDITION - COST - SOLUTION OR COST - CONDITION - SOLUTION

But of these two orders, only one also reflects chronological order, because causal CONDITIONS seem narratively to entail their COSTS. Thus the "privileged" order is CONDITION - COST - SOLUTION.

That is not to say that we never see its alternatives. Here are the first three sentences from a *New York Times* editorial (January 16, 1993, p.14):

> Women and abortion providers who need Federal legal protection from Operation Rescue's spiteful, violent blockades of abortion clinics will have to go to Congress. The Supreme Court, by refusing to apply existing law against domestic terrorism, has made the trip necessary. Fortunately, there

> is broad support in Congress and the incoming Clinton Administration for a protective new law.

The first sentence states the COST of the CONDITION, the second the CONDITION. The third sentence is the gist of the SOLUTION. Only if we reverse the first two sentences can we plausibly insert "So what" between them (I condense):

> The Supreme Court has refused to apply the law against domestic terrorism. [*So what?*] Women who need protection will now have to go to Congress.

By stating a Cost first, the writer opened more dramatically, but at the marginal expense of requiring readers to work backwards from effect to cause. In so doing, the writer has not "violated" any rule. But all things being equal, readers process most efficiently those linguistic and rhetorical patterns that reflect a sequence closest to a privileged prototype, in this case chronological order.

Because this concept of "privileged prototype" is central to understanding the full model of introductions that follows, it requires some explanation.

Privileging and Prototype Semantics

"Privileging" is a concept that arises out of recent work in prototype semantics (Lakoff, Langacker, Rosch, Rosch and Mervis, Mervis and Rosch, Taylor 1989, 1990, Tsohatzidis, Turner, Winters) and so far is surprisingly little used in composition theory (though see xxxxx). As opposed to the way logicians construct hierarchies of categories based on classical theories of Aristotelian logic, prototype semantics addresses how we actually construct mental categories and experience them. Prototype semantics differs from classical logical theory in two important ways, and both imply the concept of "privilege."

First, for classical logicians, any category in a hierarchy of categories is in principle logically equal to others, regardless of its super- or subordinate level. The sub-category of cups we call "demitasses" is in the category "cups," and cups in the category "crockery," and crockery in "tableware," etc. Those categories differ in their generality, but not in any logically principled way; none is privileged over any other.

In our mental lives, however, we do not respond to all categories up and down certain hierarchies equally. In some hierarchies, one particular

category is more equal than others above it or below it. For example, imagine what we think of when someone says "cup" or "table" or "hammer" on the one hand, and "crockery," "furniture," and "tool" on the other. The image that comes to mind when we think of "cup" is different in *quality* from the image that comes to mind when we think of "crockery." If we are asked to think of "crockery," "furniture," or "tool," or any category more general than those, most of us have no sharply defined image. If we do, that image will only accidentally agree with anyone else's: Ask five people to draw a picture of "crockery" and you are likely to get five different pictures.

But if most of us were asked to draw a picture of a "cup," we would draw an image that is visually better bounded and predictable: a concave object of a certain size and thickness, with curving sides wider at the top than the bottom, with a handle for a finger. If we are then asked to think of a specific kind of cup, table, or hammer – "demitasse" or "coffee table" or "claw hammer" – we may draw an object that is different from "cup" or "table" or "hammer," but the difference is not as great *qualitatively* as the images called up by "cup" on the one hand and "crockery" on the other. The specific image of "demitasse" is closer to the specific image of "cup," than the specific image of "cup" is to the amorphous image of "crockery." A category like that named by "cup" or "hammer" or "table" is a "basic level" category. Its members are those that we image most easily and, perhaps as a consequence, we experience most directly and with the greatest cognitive efficiency.

The second difference between classical logic and prototype semantics is, for our purposes, more important. In a classical category, all cups are equal; none more equal than any other. But in our mental lives, certain members of basic level categories are closer to a cognitive "center" of that category than are others. Some objects we call cups, for example, are unequivocally cups, even when filled with milk and cornflakes; they are so close to the prototype of a cup that they will always be cups. Other cups, however, look very different: two holes in the handle for two fingers, almost but not quite large enough to be a bowl, with straight sides angling inward from a base wider than the opening, etc. But we still call such an object a "cup" and not a bowl, mug, or glass. But it would not be a "typical" cup. In fact, were it large enough and filled with cornflakes and milk, we might call it "a bowl."

Prototype semantics argues not only that hierarchies of certain common concepts have a basic level category, but that for every basic level category, we have a concept of a most "representative" member, a concept that

defines the cognitive center of that category. In this sense, just as one category in a hierarchy – the basic level category – is cognitively "privileged" over others, so some members of basic level categories are "better" members than others: They are cognitively first among logical equals.

Here is the point: We mentally manipulate experiences that are closer to prototypes more quickly and more accurately than we do the experience of objects that, strictly speaking, may be perfectly legitimate members of a category, but are "more distant" from the prototype. There is evidence that when we think about concepts involving basic level categories, we reason not on the basis of what is common to the whole category, but on the basis of that category's most representative member, on its prototype. There is some debate whether we should understand prototypes to be a specific object or an idealized conceptual entity or just as a bundle of features (Winters). But that debate is not important here. What is important is the concept of prototype and the related notion of "privilege."[8]

Privileged Order and Content in Language

In regard to prototypical linguistic entities, there are two kinds of privileging. The first is a privileged ordering of elements. At the sentence level, for example, the privileged order is Subject - Verb - Complement:

Subject	**Verb**	**Complement**
A large truck	came	down the street.

But it is not only sometimes grammatically acceptable to reverse the prototypical order; it is sometimes rhetorically desirable:

Complement	**Verb**	**Subject**
Down the street	came	a large truck.

Depending on the context, the benefit of beginning a sentence with old information and concluding it with new may more than balance the added marginal cognitive burden on our readers of having to process the reversed privileged order.

There is a second kind of privileging: In addition to a privileged sequence of positions, those individuals positions have privileged ways of being "filled" with content. For example, at the level of sentences, the privileged occupant of a subject position is a word referring to a human agent; the privileged occupant of the verb position is a word referring to a visible action that the human agent performs; and the privileged occupant

of the complement position is a word referring to a physical object that is changed by the action indicated by the verb (Langacker; Taylor, 1989, 1990; Winters).

In fact, we can describe a set of privileged relationships among the fixed sequential order of elements in a sentence and the privileged variable occupants of those positions[9]:

Fixed Information-level Variable	**Topic**		**Stress**
	Old Information		**New Information**
Fixed Scenario-level Variable	**Subject**	**Verb**	–
	Characters	**Actions**	–

In recent years, prototype semantics has allowed us to illuminate a number of puzzling issues in regard to language and rhetoric – why grammatical definitions should endure for so long when they are self-evidently inadequate, definitions like "a noun is person place or thing"; "a verb is an action"; "a subject is doer or what the sentence is 'about,' i.e., its 'topic'" (Colomb and Williams, 1990b). Structural linguistics of the late '50's failed to catch on because it tried to define linguistic elements on the basis of their common structural features, a definition that was logically principled but cognitively unreal. Prototype theory also explains why we still hold up as a model a paragraph with an opening "topic" sentence, when we know that most paragraphs do not fit that model (Braddock, Popkin), or why it is not "wrong" to deviate from any of these prototype patterns, but somehow not cost-free. The first principle in the account book of style is that cognitive costs must be repaid by rhetorical benefits, with interest.[10]

The Prototypical Structures of Larger Units of Discourse

Similar principles of prototypical structure underlie larger, multi-sentence, multi-paragraph units of discourse. Each has a prototypically privileged sequence of *fixed* positions and a privileged way of *variably* filling them. The two fixed positional elements in every prototypical unit of discourse are straightforward: Whether that unit is a paragraph, section, or whole, it *prototypically* (*not* invariably or necessarily) consists of (1) a relatively short introductory segment and (2) the rest of that unit. In this paragraph, for example, the first two sentences constitute its positionally

fixed (by definition) introductory segment (1), and the rest of this paragraph, its fixed body (2). That introductory segment could have been just one sentence long, or three or four. The variably placed element in this or any other unit of discourse is its "point," the sentence that expresses the main claim that the rest of a paragraph, section, or whole text supports. That point sentence prototypically appears at the end of whatever counts as the the first element, the introductory segment of its discourse unit. But that point may also appear at the end of the whole unit. While the point sentence is a segment of meaning that is variably located, however, its prototypical position, its "privileged" position, is at the end of the introductory segment (Colomb and Williams,1986; Williams and Colomb).[11] The point of this paragraph, for example, is the second sentence, prototypically appearing at the end of that two-sentence introductory segment:

> Similar principles of structure underlie larger, multi-sentence, multi-paragraph units of discourse. *Each has a privileged sequence of* fixed *positions and a privileged way of* variably *filling them.*

With a little revision, though, I could have moved that sentence to the end of this paragraph, as its summary conclusion:

> So the point sentence is a unit of meaning that is variably located: it can appear at the end of the introductory segment or at the end of the whole unit, but its prototypical position is at the end of the introductory segment. *Thus each unit of discourse has a privileged sequence of fixed positions and a privileged way of variably filling them.*

But had I done that, I would have exacted on you a marginally higher cognitive cost for no apparent benefit that I can at the moment think of.

Here is the formal representation of these relationships.

Fixed	**ISSUE**	**DISCUSSION**
Variable	**POINT**	**(POINT)**

That is a micro-account of all units of discourse. At a higher level of the structure of genres of discourse, the parts have more specific functions. In this study, we are dealing with a genre of discourse that poses PROBLEMS. At the level of that kind of whole discourse, the most obvious fixed and variable levels are these:

Fixed	**INTRODUCTION**	**BODY**
Variable	**PROBLEM**	**SOLUTION**

We open such a discourse by articulating a PROBLEM in its introduction and then we solve it in the body (Jordan, Hoey, Meyer). That is such a natural order that we might think that no other is even possible. But in fact, a good many students articulate both their PROBLEM and their SOLUTION not in their introductions but toward the end of their papers, in the body, because it is there where they discover a problem that might engage them. (More experienced writers will, of course, sometimes develop a PROBLEM in the body of their text as a deliberate rhetorical strategy.)

The Fixed and Variable Bi-level Structure of Introductions

I simply assert that Introductions are now formally conventionalized:

1. They have the same kind of fixed/variable bi-level structure that we find in other units of discourse: a fixed level of privileged sequential positions and conventionalized units of content that can be moved about but have a privileged claim on certain of those positions, and
2. They have all the characteristics that qualify them as representing prototypical linguistic/rhetoric structures.

As we saw with the ozone introductions, the variable units of content consist of PROBLEM (with its two components, CONDITION and COST) followed by a reference to its SOLUTION. These variable units claim privileged positions in a general level of fixed structure.

I will now simply assert (and assume that the following discussion demonstrates) that this fixed level consists of three positions that reflect the structural sequence of a psychological episode (I will describe what I mean by Stasis in a moment; it does not have the usual meaning found in rhetorical studies):

Fixed	**Stasis**	**Disruption**	**Resolution**

This is a specific instance of a more general psychological sequence of the phenomenon of attention – stasis, disruption of stasis in the form of the arousal of an expectation, and fulfillment through the resolution of

disruption and a return to stasis (Kenneth Burke's definition of basic form, incidentally).

We have already accounted for the variable units of content that match DISRUPTION and RESOLUTION: a PROBLEM is the prototypical disruption; its SOLUTION is the prototypical Resolution to the Disruption (note that these terms are not upper-case, because they refer only to the locations, the structural slots, that are filled by actual elements, which we do put in upper-case):

	Introduction			Body
Fixed	**Stasis**	**Disruption**	**Resolution**	
Variable		**Problem**	**Solution**	

If the best kind of rhetorical Disruption is a PROBLEM, then PROBLEM has a privileged claim on the position we call Disruption.[12] And if the best resolution to a PROBLEM is its SOLUTION, then a reference to the SOLUTION has a privileged claim on the Resolution position. The minimal prototype introduction, then, is this:

> [ ] **XXX/Stasis** [(Recently, the thinning of the ozone layer has allowed sunlight to reach the earth unfiltered) **CONDITION**. (As a result, we are going to have more cancer and higher medical costs.) **COST**] **PROBLEM /Disruption** [[We can avoid these consequences only if we ban chemicals that degrade ozone].**SOLUTION-GIST**] **Resolution**

This kind of bare-bones primitive introduction, however, is not the most common, because the vast majority of introductions open by invoking Stasis in order to establish background, context, particularly the consensus on an issue – any kind of Stasis that can be disrupted. Here is a more typical introduction (I will hereafter ignore the complex bracketing):

> [As scientists have investigated environmental threats, many of their concerns have proved exaggerated, such as the effect of acid rain and the imminence of the Greenhouse Effect.] **CONTEXT/Stasis/** [But recently they have discovered a threat that is all too real: the ozone layer has been thinning, thereby allowing sunlight to reach the earth unfiltered.**CONDITION**. Since unfiltered sunlight causes skin cancer, we will experience higher mortality rates and medical costs. **COST**] **PROBLEM/Disruption** [We can avoid these consequences only if we ban chemicals that degrade ozone.] **SOLUTION-GIST/Resolution**

This short and schematic introduction represents the most common and prototypical introduction: Most begin with opening context to locate readers in a universe of discourse. But more important, the existence of that opening Stasis in this introduction changes how we experience the rhythm of the introduction. The new first sentence invoking Stasis not only dramatically delays Disruption; it creates the context for it.[13]

This new opening establishing Stasis, in fact, creates an effect analogous to one of two strategies that open narratives. The original paragraph, the one that began by directly announcing the ozone hole, opened with a disruption analogous to,

> Once upon a time, the Wolf was lurking behind a tree in the forest, waiting to jump out and surprise little Little Red Riding Hood as she skipped down the forest path on her way to her Grandmother's house.

But the more common narrative strategy is to open with a stable scene that we disrupt:

> Once upon a time, Little Red Riding Hood was skipping down the forest path on her way to her Grandmother's house, when suddenly the Wolf, who had been lurking behind a tree, jumped out and surprised her.

The same two choices are available for introductions to non-narrative texts. We begin with the threat of the ozone hole – the disrupting PROBLEM, or we begin with Stasis, the apparently reassuring knowledge that scientists have been wrong about other threats. *Then* we spring the ozone hole.

In narratives, Stasis is the opening position in which appears information that locates us in time and space and usually introduces major characters: "Once upon a time, there was a magic forest in which lived a girl and a boy who . . . ." In PROBLEM-posing texts, Stasis provides a space that we usually fill with background context in the form of prior research, a generally accepted truth, particularly consensus, etc. but that we can also fill with an anecdote, an historical episode, a bit of data, etc.

But the purpose of Stasis is more than just to contextualize: Stasis intensifies Disruption. Along with Costs, it is the second way that we rhetorically sell our PROBLEM. Most introductions in academic/scholarly/research texts open by invoking some kind of Stasis and then by disrupting it, typically expressed in a "[Stasis] but Y" pattern (see also Swales, 1984, 1985, 1990):

> Everyone thinks time runs only forward$_{\text{Stasis}}$, *but* at the sub-atomic level, it sometimes runs backwards.$_{\text{Disruption}}$

In fact, this kind of opening establishment of Stasis/Consensus characterizes roughly two out of every three published articles in the humanities, with the *but* (or its stylistic equivalent, *however, on the other hand*, and so on) followed by a more or less full statement of the disrupting PROBLEM. [14]

There is another variable in this pattern that intensifies the dramatic experience of an introduction. Often, introductions do not do not explicitly state at their end the GIST of the SOLUTION to their PROBLEM, but rather end with a rhetorical gesture whose position has the illocutionary force of a PROMISE that a solution will be forthcoming. Consider the choices for a last sentence:

> We can avoid these consequences if we ban chemicals that degrade ozone.
>
> We must address this problem, even if it means changing our way of life.

The second sentence does not state the GIST of the SOLUTION, but by its position at the end of the introduction, has the illocutionary effect of promising one. In fact, in some fields, most articles end not with the GIST of a SOLUTION, but with its PROMISE (cf. Swales and Najjar).[15]

If an introduction can end with something other than the GIST of a SOLUTION, this model must allow as a final element in an introduction something more general than SOLUTION. We will call this more general element RESPONSE. We respond to the statement of a PROBLEM with either a statement of the GIST of its SOLUTION or as a PROMISE that such a SOLUTION will appear.

Thus the full model of an introduction to a PROBLEM-posing text:

Fixed	**Stasis**	**Disruption**	**Resolution**
Variable	**(Content)**	**Problem** (Denial) Cost Condition	**Response** Gist of Solution / Promise of Solution

This formal account is consonant with a general theory of discourse that reflects the bi-level structure of all other units of discourse, from sentences through whole texts (Colomb and Williams 1986, Williams and Colomb). To that degree, this account of introductions is substantially more robust than one based on observation and categorization unmotivated by any rich conception of underlying structure. It also supports a more general claim that all discourse and all of its sub-units are structured around a fixed level of structures through which we may move variable units of

rhetorical substance (kinds of meaning), and that some of those variable units have privileged claims on certain of the fixed positions. (To be sure, there are minor elements of Introductions that I have not addressed, but they fit into this pattern in obvious ways.[16])

The Structure of Introductions and Story Grammars

In fact, this account of non-narrative prose links it to narrative prose in a way that either subsumes both under a larger formal pattern, or suggests that the strategies of non-narrative prose derive from narrative prose. Story grammars of the kind developed in the last several years account for the kind of naturally occurring narratives such as this (Johnson and Mandler, Mandler, Prince, Rumelhart, Stein and Policastro):

> I was walking down 53rd street last night, when this guy bumps me and asks for a dollar. I was afraid he was going to mug me. I just kept on walking, because there were some people right across the street. I was really relieved when he didn't follow me. I'm not going to walk down 53rd Street at night any more. You just never know what's going to happen these days.

The story grammar model of a "best" story generates as its first element a "Setting," analogous to our Stasis/CONTEXT (I follow Stein and Policastro's model here):

> I was walking down 53rd street last night. . . .
>
> As scientists have investigated environmental threats, many of their concerns have proved exaggerated, such as the effect of acid rain and the imminence of the Greenhouse Effect.

The next element in a story is an "Active Event," parallel to De-stabilizing CONDITION:

> . . . when this guy bumps me and asks for a dollar.
>
> But recently they have discovered . . the ozone layer has been thinning . . .

This is followed by an element that evokes "Emotional Reaction," parallel to our COST:

> I was afraid he was going to mug me.
>
> Unfiltered sunlight causes skin cancer, which will substantially raise mortality . . .

The story grammar continues with "Attempt to Overcome an Obstacle," parallel to our Resolution/SOLUTION:

> I just kept on walking, because there were some people right across the street.
>
> We must address this problem, even if it means taking steps that will drastically change our way of life.

The Ending of a story includes (a) a protagonist's response to having attained a goal and (b) the consequences of having done so, elements that parallel our common evaluation of what we have sought to accomplish in a text and an invocation of future research or further application of our SOLUTION.

> I was really relieved when he didn't follow me. I'm not going to walk down 53rd Street at night any more.
>
> In this study, we have demonstrated that the only way to prevent the depletion of the ozone layer is by eliminating . . . But a number of research questions remain unanswered . . .

The last element in a story is its Coda, typically a moral of some kind:

> You just never know what's going to happen these days.

Colomb and Williams (1986) have pointed out that conclusions in discursive prose have a similar element, which they also called Coda, typically consisting of a rhetorical flourish that formally closes the discourse: a quotation, a short anecdote, an epigram, or moral.

We can see how a Conclusion replicates in reverse order the elements of an Introduction if we first note that one of the more complex forms of an introduction includes not only the elements that constitute Stasis - Disruption - Resolution, but also the kind of opening "anecdote" or "fact" or "provocative quotation" suggested by standard rhetoric texts. If we add that to an Introduction,

> Opening Anecdote[a] ➡ Stasis[b] ➡ Condition[c] ➡ Cost[d] ➡ Gist of Solution[e]

we can see how the structure of a Conclusion reverses this order: A typical (but not, I think, prototypical) Conclusion opens by restating (or stating for the first time) the Gist of the Solution[e], or the Point of the paper. This is typically followed by a statement of the Point's larger significance, but that larger significance is functionally equivalent to what could have been stated as a Cost[d] in the PROBLEM statement in the Introduction. For example, one more Cost of the hole in the ozone layer might be that unfiltered sunlight

damages ocean plankton in the Southern Hemisphere, thereby disrupting the world's aquatic food-chain. But that is so dramatically distracting, that I might want to set it aside and use it at the end to suggest an added "significance" of the SOLUTION to the PROBLEM.

Following this Cost[d]/Larger Significance is typically a statement of what is still unknown, functionally equivalent to the Condition[c] element in the PROBLEM statement, typically expressed as remaining flawed understanding or incomplete knowledge. Following that (or folded in with it) is an invitation to do further research to resolve the questions left unanswered, which is (admittedly a bit of a stretch) analogous to the kind of Stasis[b] of a research paper that consists of a review of the research already done on a problem. Finally, particularly in belletristic prose, a writer will in the Coda to a Conclusion close the paper by echoing an Opening Anecdote[a] (or fact/metaphor/quotation/etc.). Thus a typical (though far from invariable) structure of a Conclusion mirrors the typical (though again not invariable) structure of an Introduction:

> Opening Anecdote[a] ➡ Stasis[b] ➡ Condition[c] ➡ Cost[d] ➡ Gist of Solution[e]
>
> Point[e] ➡ Significance[d] ➡ Left Undone[c] ➡ Needed Research[b] ➡ Echoed Anecdote[a]

Gist of Solution[e] is equivalent to Point[e], Cost[d] is equivalent to Significance[d], Condition[c] equivalent to Left Undone[c], Stasis[b] to Needed Research[b], and Echoed Anecdote[a] to Opening Anecdote[a]. I should emphasize that we may not find all of these elements in any – or even most Conclusions, nor do we find them always in this order. Conclusions are more variable in their structure and manifestation than are Introductions. But I think it is worth noting the parallels between conclusions and the resolutions to stories as represented by story grammars and between conclusions and introductions. Conclusions appear not yet to have evolved complex prototypes.

The relationship between the structure of stories and the structure of introductions to PROBLEM-posing texts is probably not accidental. We have probably derived the conventionalized structure of introductions from that of stories for reasons that are both historical and rhetorical: narrative is the form of discourse that depends fundamentally on patterns of expectation and fulfillment, and the function of an introduction is to create expectations and then fulfill or delay but promise their fulfillment.[17]

Similarly in PROBLEM-posing texts, when we establish Stasis, we create an expectation that we will de-stabilize it. When we do, we create the expectation that we will restore it. No element of discourse is more rhetorically influential than introductions, so it is no surprise that introductions should draw on the same powerful narrative structures that create stories. And it is this same impulse toward narrative drama, I think, that encourages inexperienced writers of non-narrative prose to resist "giving away" in their Introductions the point of their paper (i.e., the GIST of the SOLUTION to their PROBLEM) – "If I do, people will stop reading." It is an impulse rooted in the desire for narrative surprise.

Some Illustrations

I illustrate this pattern more fully with a series of examples. I have condensed all of them to reveal their underlying structural similarities. First, an introduction from an Op-Ed column in the *New York Times* ("True Leadership for the Next Millennium," Paul Kennedy, January 3, 1993, Section, E, p. ll):

> [As President-elect Clinton prepares to take office, his concentration on immediate issues would not be surprising. Should the free trade agreement be accepted? [four more questions follow] Add crises, and it would seem that Clinton can focus only on problems at hand.] **CONTEXT/Stasis** [[Yet**DENIAL** politicians must consider global conditions. Immediate crises only manifest how societies respond to change] **CONDITION** [i.e., politicians are not doing this now] [*So what?*] [Unless we grasp the larger picture, we cannot prepare for problems and we will be limited to damage-control when a crisis occurs. But how are we to distinguish the important from the ephemeral? **COST**]] **PROBLEM/Disruption** [We might consider a time when hopes of a new world order were also being overshadowed by fears and paralysis.] **RESPONSE-PROMISE OF SOLUTION/Resolution/**

From an academic article [Ann McMillan. "Fayre Sisters Al" *The Flower and the Leaf* and *The Assembly of Ladies*. *Tulsa Studies in Women's Literature*, 1 (1982): 27-42]:

> [*The Flower and the Leaf* and *The Assembly of Ladies* are poems attributed to Chaucer. . . . Critics have tended to dismiss the poems as metrically unsound and derivative. . .] **CONTEXT/Stasis** [[However, . . .in contrast to all the dream-visions and gardens of love from which they derive, these poems have women narrators.] **CONDITION** [*So what?*] [They reflect in their non-traditional uses of traditional themes and images the concerns of

> fifteenth-century women. . . . [and] use established traditions in unusual ways to reflect those concerns.] **COST IN THE FORM OF IMPLIED BENEFIT** See ftnt. 6] **PROBLEM/Disruption** [I shall argue that, whether composed by the same poet or not, the two poems taken together constitute variations on the theme of chastity as efficacy.**Resolution/RESPONSE-GIST OF SOLUTION**

The opening paragraph to an in-house business memorandum:

> [To date, 11 employees transferred cross-country have asked for help with a job search for their spouses. We have authorized help for six,] **CONTEXT/Stasis** [[but we have no policy for such authorization nor any standard resources for the proposed Spouse Counseling Program.] **CONDITION** [*So what?*] [Since increasing numbers of employees have working spouses, we can anticipate difficulties not only in agreements to transfer but in recruiting new employees.] **COST**] **PROBLEM/Disruption** [I recommend that we retain three firms that can provide job counseling in Los Angeles (Trans-American), Houston (ExecSearch), and New York (Helmes and Kelly, Inc.).] **Resolution/RESPONSE-PROMISE OF SOLUTION**·

And again, the introduction to the student paper that posed a PROBLEM:

> [When Corcyra and Corinth disagreed over control of Epidamnus, they went to Athens to ask for help. The Corinthians appealed to Athens' sense of justice, while the Corcyreans appealed to their self-interest. When we think of justice we think of Socrates and Aristotle, so it would be easy to think that the Athenians would side with Corinth.] **CONTEXT/Stasis** [[But**DENIAL** they sided with Corcyra Corcyra] **CONDITION** [*So what?*] We have to understand the values that Athens rejects and accepts, because we could be misled about their real motives when they appeal to justice to defend some of their actions later in the war.] **COST**] **PROBLEM/Disruption** [Athens rejected the Corinthian values of justice, honor, and treaties, and accepted the Corcyrean values of future self-interest.] **Resolution/RESPONSE-GIST OF SOLUTION**

There are a few other features that introductions often display, but they would complicate this model beyond our needs. I simply assert that this model comprises the essential underlying structure to prototypical introductions to PROBLEM-solving texts, a structure informed by the cognitive structure of a problem.

Variety vs. Monotony: PROBLEM-posing vs. Information-Providing

The risk in using these abridged schematic examples is that my analysis may seem to turn them into cookie-cutter introductions. But is there not an analogous underlying "monotony" in the structure of sentences? Most are relentlessly Subject - Verb - Complement. Yet we realize that pattern in so many ways that readers are never conscious of it. The same variation obscures the underlying structure of introductions. I can assert only that in fully developed introductions, this common underlying structure is obscured by the variety of its expression. The opening CONTEXT/Stasis is often spelled out at great length, through quotations, anecdotes, reviews of literature. The PROBLEM is elaborated in a variety of ways. The SOLUTION is hinted at, spelled out, summarized.

One particularly complex variation cycles through what appears to be a prototypical introduction, articulating a PROBLEM and solving it, but then reveals that the apparent SOLUTION/Resolution is in fact a new Stasis that is denied with a disruptive *but* or *however*, and the cycle starts again [from "Can Your Mind Heal Your Body?" *Consumer Reports*, Feb. 1993, p. 107; I condense a bit in the interest of space]:

> [[No one would deny that the mind can affect the body's health [examples]]. **CONTEXT/Stasis** [**But DENIAL** this tradition has coexisted with a more questionable one: **CONDITION** [*So what?*] A tradition of self-styled healers, some true believers and some charlatans [have arisen] who have proclaimed that the mind has an almost miraculous power to cure disease. Recently, physicians have developed a new interest in the mind's role in health—and so have entrepreneurs. [examples]. Even worse is the dark side to these claims: If good thoughts can make you well, the logic goes, then bad thoughts might kill you.**COST**] **Putative PROBLEM** [In fact, the mind is neither a miracle cure nor a lethal weapon. There is no good evidence that emotional distress predisposes people to cancer. And conversely, there is no evidence that meditating or listening to a special audio tape will make a tumor go away. Such claims are little more than wishful thinking about positive thinking.]**GIST OF SOLUTION/Resolution => New CONTEXT/Stasis** [**But DENIAL** [these distortions mask an important medical reality. **CONDITION**] [*So what?*] [The evidence is growing that thoughts, beliefs, and emotions can have an impact on physical health. And research is showing that relaxation, meditation, hypnosis, biofeedback support groups, and psychotherapy may affect the course of physical illness.] **COST** in the form of benefit] **PROBLEM/Disruption** [The result is a new synthesis in medical theory and

practice that's coming to be known as mind/body medicine.]**RESPONSE-PROMISE OF SOLUTION/Resolution**

(See also Swales 1990.)

In fact, one variation on the prototypical pattern is so radical that it can hide the fact that the writer has a PROBLEM at all. Before we look at that variation, however, we must distinguish introductions that in fact pose no PROBLEM from those that seem not to, but do. Occasionally, we deliberately write not to solve a PROBLEM, but only to provide information that someone might find interesting or useful. Call this genre of text "Information-providing." Here is the full introduction to one such text:

> Research done in the 1950's and 1960's on British copperplate-printed textiles corrected earlier misidentifications of the origins of a great number of fabrics. Most had previously been thought to be French, but the then newly discovered factory record books, which often included printers' names and the price per yard, allowed attributions to be made to as many as nine British printing firms. A recent study of the textiles themselves has yielded information about what they looked like when lengths were sewn together to form a wider piece of cloth.
>
> Gillian Moss, "British Copperplate-printed Textiles," *The Magazine Antiques* 137.4 (1992): 941

This introduction seems to offer no CONDITION and so therefore no COST, and since it formulates no PROBLEM, it can offer no SOLUTION. Ms. Moss seems to have written this introduction not to pose and solve a PROBLEM, but because she assumed that at least some readers of *The Magazine Antiques* read for information, either because they are grazing for pleasure or because they are looking for specific information to solve a problem of their own. (We could insert "So what?" between the first and second sentences, but it would ask a historical question about the CONDITION to a problem already solved, not to a PROBLEM in the act of being posed for the rest of the text to solve.)

Few scholarly texts are as purely Information-providing as that semi-scholarly one. But while most gesture toward a PROBLEM, the gestures can sometimes be so weak that they only emphasize the absence of an "interesting" PROBLEM, as in this disorganized introduction, a disorder reflected in our inability to locate with confidence a "So what?" between any pair of sentences:

> [The following is a descriptive account of medieval Welsh grammars] **PROMISE OF DESCRIPTION/Kind of Resolution**› [which have been largely

> passed over by Welsh scholars and are inaccessible to those others who do not read Welsh.] **PROBLEM/Condition** [Like Ælfric's grammar, for instance, the Welsh grammars derive from Latin sources and are equally pedagogic in purpose; unlike Ælfric's they attempt principally to tutor the student in the grammatical principles of his own language. Because they fall so firmly within the tradition of late Latin grammars, it might be claimed that they are unimportant works individually] **Stasis/CONTEXT** [However, **DENIAL** persuaded by the sentiments of such men as R.W. Hunt, who urges us to study the medieval grammars because of their elucidation of the intellectual activity of the period and of others, like Father Dineen, who would have us enlarge our appreciation of the variety and development of the Western grammatical tradition],
>
> **COST/Disruption (as a promised benefit)** [I would call attention to this little-known vernacular effort.] **PROMISE OF DESCRIPTION/Resolution**
>
> A.T.E. Matonis, "The Welsh Bardic Grammars and the Western Grammatical Tradition," *Modern Philology* 79.2 (1981): 121 - 145.

This introduction comes close to the one about 18th c. fabrics: "Here's something that you probably don't know but I hope you might like to." The only gesture toward the components of PROBLEM is the weakly implied disrupting CONDITION that two scholars have persuaded Matonis that knowledge of Welsh grammars is in fact not trivial. The Cost is stated as a rather tepid BENEFIT: You will learn something about the intellectual activity of the period and appreciate the development of Western grammar – thin intellectual gruel, at best.

We can revise this introduction to get it closer to one that poses a PROBLEM, but at bottom, there is no PROBLEM posed here (I condense and express a future benefit as a current Cost):

> [Medieval Welsh grammars derive from Latin and like Ælfric's, are pedagogical. Because they are in the tradition of late Latin grammars, they seem unimportant.] **CONTEXT/Stasis** [**But**$_{\textbf{DENIAL}}$ while ignored even by scholars who can read Welsh, these grammars, unlike Ælfric's, tutor students in their own language. **CONDITION/Disruption** [*So what?*] So long as we ignore such grammars of the readers' vernacular, we fail to recognize important aspects of the intellectual activity of the period and to appreciate the full development and variety of the Western grammatical tradition. **COST/Disruption**] **PROBLEM** [To fill this gap in our knowledge I offer the following account.] **Resolution/PROMISE OF SOLUTION**

There are, though, two caveats before we can assume that if a PROBLEM is not posed in an introduction, the text does not solve one. First, the community of discourse may share enough knowledge about a topic to

construct a problem/PROBLEM out of the introduction. Here is the shortest introduction I have ever found in published academic writing:

> This paper introduces a new category of Roman amphora. The catalyst for the recognition of the type was the discovery at Pan Sand in the Thames estuary of a specimen with its original contents.
>
> P.R. Sealey and P.A. Tyers, "Olives from Roman Spain: A Unique Amphora Find in British Waters," The Antiquarian Journal (1989) 69.1, p. 53.

The opening sentence sounds like a PROMISE and the second CONTEXT, a relationship we can see better if we reverse their order:

> In 1987, a Roman amphora with its original contents was discovered at Pan Sand in the Thames estuary. It appears to belong to a hitherto unknown category, which this paper will describe.

But while there still seems to be no obvious PROBLEM here, anyone socialized into an academic community knows that anything new, particularly a new *kind* of thing, is very de-stabilizing: the familiar categories are at least incomplete, perhaps wrong, sufficient to exact unknown COSTS: we will not understand the real relationship among amphoras, perhaps mistaking their development, origins, materials, etc. A prototypical and *explicit* introductory structure would have looked like this (I invent freely):

> [In 1987, another Roman amphora with its original contents intact was discovered at the Pan Sand in the Thames estuary.]**CONTEXT/Stasis** [But compared to the many amphora found in northern Europe (Skep,1932; Harise, 1936), this specimen does not fit any known category **CONDITION/Disruption**. [*So what?*] Its singular construction and shape calls into question the history of the Caledonia1-2 categories (Kinahan, 1987) and their distinctions from the Cardiff 3 - 5 types, including genetic relations to other types found rarely in northern Europe but widely in Sicily.**COST/Disruption**] **PROBLEM** [In this report, we describe this novel find and propose a new history of Caledonia1-2 amphora.
>
> **PROMISE OF SOLUTION/Resolution**

I do not assert that the authors *should* have written an introduction like this, only that when we compare it with the original, we can see that it makes clear how the discovery of a new type of amphora can be explicitly articulated as a PROBLEM with all its necessary components. The authors might reasonably respond that their readership would *know* why a new kind of amphora is important, that stating the COSTS of the CONDITION would be redundant to the point of condescension. And they might be right to do

so. But I will suggest later that for our students (indeed for ourselves and particularly for those of my colleagues who submit papers to journals for whom I referee) there is a distinct value to articulating a PROBLEM in an introduction in its fullest possible way, regardless of what they (or we) think an audience can infer.[18]

There is a second variation to a PROBLEM-posing introduction that makes it seem like an information-providing text . In this case, however, it is not an intentional departure from the prototype introduction: it is, rather, a sign of incompetence or error. The author may articulate a PROBLEM not in the introduction, but in the conclusion, where it was discovered, and left. Here again is one of the introductions about the Corcyreans and Corinthians appeals:

> Just before the outbreak of the Peloponnesian War, the cities of Corcyra and Corinth became involved in a conflict over which of them should control Epidamnus. They could not agree so their ambassadors went to Athens to ask Athens to side with them. After listening to the two speeches and debating among themselves, the Athenians finally decided to support Corcyra. The two speeches differ in many ways, but the most important difference is in the reasons that each side gives to support its appeal for help because the appeals that Athens accepted and rejected can tell us something about Athenian values. In order to show these values, I will first discuss the Corcyrean speech and then the Corinthian speech.

This paper seems to pose no PROBLEM, not because the writer believes that a PROBLEM is inferrable, but because when the writer wrote this introduction, she had only rhetorical problems. However, if at the end of this paper we found a passage like that in the more complex introduction (p. 00), we might conclude that she had finally discovered one:

> Since Athens was the birthplace of Socrates and Aristotle, it would have been easy to think that they would side with justice, but they sided with Corcyra. Once we realize right from the beginning of the war that Athens' basic value isn't justice, but self-interest, we should doubt them when they claim to act justly later in the war. Despite what Athens says later about reasons for their actions, their motive might be just self-interest.

In fact, a text of this form is typical not only of undergraduate papers, but of early drafts of texts of all kinds, including apparently final drafts of papers I not only referee but read in a good many journals. Two of my colleagues and I have consulted with an international management consulting firm that spends months analyzing an industry, its competitors, its market, and a particular client's position in it. Its consultants then create

a presentation that explains to the client what its problems are and how to solve them. No complaint is more common among the senior officers of this firm than that their consultants' presentations are narratives of their investigation and only at the end of the presentation do they reveal the full nature of the problem and its solution. They construct their analysis as a narrative not because they want to surprise the client (though sometimes they do want to do that), but because it was only in the act of creating their presentation that they discovered a solution to a problem that they had not yet entirely posed.

Once we get control of our materials by summarizing them, we are prepared to discover and articulate our PROBLEM, but too often we do it as a last, sometimes desperate act of completion. Having filled up a few pages with that preparation and concluding with a brief statement of a conclusion, our students feel that what they have written looks like a paper, feels like a paper, must be a paper: <<Print>>. I will suggest in Part 3 a way of addressing this problem.

Thus two introductions may seem substantially similar – no apparent CONDITION or COST, thus no PROBLEM and so no apparent SOLUTION. But if we are knowledgeable readers, we experience them in different ways, because we can construct a PROBLEM out of one but not the other. If we can read a PROBLEM out of an introduction, then we can assert that such elliptical introductions have the same *underlying* structure as fuller prototypical introductions, in the same way that we can assert that two apparently different sentences have related *underlying* structures:

> Do all the assignments in the workbook more accurately.
>
> [You must] do all [of] the assignments [that are] in the workbook more accurately [than someone did all of the assignments that are in the workbook].

In the same way, it is useful to think of *certain* elliptical introductions as having a full underlying "understood" structure, elements of which are deleted (i.e., "understood)[18]. While another introduction may seem substantially similar, however, it might have no such underlying structure.

We ought not be surprised, then, when our students are baffled by highly socialized writing. They are not unskilled readers; they simply do not share enough community knowledge to reconstruct out of elliptical introductions the implicit problem/PROBLEM structures that socialized readers do (MacDonald). Worse, when their own introductions are as short as some they find in professional writing, they cannot see the difference

between their own short and empty introductions and those that are equally short but inexplicit-because-elliptical.

Worse yet, they experience certain difficulties that go beyond even their lack of socialization, difficulties that reflect the phenomenology of the kind of PROBLEM that we typically ask our students to find or invent in academic settings. And perhaps worst of all, they seem not to grasp the fundamental principle that almost all writing that grown-up writers do is devoted to posing and solving PROBLEMS. All that is the subject of Part II.

Part II. Reading, Learning, Teaching

Though this structure of PROBLEMS and their articulation in introductions is no more complex than the structure of a sentence, it is still complex enough to make us wonder whether teaching it is worth the difficulty. Does a good introduction make a difference large enough to justify the time it takes for students to understand its structure? Can they in fact understand and use that structure? If not, we waste our time and that of our students teaching it. But some good evidence suggests that the answer to both questions is yes, and that students agree. First, I will offer some evidence that when PROBLEMS are well-articulated, it makes a difference in how we evaluate student writing and that students respond positively to studying these matters. But there are two obstacles to their success: first, many of our students seem to be unaware that they should think in terms of finding PROBLEMS at all, and second, they have a particularly difficult time dealing with the kind of PROBLEM that we ask them to address most often in academic settings. I will deal first with our responses to their problems, then to their responses, then with the problems that make dealing with all this so vexing.

1. Reading and Responding to Introductions

It is beyond debate that the opening "frame" of understanding through which we engage a text profoundly influences how we respond to the rest of it. Reading is a goal-driven activity that we organize around a preliminary sense of the *telos* of a text, a *telos* that organizes, filters, and shapes our reading experience (Kieras, Spiro, Meyer). But the research on this matter has not focused on how introductions to longer, naturally occurring texts influence not just how well we selectively remember what we read, but how we judge texts and their authors. And as a consequence, we cannot confidently project what we learn from a laboratory finding to the classroom. I offer three kinds of evidence suggesting that different kinds of

introductions described here encourage us to respond differentially to texts as a whole and to authors in particular: a reported observational study of one writer (Berkenkotter et al), an analysis of 42 introductions to Senior Papers in English and History at the University of Chicago, and the results of a study that asked faculty to read and evaluate papers identical in all regards except for their different introductions.

Introductions as Evidence of Socialization

In a study examining how one graduate student ("Nate") became socialized into his field, Berkenkotter et al examined the style, structure, and content of three of his introductions. The character of his first one encouraged them to judge Nate as "imitative," as an "isolated newcomer," his rhetorical strategies as "ineffective." His entire introduction:

> **How and Why Voice is Taught: A Pilot Survey Problem**
>
> **Problem**
>
> The English profession does not agree on what a "writer's voice" means or how the concept should be used to teach writing, equating it to personal style, literary persona, authority, orality, or even grammar.1 When teachers, writers, and researchers comment on the phenomenon of voice, they usually stay on a metaphorical level.2 Voice is "juice" or "cadence."3 The concept appears to be too illusive and too closely tied to personal rhetorical philosophy, disallowing a generally accepted definition for common usage.4 A novice writing teacher, then, might say "You don't know what it is. I don't understand it. How or why should I teach it?"5
>
> It should be taught.6 Most experienced teachers and accomplished writers recognize that in spite of the wide range of definitions the concept of voice is somehow central to the composing process.7 Some believe that without voice, true writing is impossible.8 Until the profession understands the phenomenon or in some way addresses what these experts are saying, a paradox exists, and the novice writing teacher confronts a mixed message.9 Voice should not remain just another eccentricity in an already idiosyncratic profession.10
>
> **Background**
>
> Who are these "accomplished" teachers, writers and thinkers who uniquely honor a writer's voice?11 Aristotle, Coleridge and Moffett have acknowledged the impact of the "self" on an audience.12 Donald Murray and other contemporary rhetoricians state without reserve that this self, the writer's voice, is "at the heart of the act of writing."13 From my

> experience writing and teaching writing I know that a writer's voice can spirit a composition and, if the voice is misplaced or confused, can drive a teacher or writer batty.14 If I say to my class "No, No the voice is all wrong here," or "Yes, I can hear you now," I might induce the kind of authority I seek, but I am probably sending one of those strange undecipherable teacher-messages that students rightfully ignore or misinterpret.15 I am liable to get talk-writing or emotions unbound.16 Like the accomplished experts and theorists, I tacitly know that voice is important, but I am not necessarily equipped to translate this importance for my students.17
>
> Are there other teachers who face or at least perceive the same dilemma?18 I sense that there are, but a hunch is not good enough.19 Since I have invested time and energy searching the question of voice, I worry that my observations and suspicions are egocentric.20 Before I tire myself and my colleagues with a series of inquiries and experiments, I must decide if a problem actually exists.21 Therefore I composed a pilot survey to tell me if I should continue my study of voice and in what direction.22 The survey, a questionnaire, was aimed at other writing teachers in the Pittsburgh area.23 By asking if, how, and why voice is taught I hoped to understand the boundaries of my questions and my universe.24

As signs of Nate's pre-socialized state, the authors point to his lack of citations, to diction like "batty" (14) and "hunch" (17), to self-referential language like "the boundaries of my question and my universe" (22) (though such self-referential language appears in a very substantial portion of academic writing). They observe that "we cannot expect him to exhibit a command of the conventions that Swales or Dudley-Evans describe," that his writing "does not create a 'research space'." They are right: Nate does not exhibit a command of the conventions, does not create the kind of research space that Swales describes, and thus earns their assessment of him as unsocialized.

But in fact, Nate did create a research space that included *all* the elements of a PROBLEM specified not only by Swales' and Dudley-Evans, but by the fuller model I have described here. Nate's problem is not that he failed to articulate the elements of a research space, because in fact he did articulate every one of them. His problem was that he did not know how to use those elements to shape that space, because he did not know the grammar of introductions. In a revision below, I have deleted metadiscourse and deadwood and changed some diction. But most importantly, I have re-arranged the order of his sentences and grouped them into the coherent

units of Stasis, Disruption, and Response. (Numbers refer to the sentences in the original.)

> [Critics from Aristotle to Coleridge have emphasized the impact of "self" on an audience.12 According to contemporary rhetoricians like Donald Murray this self is the writer's voice and is "at the heart of the act of writing."13 Most teachers also recognize that voice is central to composing7; that it can spirit a composition; that when it is misplaced or confused, it confuses readers.14 Lacking voice, true writing is impossible,8 so we should teach it.6] **CONTEXT/Stasis**
>
> [But the profession disagrees not just on how to teach it but even what "voice" means.1 When some teachers, writers, and researchers discuss voice, they stay on a metaphorical level:2 voice is "juice" or "cadence."3, or tie the concept to a rhetorical philosophy that equates it with personal style, literary persona, authority, orality, or even grammar.1
>
> **CONDITION/Disruption**
>
> [*So what*?] As a consequence, the novice writing teacher may think voice is important, but because the concept has no generally accepted definition, she may not be able to make that concept important to her students.17 When she says to a class "No, No, the voice is all wrong here," or "Yes, I can hear you now," she might induce a kind of authority but may send a message that students misinterpret.15 Or she might finally say "I don't know what voice is. I don't understand it. How or why should I teach it?"5 **COST/Disruption**] **PROBLEM**
>
> [To address these questions,22 I conducted a pilot survey of writing teachers in the Pittsburgh area to determine how and why voice is taught.23 **PROMISE/Resolution**

I do not argue that this revision is in all ways superior to the original. Indeed, one of my colleagues thought the original charming, my revision so repellent that it could have been "written by a robot." But he also said that he would not be surprised to read it in "certain grindy journals" (I did not ask him which ones he had in mind). I am interested only in his last observation, because I think that it indicates in his judgment, the revision is close to a prototype (too close for his tastes).

My point: Berkenkotter and others are right about Nate: His diction, his excessive metadiscourse and personal narrative demonstrate that he was indeed not yet socialized into the professional discourse of his field. But it is crucial to recognize that in his introduction, he *explicitly* formulated all the crucial components not only of Swales' "research space," but of the elements of CONTEXT, PROBLEM (including CONDITION and COST), and

PROMISE-OF-SOLUTION that could have inhabited a Stasis - Disruption - Resolution structure. He simply did not know how to articulate them in a way that reflected the "grammar" underlying the rhetoric of PROBLEM-posing. I have refereed manuscripts whose authors formulated their objectives in terms so much more primitive that their opening paragraphs said little more than "Here's something that I know and desperately hope that you don't but might like to." To the degree that Nate intuitively understood the rhetorical *elements* of a PROBLEM, he was more socialized than many new PhD's. It would be interesting to know how much the ill-formed introduction of this paper influenced the evaluation of its holistic quality, because introductions appear to make a difference.

Correlations between Introductions and Judgments of Holistic Quality

To determine whether the perceived quality of introductions does correlate with perceived quality of whole, I analyzed 42 Senior Papers from English and History at the University of Chicago. Twenty papers received Honors (9 in history, 11 in English); 22 a grade of B- or lower (12 in history 10 in English). Here are two representative introductions (in the interests of space, I condense the O'Connor example and drop citations; the original was twice as long):

1. Hemingway's *A Farewell to Arms* blends the themes of love and war, based on this grand scale of love and death. The themes of love and war and the bliss and tragedy originate, develop, and intermix, often coexisting in certain sections of the novel, depicting life as it is. The result of this intermixing is a fusion of the idyllic or comic and the tragic or disturbing, which is affected by the impending doom of the war. *A Farewell to Arms* is about a love affected by the events that happen during a war. It is a narrative which follows the development of the psychological characteristics of two lovers in tragic and idyllic settings, developing their relationship amidst the unstable surroundings of a country at war. Hemingway writes of two lovers as they represent average human beings in their emotions, thoughts, and actions in a natural and neutral world of love and war. He describes the lovers as they stand on unstable ground during this period, comforted by the neutral territory they find amidst the instability of their surroundings.

2. In 1959 Flannery O'Connor was invited to meet James Baldwin but declined, saying that his visit "would cause the greatest trouble, disturbance and disunion". Reading this, we could conclude that

O'Connor was racist. But in a 1964 letter, she hinted at a real reason, one not obviously racist:

> About Negroes, the kind I don't like is the philosophizing prophesying pontificating kind, the James Baldwin kind. Very ignorant but never silent. Baldwin can tell us what it feels like to be a Negro in Harlem but he tries to tell us everything else too.

But the ambiguous treatment of race throughout her work remains a difficult subject. In *The Habit of Being*, Sally Fitzgerald describes O'Connor's puzzling presentation of race as the product of "an imperfectly developed sensibility" and that "large social issues as such were never the subject of her writing." Fitzgerald's analysis, however, is only half true. Large social issues were not the subject of her writing, but her attitudes concerning race were far from the product of an imperfectly developed sensibility. They were well-developed and firmly based intellectually in her religious beliefs. To O'Connor, to treat racism as a social problem is to misunderstand it. Analysis of "The Artificial Nigger" and "Everything That Rises Must Converge" shows that her treatment of racism as a spiritual crisis was more sympathetic to racial equality than is apparent and, far from indicating that racism was an aberration in her life, it suggests that her understanding of racism set her apart from other liberals of her time.

Which received Honors is obvious. They represent these general differences:

Honors (20)	B-/lower (22)
Length	
1. Introductions at least 1/10 length of paper:	70% (14) 32% (7)
Rhetorical Complexity of PROBLEM/SOLUTION	
2. DENIAL (*but, however,* etc.):	65% (13)
31% (7)	
3. Other semantic signal of Condition	80% (17)
43% (10)	
(*puzzle, unclear, discrepancy*, etc.)	
4. Cost stated	60% (12)
18% (4)	
5. Gist of SOLUTION at end of introduction:	50% (10)
28% (6)	
Summary	

Number with all five positive elements present:	25% (5)	5% (1)
Number lacking all five:		20% (4)
	41% (9)	

These correlations are far from perfect: Some Honors papers had one-paragraph introductions, no Disruption (apparent to me), no gist of a SOLUTION. But only four of them lacked all the positive characteristics. Among the B- and lower papers, some had introductions as long as the longest of the Honors papers; most had at least one of the elements of a prototypical PROBLEM statement. But only one paper had all of them; all positive characteristics were missing in 9 of 22. The overall pattern was clear to me: In general, Honors papers had rhetorically more complex introductions; B- and lower papers, less complex.

I do not assert that the Honors papers were highly evaluated *because* of their complex introductions, the others less well *because* of their more primitive ones. I point only to a general correlation. It is now worth considering, however, whether in fact the rhetorical complexity of introductions does influence how we evaluate what follows. The next study tested the assumption that, in fact, good introductions influence holistic judgments.

Controlled Observations

Because the data reported above are retrospective and uncontrolled, I created a series of three papers alleged to have been written by a first year student in the fifth week of the first quarter of a Humanities course. These papers differed *only* in their introductions. I modified two of the introductions you have already seen so that they would be identical in all respects except those at question here. Here are the opening three sentences that were common to all three introductions:

> In 433, Corcyra and Corinth became involved in a dispute over which of them should control the city of Epidamnus. Because they could not settle the dispute between themselves, they sent representatives to Athens to appeal for its help against the other. After hearing the speeches and debating among themselves, the Athenians finally decided to support Corcyra.

They differed only in what follows:

1. The two speeches differ in many ways, but the most important difference is in the reasons that each side gives to support its appeal

for help from the Athenians. It is important to understand the appeals that Athens accepted and rejected before the war because those appeals can tell us something about Athenian values. In order to show what these values are, I will first discuss the Corcyrean speech and then the Corinthian speech.

2. Corcyra emphasized how they could help Athens in the coming war while the Corinthians appealed to history and justice. Since Athens was the birthplace of Socrates and Aristotle, it would be easy to think they would side with justice, but the Athenians supported Corcyra. It's important to understand the values that Athens rejected before the war, because we could be misled when they try to explain some of their cruel actions during the war on the basis of justice. The speeches describe the values of justice, honor, and tradition, which they claim to hold but in this case reject, and the values of pragmatism and self-interest, which they probably really believed in

3. The appeals differ in that the Corinthians appealed to Athens' sense of justice, while the Corcyreans appealed to their self-interest. After some debate, the Athenians finally sided with Corcyra, because at this time the Athenians knew that war was coming and that they might need Corcyra's naval power. We can best understand Athens' real values and motives if we look carefully at the specific appeals the Corcyreans and Corinthians made and that the Athenians accepted and rejected.

The first announces only a topic; the second articulates a full PROBLEM-SOLUTION rhetorical structure; the third articulates no PROBLEM, but ends with what could be the gist of a SOLUTION to a PROBLEM not yet articulated.

Each of these three introductions was then joined to five identical following paragraphs to create three essays that differ only in their introductions (see Appendix 1). The three "essays" so constituted have been read and evaluated by several groups of faculty. In uncontrolled settings, groups have consistently evaluated the essay introduced by introduction #1 the lowest, by #2 in the middle, and by #3 the highest. In controlled readings involving 55 instructors from colleges and universities in the Midwest, readers were asked to give a numerical grade ranging from 1 to 10 to the version they read, to evaluate on the same scale the apparent "critical thinking" ability of the putative student-authors, and to write a one-

sentence comment that summed up their response and the reason for it. (Individuals readers, of course, read and evaluated only one version.) The quantitative results:

	Holistic Score	**Critical Thinking**
Version #1:	4.8	4.1
Version #2:	5.8	5.9
Version #3:	6.5	6.3

The discursive comments reflect these numbers. In short, when an essay opens with the PROBLEM, it appears to elicit perceptions of higher quality not only of the essay, but of the mind attributed to the putative author. What is seen as "just summary" in one context is seen as "some evidence offered" in another. A writer judged to be "not perceptive" on the basis of one introduction is judged "thoughtful" on the basis of another.

I do not want to exaggerate the influence of a well-formulated introduction. But on the basis of these three sets of data, introductions appear to constitute an element of discourse that plays a perceptible role in our understanding of texts and should play a role in our students' rhetorical education. The next question is whether students can recognize the power of that role.

2. Student Judgments about the Importance of PROBLEMS

The University of Chicago offers an elective course officially called "Advanced Academic and Professional Writing," a.k.a., The Little Red Schoolhouse. It now annually enrolls 400+ students, undergraduate, graduate, professional, and post-doctoral. The course consists of several lectures on matters of sentence style, discourse style, and so on, all based on the principle of bi-level structuring of discourse outlined in Colomb and Williams (1990) and described here. At the beginning of each quarter, students fill out a questionnaire asking about self-perceived problems with their writing, and then at the end evaluate how well they believe they have mastered various elements of style and structure and rate the perceived usefulness of each principle that they have learned. Since substantial writing is required in almost all College and University courses, most students have

an opportunity to evaluate the Schoolhouse as they are learn and use what it offers them.

Table 1 represents four of 10 kinds of difficulties that students were asked about before and after the course. (These are responses for 1991-94, based on 476 of 820 students enrolled.) At the beginning of the course, students reported they felt more inadequate formulating a PROBLEM and writing an introduction than being clear and organized. And it was in those two areas that they reported the greatest relative progress. Apparently, the value of these structures is not only in their being a rhetorical plan for writing introductions but as a heuristic for formulating PROBLEMS.

Table 1. Relative Progress

	Pre-LRS	Post-LRS	Change
Clarity of Sentences	3.3	5.1	+1.8
Organization	3.2	4.6	+1.4
Formulation of problem	2.8	4.8	+2.0
Writing Introductions	2.2	4.6	+2.4

(Scale: 1 - have had great difficulty ; 6 - have had no difficulty)

Table 2 illustrates reported comparable values for just three of the ten units of the course: style, the placement of points (roughly equivalent to major claims), and problem-formulation. In the first ten years of the course, the sessions on style and the placement of points were regularly ranked highest. In the first year that PROBLEM formulation was presented, it was rated highest, by both graduate and undergraduate students:

Table 2. Relative Value of Units of Instruction

	Undergraduates	Grad & Prof. Students
Problem formulation	5.7	5.2
Point placement	5.4	4.6
Style - 1 (nominalizations)	5.2	4.8

(Scale: 1 - no value; 6 - extremely valuable)

Without pre- and post-testing, these data are self-serving of course, but they do not mean nothing. We assume that advanced students (some post-doctoral fellows) are able to evaluate accurately their own educational experience. They apparently value more highly than progress in clarity and organization their enhanced ability to articulate a PROBLEM in the

introductions to their papers. Based on these self-reports, in this case, direct instruction seems to work (contra Krashen, Freedman, Cooper; for a more extended discussion of this issue, see Williams and Colomb, 1993).

3. Two Obstacles to Teaching and Learning PROBLEMS

It seems reasonable to suspect that a well-articulated PROBLEM is relevant to the perceived holistic quality of the text it introduces, and that students feel (or at least report) that their enhanced ability to articulate PROBLEMS and write complex introductions is a useful achievement. On the basis of those two claims, it would be easy to assert that we can raise the rhetorical competence of our students simply by teaching them how to think about problems, PROBLEMS, and their articulation in introductions. But there are two obstacles: First, a substantial number of our students seem not to understand in the first place that finding and articulating PROBLEMS is at least as important as solving them, and second, the kind of PROBLEMS that we most often ask our students to address is extraordinarily difficult for most of them to grasp. Until we face up to those two difficulties, theoretical understanding won't make any difference in their ability to find and pose problems, never mind solve them.

Why Our Students Think They Write

We read for many reasons – diversion, improvement, interest, social contact, etc. But in our professional lives, we read for only a few. We read to stay current. We also read to acquire specific knowledge and ideas so that we can pose and solve a specific PROBLEM of our own making. And we read to find the solution to a specific problem, the answer to a specific question, but not in the service of our writing about it. These motives are by no means mutually exclusive. As we read for one reason, we are alert to the other two.

Motives for writing match these for reading in the same overlapping way, but ordinarily, we write to an audience we hope is reading mainly for the third purpose: to find the SOLUTION to our/their PROBLEM. While some of us write to review articles or to share new knowledge with those who might be interested, most of us write to pose and solve a PROBLEM. When we do (and we are thoughtful), we anticipate readers who are reading

only to keep up or only to acquire information. But if you, *you*, are my ideal reader, you are reading because you share my specific interest in solving the specific problem of PROBLEMS and introductions, either because you have always had that interest or because I have persuaded you to share it. In fact, I can name several whom I would consider ideal readers: Ackerman, Berkenkotter, Bazerman, Hashimoto, Huckin, MacDonald, Swales, among others.

To practicing writers, these motives should be self-evident, but to our students, perhaps not. In a study that asked first year students at the University of Pittsburgh and Robert Morris College (among other things) what motivated them to write, Palmquist and Young found that the overwhelming majority (72.4%) wrote either to "discover" ideas (10.5%) or to "express" them (61.9%). Only 27.5% said they wrote to "inform" readers (18.6%) or to "persuade" them of a claim (8.9%) (these numbers may be an artifact of a composition program that emphasizes writing to discover).

No one would argue that writing to discover or to express are trivial motives, but we might be struck by the small number of students whose motives implied readers, until we recall that their motives match their competence and that few of us who assign writing tasks to first year students expect them to discover and communicate information that is genuinely new and useful, much less to discover, pose, and solve a PROBLEM that we think is "interesting." Nevertheless, most of us believe that eventually our students should learn to anticipate mature motives for reading, that they must eventually learn to pose and solve PROBLEMS. To determine whether and when that happens, we put some of the same questions to more advanced students in the Schoolhouse:

> "When you write an essay or term paper, what reasons motivate you? Ignore in-class essay tests or take-home examinations. Before you answer any of the questions, read the whole list."
>
> **Discovery**
>
> 1. To better understand something I have read.
> 2. To help me discover something new or to clarify my own ideas or feelings.
>
> **Demonstration**
>
> 3. To demonstrate that I know and understand ideas and information that I have read about or that I have heard lectures and discussions about.

4. To demonstrate that I can exercise some skill or method of analysis.

Expression

5. To express my thoughts and opinions about some subject.
6. To make an important claim about a topic and to give good reasons for it.

Communication

7. To communicate to a reader who might find use for it information that I have gathered and/or my views, thoughts, opinions about it.
8. To persuade a reader to accept my ideas.
9. To find, pose, and solve a problem that a reader should think is important enough to need a solution.

To hide our logic, we presented these questions in random order. And instead of asking for simple yes or no responses, we asked them to respond from "not important," to "somewhat," "very," and "most." The averages of 114 responses:

	Discover		**Demonstrate**		**Express**		**Communicate**		
Questions	[1	2]	[3	4]	[5	6]	[7	8	9]
3rd year	2.6		2.8		2.6			2.5	
	2.7	2.5	**2.8**	**2.8**	**2.8**	2.4	2.5	2.6	2.4
4th year	2.55		2.9		2.7			2.43	
	2.6	2.5	**2.8**	**3.0**	2.5	**2.9**	2.4	2.3	2.6
Grad	2.25		2.65		3.3			3.1	
Students	2.3	2.2	2.7	2.6	2.9	**3.7**	2.9	**3.2**	**3.2**
Grad	2.25		2.75		3.1			2.87	
Business	2.1	2.4	2.7	2.8	**3.1**	**3.1**	2.9	2.9	2.8

To be sure, few of us know why we do what we do; questions like these are likely to elicit answers that students think are appropriate rather than true. But while these data are not as sharply distinguishing as those of Palmquist and Young, they are indicative. Among upper-level undergraduates, their most important motives are either demonstration or expression. Their least important motives include helping readers who want information or solutions. Among graduate and business students, the

relationship is reversed. Their most important motives imply readers; their least important discovery.

Our problem is to encourage a development toward PROBLEMS by introducing that concept into the conversation of the classroom. We might be struck by the fact that so few responding to this questionnaire cited the posing and solving of problems as their most important motivation for writing. Of the 114, only 18 picked problem posing and solving as their most important motive. The concept of problem does not seem to occupy a naturally prominent place in their vocabulary of motivation, which suggests that what actually motivates them to write may be obscured by the vocabulary of the choices, that perhaps they all think they are posing and solving problems, though unable to say so.

The Contrasting Phenomenology of Costs and Conditions

As difficult as it might be for students to understand that at some point in their professional lives their motives for writing must include posing and solving PROBLEMS, there is perhaps a yet more telling reason why it is so difficult for them to engage with what I have defined as an "interesting" PROBLEM. It is that one kind of problem in particular – the kind that we in fact pose most often in academic settings – raises difficulties not just in its articulation, but in its very conception. Indeed, this distinction among kinds of problems and PROBLEMS may even distinguish kinds of students.

The ordinary language definition of "problem" reflects the notion of a real Cost entailed by a real flat tire: something really troublesome and unpleasant, a concrete Cost that we try to avoid or overcome. This kind of tangible problem might occasion a conceptual problem that defines a research problem aimed at solving the tangible problem:

Tangible problem: I have a flat tire.CONDITION

If I do not fix it, I will miss an appointment.COST

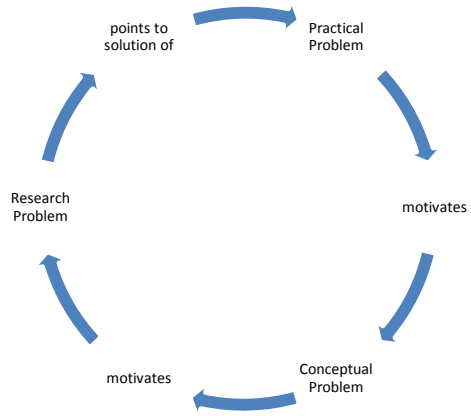
Conceptual problem: I do not know where the jack is.CONDITION

If I do not find it, I will not know how to change the tire.COST

Research problem: I do not know where the driver's manual is.CONDITION

If I cannot find it, I cannot know how to find the jack.COST

Graphically, it looks like this:



Most of our students understand this relationship: People are dying of aids, but we cannot solve that practical problem because we have a conceptual problem: we do not know exactly how the HIV virus works. That conceptual problem motivates a research problem that we hope will point to the solution of the practical problem. And so students understand that a research problem is motivated by a conceptual problem which is motivated by a tangible, practical problem.

But there is another, different kind of problem-cum-PROBLEM with a different kind of motivation. It is the kind of problem that those of us in academic communities call a "pure" scholarly or research problem: We do not know how much matter there is in the universe, how Shakespeare could have known so much, how language evolved, the origins of melody among Polynesians. These are not problems motivated by any tangible or pragmatic problem, the kind of problems that we call "troublesome" that so afflict us that we flee them. These are "conceptual" problems, intellectual problems, theoretical problems, problems that arise simply from the workings of a curious, inquiring mind, problems that so fascinate us that we cannot resist pursuing them and then articulating our answers in print, even though their solutions will impinge on the practical, pragmatic, tangible problems of "the world" not one whit. (I will henceforth omit the scare quotes around pure; I mean by pure only a PROBLEM whose Conditions and Costs are not motivated by any Cost exacted by a tangible problem of the world. I imply no relative value between pure research PROBLEMS and research PROBLEMS motivated by external tangible problems of the world.)

Now, of course, we must conceptualize all problems that we eventually articulate as PROBLEMS, whether they are motivated by tangible and

concrete conditions like homelessness or by pure theoretical and scholarly topics like Shakespeare's imagery, must, of course. And the hardest pragmatic problems of the world usually can be solved only by first posing a difficult conceptual PROBLEM whose solution requires the posing and solving of a difficult research problem. But to our students, there is less felt difference between a PROBLEM that articulates gun control as a *pragmatic* PROBLEM and a PROBLEM that articulates gun control as a conceptual *research* PROBLEM, than there is between a conceptual research PROBLEM driven by a tangible problem like gun control and a conceptual research PROBLEM driven by a pure scholarly problem like the origin of the chorus in Greek drama. In the first, the tangible problem of gun control drives the research problem about gun control, but in the second, no tangible problem drives a problem about the origin of the Greek chorus. This difference is a compound of four qualities that make it difficult for our students to share our enthusiasm for the Greek chorus kind of PROBLEM:

1. We locate conceptual and tangible problems in different places in our experience.
2. We become aware of them in paradoxically different ways.
3. We find it extraordinarily difficult to articulate in a PROBLEM the Costs of a "pure" conceptual research PROBLEM, relatively easy to articulate the Costs in a tangible research PROBLEM.
4. We can solve tangible problems in two ways, but conceptual problems usually in only one.

It is these difficulties that at least partly lead to the lower case rhetorical problems about which we have an increasingly rich literature.

i. Locating the PROBLEM: We locate the tangible problems that might motivate research PROBLEMS and the "pure" conceptual problems that might motivate research in different experiences. The Condition to a tangible problem is usually constituted by a tangible experience such as a flat tire, no place for poor people to live, too easy access to handguns, a non-functioning immune system, Conditions that seem to exist "out there," in the tangible world (including our physical bodies) and that actually or potentially injure us, or at least exact some Cost of diminished happiness. And the experience associated with the Costs of tangible problems seem to be exacted from "out there," as well, Costs that tangibly affect my body, now or potentially, or the bodies or feelings of others: We miss an appointment, sleep in a cold doorway, lie wounded in the street or sick in a

hospital bed. If the problem is "ours," then we physically, tangibly feel that problem by feeling or imagining its *Costs* that seem to hit us unbidden.

But in the academic world, particularly in the liberal arts, the problems that we and our students typically address and articulate as PROBLEMS are not *necessarily* stimulated by the perceptible costs of a tangible problem that causes people distress. In the academic world, we more typically ask our students to address "pure" problems whose Conditions and Costs are not "out there," but essentially "in here," in our mental worlds: how could Shakespeare have known so much? what was Native American social structure like 1000 years ago? how much matter is there in the universe? To be sure, many conceptual research PROBLEMS that we enthusiastically grapple with are stimulated by tangible problems in the world that, were those problems ours, would terrify us. It is no comment on the character of those doing research on AIDS to say that while they may be dedicated to solving the tangible problems of people with AIDS, they are also fascinated by the HIV virus and its effect on our systems as a pure *research* PROBLEM, as a PROBLEM of pure understanding. But most such problems that we might eventually articulate as PROBLEMS do not come looking for us from "out there." If pure conceptual problems are going to be posed as PROBLEMS, those problems have to be found "in here" and articulated "out there."[19]

Most of our students would rather think and write about PROBLEMS stimulated by tangible problems than about PROBLEMS based on pure conceptual destabilization, because the CONDITIONS, COSTS, and SOLUTIONS to tangible problems are prototypically "out there," visible and concrete, and so seem more conceptually available. Moreover, our students usually write not to develop the solution to a *conceptual* PROBLEM motivated by what is "out there," but to recommend a specific solution to what is out there, articulated in a SOLUTION that describes not a conceptual conclusion but direct action (I understand that some would deny the difference). Furthermore, tangible problems afflict us all, educated and uneducated, learned and unlearned, literate and illiterate alike. It takes no special training or education to recognize tangible problems.

Conceptually pure research problems, on the other hand, are, candidly, an elitist indulgence. They are enjoyed largely by those few of us whom society has exempted from having any immediate and continuing need to solve 9 - 5 problems from out there; we are able to spend our time concerned with PROBLEMS in here, in our heads, with their COSTS, CONDITIONS, and the benefits of SOLUTIONS invisible and abstract to

anyone not part of our community. Such PROBLEMS are the property of – or must be made the property of – a community of academic interest.

ii. Becoming Aware of the Problem: We usually become aware of conceptual PROBLEMS driven by tangible problems from "out there" and research PROBLEMS driven by conceptual PROBLEMS purely from "in here" in opposite ways. We usually become aware of the existence of or potential for a PROBLEM based on a tangible CONDITION of a tangible problem when we see, hear, taste, smell, or feel its cost, or we fear that we will. We need not experience the condition to realize we have a problem, much less a PROBLEM, but we do feel or imagine feeling the costs of that condition. We may not feel the *condition* of having the AIDS virus, but we feel or fear feeling the *cost* of having it.

On the other hand, almost invariably, we become aware of the potential for a pure conceptual problem *in exactly the opposite way*. When we are on the outskirts of such a PROBLEM, we experience not what we might articulate as its COST first, but only signs of what might eventually be articulated as its CONDITION. We recognize most clearly the sign of a possible CONDITION to a pure conceptual research PROBLEM when we are dead-certain that what is widely believed about some issue is in error, especially when that error is in print. I am dead certain that what has been written about introductions is, if not dead wrong, at least not vividly enough right. When I first felt that, I was not concerned with the tangible problem of teaching students how to write better introductions. I was just vexed by what seemed to me to be conceptually not quite right in what I had read about rhetorical problem posing and solving, so I bet a substantial amount of my time that I was feeling the signs of at least one potential component of an "interesting" problem that might become an interesting PROBLEM – a CONDITION consisting of not just of my mistaken, incomplete, misleading thinking, but the thinking of others who did not know they were completely or partly wrong, particularly among those who were writing for a community of readers that included me. What I did not understand at that point was the COST of that CONDITION, COSTS that I would fully understand only *after* I had articulated the SOLUTION to a PROBLEM motivated by a problem, neither of which at that point, paradoxically, yet existed.

What I mean by this paradox is that until we *solve* the PROBLEM, we aren't clear what either the problem or the PROBLEM is. So what if people don't understand the underlying structure of PROBLEM-posing introductions? I would not know the answer to that question until I found a

SOLUTION that would allow me to recognize COSTS that perhaps none of us knew we were paying. But until I did that, I did not fully understand my PROBLEM; which is to say, my SOLUTION created my PROBLEM. And once I understood the PROBLEM, I was able to see the problem behind it more clearly. It is the paradox Socrates posed in the Meno. Our students find this kind of thinking bizarre. But it's what we do – a kind of Zen locksmithing: we have made a key that fits a lock before we have made the lock that fits the key.

We feel a more subtle sign of a Condition to a potential conceptual problem that might become a PROBLEM when after accumulating and thinking about a body of knowledge on a topic that interests us, we experience a kind of low-grade but tantalizing buzz of cognitive dissonance: a fluttering sense of possibility; the sense of an important unasked question; the feeling that behind a set of disparate data and facts is a general principle, connections that we sense but can't quite see; what John Dewey described as the first sign of a problem, a "state of doubt, hesitation, perplexity, mental difficulty" (12). In fact, Dewey accurately caught the affective quality of this not entirely unpleasant Condition of confusion:

> The world 'problem' often seems too elaborate and dignified to denote what happens in minor cases of [becoming aware of a problem]. But in every case where reflective activity ensues, there is the process of *intellectualizing* what at first is merely an *emotional* quality of the whole situation. (109)

Students prefer to think and write about conceptual PROBLEMS driven by tangible problems rather than by conceptual PROBLEMS driven by a pure intellectual activity, because the emotional quality of the costs associated with a tangible problem are infinitely more compelling and immediate (and easy to handle) than the emotional quality of a condition associated with a conceptual problem. Most tangible problems come looking for us (though the best problem-finders see them coming). But unless we are working in a field where there are acknowledged problems lined up waiting to be solved (as in some branches of mathematics, physics, medical biology, etc.), we usually have to go looking for sources that will elicit in us the signs of a conceptual problem, and we must be exquisitely alert for them, because most conceptual problems do not exist until we invent them (Bazerman and MacDonald are quite good on this point).

But while our students often do recognize states of doubt and perplexity, they too often interpret that uncertainty not as the sign of a potentially interesting conceptual problem for research, but of a dismaying

failure of their understanding. When we mature writers experience perplexity about the work of our community, we are confident enough to attribute it not to our incompetence but to something wrong in someone else's argument and exposition – my feeling that in so much published work about rhetorical problem solving something was missing, that it all missed a central point. That failure of understanding was not my problem – it was theirs, though I would make it part of my PROBLEM in due course. This ability to sense and trust our own uncertainty is an acquired cast of mind, a product of training, practice, and confidence, a mental habit shaped by our community of interest. Few of our students present themselves to us fully sensitive to those kinds of *grounded* doubts, hesitations, and perplexities, and fewer yet are able to articulate them well. And so they find our conceptual problems not just baffling; they do not even experience their existence, because when we resonate to the "emotional quality of the whole situation," we experience it as the tantalizing possibility of a problem and its eventual representation as a PROBLEM, but our students too often experience that emotional quality of puzzlement as just more evidence of their intellectual incompetence.

iii. Articulating the Costs and Conditions of the PROBLEM: Because of these differences between the epistemological/phenomenological nature of tangible and conceptual problems, our students (and we ourselves) feel it to be much more difficult to articulate the Costs and Conditions of conceptual PROBLEMS than of tangible PROBLEMS.

It is not difficult to articulate the most obvious COSTS associated with the tangible problem of AIDS because we can usually *feel* them, or at least imagine feeling them; they are evident and palpable, COSTS for which we have a rich vocabulary based on fundamental human motives: pain, loneliness, fear, loss of respect, etc; the hope for money, power, prestige. To be sure, these tangible problems have causal CONDITIONS that are often difficult to articulate, because they are usually more complex than we want them to be. In the former Yugoslavia, how do we define the causal CONDITIONS whose COSTS are so tangible: Are the CONDITIONS that exact the COSTS of so much suffering tribal mentality? cultural history? lack of UN action? evil? all of the above? But as difficult as it may be to understand which CONDITIONS cause what COSTS, we are rarely at a loss to offer some explanation, right or wrong.

On the other hand, though we can articulate the CONDITIONS to a conceptual problem more easily than its COST, they are still hard to pin down, because the strongest sign of a possible CONDITION is that sense of

cognitive disequilibrium that Dewey described, and out of that alone we begin constructing the CONDITION to a PROBLEM. Our seemingly impossible rhetorical task is to persuade our readers to feel exactly the same way.

How we do that is fraught with methodological difficulty. Once we feel that sense of unease, we metaphorize it into something that we project onto the body of knowledge about X by instantiating that into an impersonal "gap in knowledge about X" – hence my opening metaphor about problems as opposed to PROBLEMS: "This gap in our understanding exacts a price on our teaching." In fact, we have a rich vocabulary that encourages us to displace our sense of cognitive dissonance onto the understanding of our community. When we try to understand some issue and don't quite, *we* may have feelings of uncertainty, perplexity, confusion, ambiguity. But if we believe that *we* feel uncertain not because *we* are incompetent or uninformedly ignorant but for some good grounded reason having to do with *their* failure, then we point to *our community's* understanding of the issue as "having" a discrepancy, inconsistency, contradiction, incongruity, incoherence, disagreement, incompleteness, ambiguity, unclarity, anomaly, paradox, conflict. Although the language we use to describe the CONDITION to a conceptual PROBLEM is conventional and limited, it is always displaced and usually metaphorical, making it difficult to articulate the CONDITION to a conceptual PROBLEM exactly.

And it gets even more complicated and, unfortunately, more significant: At this point, we might be able to articulate a dissonant CONDITION, but we are probably still unable to articulate what COSTS – if any – might be associated with this gap in our knowledge, this discrepancy or inconsistency. Suppose we don't fill in a gap of knowledge, correct a discrepancy, or correct an error? So what if I remain ignorant about the number of trees on the island of Zanzibar, the source of Shakespeare's classical learning, the reasons why Anasazi Native Americans suddenly disappeared from their cliff dwellings in the Southwest? The trouble with an inchoate conceptual PROBLEM is that often we cannot even guess at its COSTS until we solve it: What COSTS does the community pay if it, unknowingly, remains oblivious to the new knowledge, the better understanding, the new connections that I provide? What COSTS will my community stop paying that it didn't know it was paying, or what as yet unknown BENEFITS will it gain? So what if they don't learn about Welsh grammars? realize that the Athenians were self-interested? know about a new kind of Roman amphora with its original contents? To explain the COSTS

of any of the CONDITIONS implied by these questions, we have to understand not just what locally puzzles us and how much better we would feel if we were not puzzled, but how any new understanding might change some other part of the network of received knowledge, understanding, opinions, values, ideas, etc. that constitutes our community of knowledge.

Which creates the paradox: If COSTS are necessary for there to *be* a problem or a PROBLEM, how can we discover COSTS only *after* we've solved what does not yet formally exist? How can we recognize anything as a problem or a PROBLEM until we have found its SOLUTION? It is the paradox that Charles Darwin must have had in mind when he observed that, "Looking back, I think it was more difficult to see what the problems were than to solve them." But how can that be? If we have a solution, we no longer have a problem. Dewey again captures the paradoxical phenomenology of problem/PROBLEM posing and solving:

> In fact, we know what the problem *exactly* is simultaneously with finding a way out and getting it resolved. Problem and solution stand out *completely* at the same time. Up to that point our grasp of the problem has been more or less vague and tentative. (108).

To see this process through to its conclusion requires patience, confidence, tenacity, and a tolerance not just for delayed gratification, but for the delayed existence of even the *possibility* of gratification. Our emotional horizons are long; those of our students are short.

iv. Solving the PROBLEM: We can solve tangible problems in either of two ways, but conceptual problems usually in only one, rarely in the other. When we solve tangible problems, we can remove the Condition that exacts the Cost or we can ameliorate the Cost. I can solve the problem we holistically call "excessive litigation clogging the courts" by eliminating the Condition: make it more difficult for people to bring suit for no good reason or disbar greedy lawyers, or by ameliorating the Cost of the Condition: build more courthouses and hire more judges. But we typically solve a conceptual problem only by changing its Condition, only by filling the gap in knowledge, resolving the discrepancy, clarifying the ambiguity, correcting the error. We do not know how Shakespeare could have known so much. Some think that, as a consequence, we cannot know who Shakespeare really was. We can solve the problem of

> [[we do not know how Shakespeare could have known so much$_{\text{CONDITION}}$ ➡
> [we do not know who he really was]$_{\text{COST}}$]$_{\text{PROBLEM}}$

only by discovering how he could have known so much. We could try to "solve" this PROBLEM by arguing that there is none, that we should not care who Shakespeare really was because there is no COST in not knowing – i.e., remove the COST by persuading our audience that it does not really exist. But that does not solve the PROBLEM. It uncreates it.

But that is exactly what paradigm shifts in a field do: they uncreate problems by replacing them with new ones. For example, in the late '50's, linguists faced an extraordinarily intractable problem in how to move from phonological analysis to grammatical analysis and from grammatical analysis to semantic analysis. They had this problem because they were committed to a "bottom-up" explanation of language: first do phonology, then and only then move on to grammar. The problem was to get from pure sound to syntactic structures. Until that Condition of procedural ignorance was solved, linguists felt, they would pay the Costs of not having a phonologically grounded grammar. Noam Chomsky "solved" the PROBLEM by arguing that the supposed Cost was no Cost at all: "Forget about trying to create procedures by which one moved from phonology to syntax. That's the wrong direction: get the syntactic component of a language device straight, and an account of the phonology becomes possible." That is a conceptual move generally beyond the abilities of our students.

Finally, we should point out again that different fields encourage different ways of finding problems. In the natural sciences, it is not quite the case that problems line up to be solved, but the community has a good understanding of what problems are outstanding and which might be turned into "interesting" PROBLEMS. The most interesting PROBLEMS, of course, are those not yet discovered and articulated. In other fields like the humanities and some of the social sciences, the situation is different. In those fields, problems and PROBLEMS more often have to be discovered, or more typically, invented. Good PROBLEMS about early 19th c. novels do not line up in the hall hoping to be tapped on the shoulder by anxious PhD students. (Again, see Bazerman and MacDonald on this matter.)

For all these reasons, less advanced students usually prefer to articulate and write about PROBLEMS that address or are motivated by tangible problems. After all, they have been articulating PROBLEMS about tangible problems all their lives, in a language common to us all – "Dad, I need the car. If I don't get it, the guys will . . . ." But most of our first year students have no experience finding, posing, and solving pure conceptual problems or PROBLEMS; nor do they all have a taste for them; nor do they have much experience recognizing that promising feeling of informed ignorance or

confusion that motivates them; nor when they feel it, do they trust it, attributing it to their incompetence rather than to anything potentially interesting to their community of readers; nor do most of them see any obvious payoff in posing and solving a pure conceptual PROBLEM because they have no community to reward them for doing so. But however difficult it may be for us to make these distinctions, we eventually must if we are to help our students to understand what it means to pose and solve an "interesting" PROBLEM in an academic setting. Either that or encourage them to pursue only tangible problems. But that has its costs, as well.[20]

The trick, of course, is to figure out a way to teach them how to think about problems and PROBLEMS in a productive way at all. That's the problem of Part III.

Part III. Teaching and Further Research

1. Pedagogy

The last question is how we translate theory and research into pedagogy. I sidestep the prior question of whether we should, even though arguments against teaching specific knowledge as a way of teaching writing seem to be increasingly popular (Krashen, Ellis, Freedman; for the contrary view, see Williams and Colomb, 1993). To critique those arguments in detail would require more space than is available and in any case unnecessary.[21] Unless we claim that self-evaluations by mature writers are worthless, we must at least consider reports that learning specific knowledge about text has a perceived value – in this case especially introductions and the formulation of PROBLEMS. I sidestep as well the political objection that this kind of teaching maintains the rhetorical hegemony of a capitalist, task-oriented, product-producing culture. Since all of the standard attacks are framed within the rhetoric described here, those objections would seem to be paradoxically self-deconstructing, and equally mindless. In fact, the only potential here for intellectual or social hegemony is that PROBLEM finding, posing, and solving is a Western way of thinking. There are cultures that do not set that activity as a central intellectual objective. But we do, and I think it's a good idea. (And I assume that I need not disabuse anyone of the assumption that I believe this is the only kind of writing worth teaching.)

What follows is based on four years of teaching the matter of PROBLEM-posing to students ranging from first year students to post-doctoral fellows to writers in professional organizations and on college faculties.

Intrinsic Constraints and Created Boundaries

We have found that some constraints on teaching these matters are intractable. First, there is the anxiety of uncertainty. When we solve a

tangible problem posed by someone else to that person's satisfaction, we experience the satisfactory thunk of closure. We got it right, and the case is closed. But when we try to formulate our own PROBLEM, not only can we not be certain that we have solved it according to some external frame of reference, we cannot even be sure that we have posed a problem as a PROBLEM that captures it in all of its felt complexity. Few of our students can tolerate the lack of closure that mature academic PROBLEM-finding entails, even when we not only candidly allow them to stop short of closure, but encourage them to. When we ask them to pursue on their own an activity that has no certain closure and no obvious bite on a tangible problem in the world, we must seem to them to be from Mars. The universes of so many of them simply have no place for uncertainty, unresolved complexity, the very idea that a PROBLEM posed well but left unsolved can be infinitely more compelling to us than a PROBLEM posed banally and solved. Moreover, problem-finders are trouble-makers; they disrupt stability.

Second, this material is complex and so cannot be learned in a sitting, even by advanced students. It requires repetition, numerous examples of complete and incomplete PROBLEM-posing introductions, practice, analysis of papers, in more than one class, then more practice. And then we do it all again. In particular, teaching PROBLEMS should be done on an institution-wide basis. Students should hear it in English, in history, in psychology, in economics, in physics, in chemistry, in mathematics. Unless PROBLEM-posing is supported on an institutional-wide basis, students risk an experience that we have had to warn our students of: Once students develop a mind-set that posing a PROBLEM is at least as important as solving it, they tend to elaborate their PROBLEMS beyond what seems necessary to faculty who are interested only in their simple demonstration of knowledge. Unless faculty in other courses understand what students are doing when they spend more time formulating and justifying a PROBLEM than demonstrating that they can accurately summarize what they have read, those conflicting motives can result in students and faculty alike misunderstanding what criteria will be applied to student writing.[22]

Third, students vary widely in their ability to grasp these principles. Their ability to do so correlates partly with intelligence, but there is a deeper and I think more subtle distinction that transcends social class, ethnicity, race, gender, etc. On the basis of work by Getzels, Csikszenthmihalyi, and their students (Schwartz, Smilansky), we must acknowledge that some students seem intrinsically able to recognize and define problems better

than others, and their evidence suggests that such a competence extends into adulthood. This competence correlates reasonably well with intelligence as measured by standard tests and with grade average (Schwartz). Other evidence based on finding problems in mathematical data suggest that the ability to find a problem also correlates with grade-point average. Malley and Davis found among the lower and mid-level managers in corporations a good correlation between a higher level of education and a cognitive style more inclined to finding problems than to solving them. But they also found that as executives rose through the ranks, either their experience or the system selected for those whose cognitive style emphasized not problem finding, but problem solving. As noted above, problem-finders are trouble makers.

Compounding that division between finding problems and solving them is a criterion that separates those of our students for whom conceptual PROBLEMS are a boring irrelevance from those for whom such PROBLEMS exert an irresistible fascination. And again, we cannot predict who they will be. Many of us in academia come from backgrounds that did not value reading, thinking, and ideas, but something drew us into the life of the mind (Rose). When we distinguish those interested in problems from those who just want to know what to put down in their notebooks, and then among those interested in problems those who are naturally inclined problem finders from those who tend to be problem solvers, and then among the problem finders, those who are inclined toward pure conceptual research PROBLEMS as opposed to research PROBLEMS driven by tangible problems, we can see that we are dealing with a not large subset of students who might want to engage with issues like the vexed history 15th century Tibetan plainsong.

I do not claim that some students are by their hardwiring incapable of learning to recognize and articulate PROBLEMS in general or incapable of resonating to conceptual PROBLEMS in particular. Mike Rose has eloquently described his own experiences about these matter, and Gerald Graff has explored some of these same differences in his analysis of the Culture Wars. I point out only that many of our students come to us apparently untouched by the idea that they should try to find conceptual PROBLEMS. Indeed, among some undergraduates there is for the life of the mind a distrust bordering on contempt.

Fourth, there is a developmental sequence that I think has to be honored, and that at each stage a different affect complicates the acquisition of competence.

1. Self-interest: a student is attracted to a topic that he or she simply finds interesting, regardless of whether there is in it anything more than some inexplicable attraction.
2. Self-puzzlement: the student finds in the topic something that makes him or her feel what Dewey called that "state of doubt, hesitation, perplexity, mental difficulty" that has to be resolved, just because it is there.
3. Self-enlightenment: the student discovers that by resolving the perplexity, he or she changes something about other areas of thinking about that topic, and likes the feeling of having done so.
4. Community interest: a student is attracted to a topic because both he and the community find it interesting.
5. Community puzzlement: the student finds in the topic something that the community is already puzzled by or might be puzzled by.
6. Community enlightenment: the student discovers that by resolving the perplexity, he or she can teach the community something about other areas of its thinking, and likes the feeling of having done so.

This sequence is not enacted once; its steps overlap; some collapse; (4) - (6) can occur at the same time as (1) - (3). But our experience suggests that most students begin with their own interest, regardless of its consequences, and only then broaden their sense of audience and community, with the last step being the most difficult.

There also appear to be different affects associated with these steps. We see our own students moving from (1) and (2) to (3) most easily: the affect is fascination to the point of obsession. But they often resist moving from (3) to (4) because it means they must socially reconstruct their interests. The move from (4) to (5) and (6) is, we have found, laden with increasing anxiety and self doubt. We have had more than a few graduate students appear in our offices after a session on PROBLEM-posing, filled with existential dread upon the discovery that they in fact may have no PROBLEM as we defined it, because they could think of no COST to their community of readers (i.e., their dissertation directors) if they never reported the results of their research.

Younger students experience this dread less often, because for them less is at stake. First and second year students experience frustration because they do not quite understand the notion of how or why someone else could

find in their writing something at stake, and so we do not dwell on that aspect of a PROBLEM. It is sufficient for a student to find some CONDITION to a PROBLEM – some flawed understanding or incomplete knowledge – the COST of which is simply the relief of an itch scratched. We want them to experience the feeling of satisfaction that comes with solving a private PROBLEM. To the degree, however, that they understand that eventually, as they become citizen *rhetors,* they must participate in the PROBLEMS of a community, we are satisfied that they are on the right track to that end. And I must candidly acknowledge that even some otherwise apparently competent graduate students seem never to get a firm grip on these concepts. That may be our fault, not theirs.

Perhaps the greatest constraint in teaching these matters is the training, taste, and mind-set of the instructor. To address these matters, one requires a good deal of specific knowledge and experience finding and posing PROBLEMS, a demand that might explain why writing is now so widely taught as discovery and expression, or not taught at all. Teaching writing as discovery is not simple or easy: it requires patience, support, appreciation, kindness, imagination, etc.. But it does not require either of its teachers or of its students hard, sustained *analytical* intellectual effort. And among many who believe that teaching writing is teaching feeling, so there are those who think that teaching abstract principles as knowledge encourages the worst tendencies of a hierarchical class system. Privileged knowledge gives the teacher unwarranted authority in the activities of the classroom. As I said earlier, on that matter we differ.

Classroom Practices

Here is a potpourri of advice, anecdote, and suggestions about teaching these matters.

1. I rejected earlier the idea that writing can be learned only in the way that we learn a first or second language (Krashen, Freedman). There is, however, a device from second language learning that is crucial to teaching writing in general, the matter of PROBLEMS in introductions in particular: it is the minimal pair. In second language learning, we contrast the /r/ - /l/ contrast by asking students to hear, distinguish, then reproduce the difference between *roll* and *loll*, *barrel* and *bearer*, etc. In the same way, before our students can articulate PROBLEMS, we have found it crucial for them first just to recognize the difference between an introduction that poses a PROBLEM and one that doesn't. Thus it is important to have many

paired introductions that illustrate those distinctions. The simplest way to create these pairs is to find a good introduction (or one that is not) and out of it create its contrast. Compare these with their mates on pp. 00 - 00. Each lacks a statement of Cost. Nowhere can we plausibly insert "So what?"

> As President-elect Clinton prepares to take office, his concentration on immediate issues would not be surprising. Should the free trade agreement be accepted? [four more questions follow] Add crises, and it would seem that Clinton can focus only on problems at hand. Yet politicians must consider global conditions. But how are we to distinguish the important from the ephemeral? We might consider a time when hopes of a new world order were also being overshadowed by fears and paralysis.

> To date, 11 employees transferred cross-country have asked for help with a job search for their spouses. We have authorized help for six, but we have no policy for such authorization nor any standard resources for the proposed Spouse Counseling Program. Following is a recommendation that we retain three firms that can provide job counseling in Los Angeles (Trans-American), Houston (ExecSearch), and New York (Helmes and Kelly, Inc.).

> Before the Peloponnesian War, Corcyra and Corinth disagreed over who should rule Epidamnus and went to Athens to ask for their help The Corinthians appealed to Athens' sense of justice, while the Corcyreans appealed to their pragmatic self-interest. Since Athens was the birthplace of Socrates and Aristotle, it would be easy to think that they would side with justice, but they sided with Corcyra. We can see in the appeals that the Corcyreans and Corinthians make the Athenians' choice between acting on the basis of future self-interest or on traditions of justice and honoring old treaties.

We might be able to reconstruct an answer to "So what?", but we ought to be aware of when we have to and when we don't have to. When students learn to explain how the pairs differ, they develop an eye for recognizing the difference, a vocabulary for understanding and explaining the difference, and a range of models for reproducing the difference. (They also learn to read more thoughtfully.)

2. The next step is for our students to read and analyze one another's introductions and PROBLEM statements. To this end, we encourage our students to be more specific than they think they must be in articulating their PROBLEM. We let other students suggest what to delete as "self-evident." Writers are usually surprised that at least a few readers think the

writers should keep what they thought they could have omitted. It is a useful lesson in not overestimating what audiences need.

3. Students tend to distrust this formulaic account of introductions, problems, and PROBLEMS, believing that it reduces their writing to the same boring pattern. To counter that impression, we have found it necessary to show how variously these patterns are realized, both in their own writing and in what they read. We point out that the underlying structure and the variations in its articulation is a heuristic that they can use to explore their materials and ideas to discover in them the elements of a PROBLEM. But finally, we simply tolerate the early mechanical application of these principles to their writing. We have assumed that we are more interested in seeing our students learn to control some of these issues, regardless of how original they are in other respects, than to expect personal narratives so moving that they deflect the boredom of reading paper after paper after paper. We are not disappointed when we get banal papers. We assume that down the road, our students will engage with matters that are not banal and will not write banal papers.

4. To help our students work through their own understanding of what they think they are doing, we give them a one-page formula for articulating their intentions. It is not foolproof, but it focuses their attention:

> "In the earliest stages of a research project, when you have only a topic and maybe the first glimmerings of a question to ask about it, you describe your work in a sentence something like this: "I am learning about/ writing about/ working on/ studying _____," and you fill the blank with a few noun phrases:
>
> > I am investigating the early speeches and policy initiatives of Presidents since Hoover.
>
> But once you begin to work toward a problem, you have to try to describe your intention differently: "I am studying/working on X *because I want to discover /find out/ figure out* ***who/what/when/where/whether/why/how*** _____," where you can now fill in the blank with a subject and a verb:
>
> > I am working on Hoover's early speeches *because I want to* ***discover how*** *Presidents since him developed their inaugural address and first state-of-the-union address and* ***whether*** *those speeches were used to announce new policy initiatives*.
>
> Now describe your intention more fully, adding a description of why our problem is important: " . . . ***in order to understand/ explain***

*how/why*_____ . " Use *how* or *why*, not *who, what, when, where,* or *whether.*

> I am working on Hoover's early speeches because I want to **discover how** Presidents since have developed their inaugural and first state-of-the-union addresses and **whether** those speeches were used to announce new policy initiatives ***in order to explain*** *how the process of generating public support for national policy has changed in the age of television.*

The first part of the statement, "I want to discover **how/why** . . . " identifies the *CONDITION*, what you now do not know or understand but will as a result of your research; the second part, "**in order to explain** how/why . . . ." points you toward the *COST*, the still larger matter that you probably will not know or understand until you resolve the research problem. Here is a framework that will help you articulate your problem:

1. I am studying _____

2. because I am trying to discover how/why _____

3. in order to explain how/why_____.

We also encourage students to write papers that only pose and justify PROBLEMS, that only propose potential CONDITIONS and COSTS. They don't have to solve them, but they do have to defend them as potentially good PROBLEMS. This requires them to speculate, to create hypotheses about potential COSTS, to justify a longer project. And we then have the other students evaluate those proposals.

5. This next is the most difficult activity that our students attempt: we try to get them to think backwards. Typically, all of us discover closer to the ends of our first drafts than to their beginnings the point of our argument, our major claim, the gist of a SOLUTION to some as-yet unarticulated and unrecognized PROBLEM, the potential for a CONDITION – some puzzle, conflict, discrepancy, gap in knowledge that could be one component of a PROBLEM. It is the typical pattern of writer-based prose, that pattern of writing associated with immature student writing, or at least the writing of those who are not fully competent (Flower, 1979). But it is a pattern that characterizes even the most mature published prose. In the course of researching this piece and working up teaching materials, I have looked at hundreds of introductions and conclusions to academic essays in scores of journals. I will simply assert that many (fewer than half but many more than a handful) open with banalities but end with quite interesting and provocative conclusions.

This pattern of writing is so common that for I time I questioned whether its ubiquity testified to its appropriateness and my error in assuming its inadequacy. If so many published introductions pose PROBLEMS so thinly and conclude with the richest thinking, could it be that *that* is simply an alternative to the prototype pattern that readers in fact prefer? I finally rejected that possibility, because in working with a great many professionals, I have found that the overwhelming majority at least claim to prefer to see a PROBLEM articulated richly and complexly in an introduction rather than in the last few pages of an essay or article. Every bit of evidence from psycholinguistic research supports that claimed preference.

To encourage our students to pose their PROBLEMS as richly as they can in their introductions, we ask our students to inspect their last few paragraphs to find two elements – (1) some sentence or two that would stand as the point the whole text serves to defend and (2) even a hint of the conflict, difficulty, discrepancy, etc. that that point sentence is intended to resolve. If they can find those elements, they have two elements to an introduction for a PROBLEM-posing paper: a potential Condition in (2) and a potential SOLUTION in (1). We then ask them to inquire of the potential Condition, "So what? What's at stake in resolving this?" If they can imagine answering that question as their readers might, they have begun to define the Cost of the Condition. At this point, they have candidates for the two elements of a PROBLEM and one candidate for its SOLUTION.

We have tried to reduce the process to an algorithm:

"If you find no PROBLEM in your introduction, re-read the last 1/4 of your paper, because you probably did your best thinking there. Then do this:

1. Find your main point, the sentence that best sums up what you conclude from your research. If you find two or three sentences, combine them into one; don't worry about its style right now. Be sure that that sentence incorporates all of the key terms in those last few pages. *This sentence is the gist of the* SOLUTION *to your* PROBLEM.

2. To define the PROBLEM, look in those last few pages again, this time for hints of a conflict, tension, contradiction that you want the Point sentence you articulated in (1) to resolve. Then specify that contradiction, conflict, discrepancy as clearly as you can in a sentence like "There seems to be a conflict/gap in knowledge/ flawed understanding/puzzle . . . in regard to how/why/whether . . ." (finish

with what you wrote in (1)). *This sketches the **Condition** of your problem*.

3. Put "So what?" or "What's at stake in working this out?" after the sentence you just created in (2). *When you can answer that question, you create the **Cost** of your* PROBLEM. Try out, "If we can't settle [fill in the Condition from (2)], then we won't understand this more important matter: _____."

4. Imagine what common belief of your readers that the statement of (2) would disrupt. It may be a simple as "Most people (or at least some) think that . . ." followed by "But (2)" *When you have done that, you have created your **Stasis**.*

5. Now assemble the above into a sequence and revise for style:

   (4) ➡ But (2) ➡ As a consequence, (3) ➡ (1)

Here, for example is the opening paragraph of a 15-paragraph paper written for a second year course in Western Civilization. The student was working on a document about the Crusades and the Church, trying to explain its significance. The opening paragraph announces only the topic that the paper will cover. The last three paragraphs (nos. 13-15) develop the conflict between the alleged motives for the Crusades and the possible real motives:

The Church and its Crusades

Starting in the late eleventh century, the Catholic Church initiated several Crusades to recover the Holy Land for Christianity. In 1074, Gregory VII wrote a letter supporting a crusade, and in 1095, Pope Urban II called for a crusade in his "Speech at the Council of Clermont." Both Urban's speech and the text preceding it, *The Version of Fulcher of Chartes, including His Description of Conditions in Western Europe at the Time,* mention several problems within society, both lay and clerical. I will discuss the relationship of these three texts to the reasons Gregory and Urban wanted to initiate Crusades at this time in European history.

. . . . . .

Gregory's letter therefore suggests that the Crusades were not just an idealistic religious project but a political one, as well. He wanted a Crusade to unite the divided Roman and Orthodox Churches because they held different views on the Holy Ghost in the Trinity, and the Eastern Church did not recognize the Pope's authority. After a successful Crusade, the Pope believed that both schisms could be rectified by a conference that would discuss the Holy Ghost and get the Eastern Church

to accept the Pope's authority. Gregory's motive may have been to unify divisions between the Church and the Empire. A power struggle between the Pope and Emperor had begun during the his reign and that of Henry IV. When Gregory assured Henry of his affections and said he would leave the Church under his care if he, Gregory, went on a Crusade, he showed that the Church and the Empire could unite by fighting against a common external enemy.

Though Urban and Gregory may really have wanted to recover the Holy Lands, they were equally concerned with internal politics and religious unity. Urban fought the Muslims, but also wanted to establish his authority and control fighting among the Europeans. Gregory VII wished to unify the Roman and the Greek Churches and to prevent the breakup of the Church and the Empire. Thus the Crusade were probably not just an idealistic religious project, but a political effort to unify the Church and Europe against internal political divisions.

Step 1. **Find the main point:** Thus the Crusade were probably not just an idealistic religious project, but a political effort to unify the Church and Europe against internal political divisions.

Step 2. **Specify that contradiction, conflict, discrepancy:** When Pope Gregory and Pope Urban called for Crusades to rescue the Holy Land from the Muslims, they justified the effort on grounds of faith and religion, but there is evidence that there were other motives as well, perhaps even more consequential in their thinking.

Step 3. **Ask and answer "So what?":** Until we resolve the real motives that drove the Christian world to make war on the Muslim world, we may not be able to understand why the Crusades occurred just when they did and the reasons why, eventually, they ceased, well before the Holy Land was in fact returned to Christendom.

Step 4. **What belief does this challenge?** Perhaps no event in our popular memory of the Middle Ages is more dominant than tens of thousands of Christian soldiers marching toward Jerusalem to restore the Holy Land to Christian rule. One history of that time asserts " . . .".

Step 5. **Re-assemble:** Perhaps no event in the Middle Ages is more vivid than the image of tens of thousands of religiously dedicated Christian soldiers marching toward Jerusalem, intent on restoring the Holy Land to Christian rule. One history of that time asserts " . . ..". And it is true, that when Pope Gregory VII

> in 1074 and Pope Urban II in 1095 called for Crusades to rescue the Holy Land from the Muslims, they justified the effort on grounds of idealistic faith. But there is evidence that they had other motives as well, perhaps even more consequential in their thinking, motives that involved not just religious zeal but practical internal politics. Until we understand the real motives behind the Crusades, we will not fully understand why they occurred when they did and why they ceased, well before the Holy Land was conquered. In fact, it appears that the Crusades were not just an idealistic religious project against an external enemy, but no less important, a political effort intended to unify internal divisions that were threatening European stability.

Now I understand that some readers may feel that that introduction is of the certain "grindy" kind that my colleague objected to when he read my revision of Nate's introduction. This does have the feel of a cookie cutter introduction, an accurate assessment that in fact does not trouble me. When I see that kind of introduction, I know the student at least understands what a research problem and PROBLEM might be. I take it for granted that as such students mature and read a good deal in their field, they will learn how to manage introductions with more skill, flexibility, an originality, than this. *But even if they don't, this kind of introduction bespeaks a level of maturity well above the original.* I am more interested in the maturation of my students than in my own diversion.

6. An intractable problem in working with students in a first year or introductory course is that they have no idea what the received ideas, structures of belief, received knowledge is of any community of discourse. And so when we ask them to think of PROBLEMS in terms of readers, they are, justifiably, baffled. We have tried to overcome this problem by defining the community of belief in terms of the beliefs, understanding, and structure of knowledge that the students bring to the class and develop in the course of their work. To make clear where that community feels the potential for PROBLEMS, we ask our students at the end of a particular discussion or lecture or series of discussions to write down one question that is really bothering them about what they have heard or read – anything at all that they don't understand, are baffled, feel troubled by, wish they knew more about – anything that suggests a problem. These questions imply the flawed understanding or incomplete knowledge that potentially defines the Condition of a potential PROBLEM.

At the end of the class, they turn these questions in, and we turn them over to two or three students from the class who sort them into questions that can be answered quickly and easily – "Why did you say Hobbes was intellectually robbing Peter to pay Paul?" and questions that address questions of deeper understanding – "I don't understand what Madison meant in Federalist 10 when he said the main objective of government was to protect the "faculties" of the people to acquire property," or questions that open up a genuinely provocative issue: "If Locke believed that a good legislature depended on elected representatives returning to the constituency they came from so that they would have to live under the laws they had passed, would he have favored term limitations?"

When we find genuinely interesting questions – and we find many – we turn them into essay assignments. We have thought about posting the questions around the room to let everyone in the class see what questions have been asked and their range, to compare and contrast kinds of questions, and to pick whatever question they want to address in their writing assignment. That would require them to pick a "good" question to answer and would provide an opportunity for them to get genuine feedback from the person who asked it. In any case, it is the common questions that create out of a class of disparate students the community of discourse whose common interests allow its members to articulate full rhetorical PROBLEMS. I do not offer this as an innovative practice, because it is done in many classrooms. I describe it here because it fits so well the objectives of PROBLEM posing and solving.

We encourage other activities, but these constitute the heart of the work. We point out how things will change when they write for a community more widely defined: They must know what that community would consider a significant PROBLEM. That means that before they write, they must read, a lot. But when they read, they are reading not just to acquire information, but also to see how those writers pose and solve PROBLEMS, to learn how their community does it so that they can do likewise.

2. Further questions

This account leaves many questions unanswered and raises others.

1. How do we measure how "interesting" a PROBLEM is? This obviously depends on how we could measure any change in the structure of received

thinking (Arrington and Rose) and what our community counts as historically interesting (Davis), and that depends on a metric for measuring Cost. There are some metaphorical measures: Do we add a unit of new information, delete one, or replace one with another without disturbing the overall structure of understanding? If when we add, delete, or replace and thereby disturb the structure of understanding, what is the extent of the disturbance? Do we re-arrange hierarchies of relationships? taxonomies of sets? This kind of mental model relies on a hierarchical tree structure. What better metaphors are there?

2. The underlying metaphor for this analysis is based on commercial transaction: If in my introduction I can "sell" a PROBLEM by making you experience the "Costs" of the Condition, you will "spend" time reading what I have written and maybe will "buy" my SOLUTION. What other metaphors might be used to analyze the structure of introductions that would reveal other aspects that the transaction metaphor does not illuminate (or more accurately, create)?

3. We do not know the real degree to which an introduction in fact influences judgments. An introduction to a short paper has a larger effect on a response to the whole paper than an introduction to a longer paper, where the quality of argument and evidence replace the memory of a strong or weak introduction. I would guess that the importance of a more rather than less elaborate introduction is less in the way it influences a reader's response than in the intellectual effort that went into it.[23]

4. As noted above, we can define Costs as "out of pocket" losses (the metaphor of the commercial transaction again) or as an opportunity to profit (and again):

> If we can prevent the degradation of ozone, we can save 100,000 lives, maybe yours.
>
> Unless we can prevent the degradation of ozone, 100,000 people will die, maybe you.

Some research has investigated whether we respond more strongly to the possibility of loss or to gain (Tversky and Kahneman). Most of this research suggests that we respond more strongly to the threat of loss: "100,000 people will die, maybe you." If that is the case with the statement of a tangible PROBLEM (and I do not know whether, in fact, it is), is it equally true with the statement of conceptual PROBLEMS? For example, is one of these introductions more compelling than the other?

> Medieval Welsh grammars derive from Latin sources and like Ælfric's, are pedagogical. Because they are in the tradition of late Latin grammars, they seem unimportant and have therefore been ignored even by scholars who can read Welsh. But unlike Ælfric's, these grammars tutor students in their own language. Because we know so little about them, we fail to understand important aspects of the intellectual activity of the period and thereby fail to appreciate the full range of the development and variety of the Western grammatical tradition. To correct this gap in our knowledge, I offer the following account.
>
> Medieval Welsh grammars derive from Latin sources and like Ælfric's, are pedagogical. Because they are in the tradition of late Latin grammars, they seem unimportant and have therefore been ignored even by scholars who can read Welsh. But unlike Ælfric's, these grammars tutor students in their own language. If we knew more about them, we would better understand important aspects of the intellectual activity of the period and thereby appreciate the full range of the development and variety of the Western grammatical tradition. To provide that knowledge, I offer the following account.

My intuitive response is that the threat of failing to understand something as well as I might is more compelling than the possibility of understanding it better than I do, even though I know that those alternatives are structurally identical. In a conversation with faculty at the University of Nevada-Reno, the felt preference seemed to break roughly along gender lines: men thought that threat was more compelling; women thought a PROBLEM that promised a BENEFIT more compelling. This intuition has been tentatively confirmed in research by xxxxxx at the University of Illinois at Urbana. I can imagine a range of other controlled experiments that would explore the effects of positive and negative statements of Costs across a variety of populations. In fact, as Jordan, Hoey, and Swales and his colleagues have demonstrated, there is a great variety of ways of expressing all of these elements. While they have done much to assemble the variety, there is a great deal more to do, particularly in different fields and to determine their relative rhetorical power.

5. To what degree does a model for introductions to whole texts apply to the introductions of local sections of text? If in this essay you will glance back at the conclusions to one section and the beginning of the next, you will see that I structured most of them around a PROBLEM - SOLUTION format. Young, Becker, and Pike pointed out a long time ago that one of the basic forms of paragraph organization is Problem - Solution. To what degree does the fuller model offered here support their claim (along with

Jordan, Hoey, and Meyer) that that kind of organization is fundamental to all units of discourse?

6. What other relationships are there between narrative and non-narrative prose? Do information-providing texts have subtle relationships to stories that do not appear in their introductions. Obviously, certain devices like beginning with an anecdote, etc. has a dramatic quality to it, but there are likely more. What, in fact, are the conventions of information-providing introductions?

7. What is the history of these introductions? Introductions to the earliest papers in the *Philosophical Transactions of the Royal Society* begin quite differently from more recent ones. When, how, and why did the PROBLEM-posing introduction become the prototype? Which writers were most responsible for the change? Based on some preliminary research by Matthew Abergel here at the University of Chicago, introductions of the kind described here appeared in the earliest *Transactions*, but did not become standard until well into the 19th century.

8. What relationship is there between the purely mental spaces of experts as they formulate problems conceptually before they articulate them as full-blown PROBLEMS? How do novices differ? There is some important work on this already (Voss et al) but it does not relate the structure of a problem to the structure of a PROBLEM. Do experts begin with a mental schema into which they fit elements and then map it onto the same schema underlying introductions, or do they simply ruminate and assemble the elements into the schema of a written introduction at the moment of writing?

9. What relationships exist between patterns of prose that depend on Stasis-Disruption-Resolution and other symbolic forms that seem to have an analogous psychological structure? The same form characterizes a great many musical constructions – from sonatas to symphonies. It is arguably the form of a syllogism:

Major premise = Stasis:	All creatures with feathers are birds.
Minor premise = Disruption:	Must this creature with feathers be a bird?
Conclusion = Resolution:	It must be a bird.

Indeed, one might speculate on how natural events provide models for the same structures: thunderstorms, sunrises, sexual activity, etc. A wider question is the degree to which prototype theory can be extended to cover other matters of discourse and style?

10. To what degree can the notion of PROBLEM resolve current disputes over the nature of community of discourse (Bizzell, Cooper, Freed and Broadhead, Porter). Most definitions depend on features of style, format, tone, habits of mind, etc. A more sensitive measure is the degree to which certain groups of related PROBLEMS create the center of a community of discourse. These days, English departments can be called discourse communities only to the degree that the central PROBLEMS focus on hiring, firing, salary, and office space. It would be more useful, I think, to define immediate discourse communities by those who think the same PROBLEMS are important, largely because if they do share the sense of PROBLEM, then they must share a sense of COST – they all acknowledge the same potential loss and perhaps the same potential gain. Wider communities consists of those interested in related PROBLEMS, and in particular by the degree to which they keep asking and we must keep answering the question "So what?"

11. As I have indicated, there is a growing debate about whether it is possible, even whether it is harmful, to teach the kind of thing I have laid out here. I think the debate exists only because of the low level of knowledge and analytical skill demanded by some current methodologies proposed for the teaching of writing. Ignorance may now be its own ideological justification. But maybe not. How early can we begin to teach these matters and expect some effect?

Conclusion

I want to be clear here: I do not claim that merely by teaching students the structure of problems and their articulation as PROBLEMS in introductions that they will suddenly become "good critical thinkers" and write papers that pose and solve "interesting problems." The criteria for "interesting" are too deeply entrenched in social practice to yield to any simple algorithm of discovery or evaluation (Davis and Kaufer).

Nevertheless, a tacit or explicit understanding of the form of both problems and PROBLEMS is a necessary condition for reporting how we find and solve them. Further, introductions are important because how successfully they articulate their PROBLEMS profoundly influences how we read what follows. Among our first criteria in judging a paper are these:

1. Does this introduction articulate an "interesting" PROBLEM?
2. Does this introduction articulate a PROBLEM in a way expected by its intended community of discourse?

A paper that does neither is apt to be judged as Berkenkotter et al judged Nate's first paper – as "ineffective," "evidence of an "isolated newcomer."

The underlying structure of introductions that pose PROBLEMS is quite direct and in fact quite simple. What's difficult, of course, is *creating* a good one. To the degree that we think finding, inventing, and articulating PROBLEMS is a competence that we want our students to learn and demonstrate, to that degree we must teach it.

Notes

1. The philosophical literature on problems in general is more substantial. Carter has a useful bibliography. See especially Agre, Bunge, Hattiangandi, Nickles, Siitonen, Sintonen. The literature on problem solving is endless.

2. For other points of view on introductions see also Arrington and Rose, Swales and Najjar, Crewe, Schwegler.

3. There are several educators in areas other than rhetoric and composition who have focused not just on problem solving, but on artful problem posing. See Brown; Brown and Marion; Delbecq and Van de Ven; Goldman; Manteuffel and Laetsch; Lyles and Mitroff; Mayer; Sacks; Stewart and Jungck; R. Taylor. On the other hand, the standard literature in psychology has largely ignored problem finding as a cognitive skill (or knack). In *The Handbook of Creativity*, there are two dozen references to pages that address problem solving; the references to problem finding number just six, and only one of those goes beyond a single sentence or two (Robt. Brown, 23 - 24) The two striking exceptions to this generalization are Getzels and Csikszentmihalyi. But see also Mackworth, Guilford, Landau, and Henle.

4. I will later use and explain "prototype" in its current technical sense (Mervis and Rosch; Rosch and Mervis; Rosch 1973, 1978; Lakoff; J. Taylor 1989, 1990; Turner; Winters)

5. It will have occurred to some readers that I have seemed to substitute one metaphor for another: not that of metaphorical space but of commercial transaction. In fact, the use of the concepts of cost and benefit in a commercial transaction is only a specific application of a more general human concept. There are for bears and squirrels costs and benefits of hibernation. But it makes no sense (at last to me) to argue that we therefore look at hibernation as a commercial transaction. There are, however, other possible metaphors. Whichever ones we might use to articulate the model, however, the underlying relationships would have to be the same: X causes Y and person A seeks Z in order to avoid Y. Other readers may have noted that this formulation moves rhetoric away from

confrontational argumentation toward negotiation, a move that some might think contradicts the commercial metaphor, but, I believe, does not. For a reformulation of argumentation as conversation, see Williams, forthcoming.

6. Note that the difference between Cost as an out-of-pocket loss and as an unrealized benefit may be only in the phrasing:

   Condition: I do not know the number of stars in the sky.

   Cost as threatened loss: Until we find out, we never know the ultimate fate of the physical universe.

   Cost as potential benefit: If we can find out, we learn discover the ultimate fate of the physical universe.

   As I will suggest later, this choice may not be rhetorically neutral.

7. This notion of problem is obviously relevant to Bitzer's definition of exigence and the rhetorical situation. However, it differs in at least two ways: First, what he calls exigence often has to be created. It is not the case that "The exigence . . . [is] located in reality, . . . objective and publicly observable historic facts in the world we experience, . . . available for scrutiny by an observer or critic who attends to them" (1968, 11). Similarly, it cannot be the case that exigence pre-exists problems, because in some cases, the problem is to create a PROBLEM (1980, 22-24). Patton's constructivist approach is closer to what I offer here.

8. Inevitably, some will read into "privilege" a sense of transcendentally better, always to be preferred, and out of that will infer that I imply some rule-like preference. That is not what "privilege" implies. What I describe here is, insofar as the research indicates, is simply predictable cognitive behavior.

9. 9. For our purposes, the fixed levels are pragmatically equivalent to underlying structures generated by the familiar generative rules of a transformational generative grammar: S ➡ Subject + Predicate, rather than S ➡ NP + VP. For our purposes, a "grammar" of style is better served by defining "subject" as a fixed segment with elements moving through that segment, rather than defining subject as a purely syntagmatic relationship. What we thus have is a hybrid of a slot-filler grammar and a base rule - transformational rule grammar. Those who might throw up their hands at that cavalier approach toward a theoretical model of style might refer to the end of Book 1, Chapter 7 of Aristotle's *Nichomachean Ethics*, where he addresses the issue of ends, means, and appropriate precision.

10. This is the latent principle behind Williams, 1994.

11. Prototype theory may also explain the durability of the five-paragraph essay: it consists entirely of well bounded prototypes. The essay itself has a prototype – introduction, three-part body – conclusion. Each section consists of another well-bounded prototype: the single paragraph. The five-paragraph essay causes problems later because it does not prepare students to create units of discourse for which we have no good prototypes – in particular, sections. We have a clear image of what a prototype essay looks like, what a prototype paragraph looks like, what a prototype sentence looks like. But what does a prototype section look like? We have no clear image. That is why papers with several sections that each consist of several paragraphs can be so hard to process, if we have no way to image their boundaries.

12. There are other kinds of disruptions: a description of a strange event, newspaper stories that report disasters, etc. – the supermarket tabloid that reports about UFO's contacting Elvis' ghost.

13. Stasis is the rough rhetorical analogue to Kaufer and Geisler's "consensual knowledge," the received state of affairs that the writer attempts to change. Similarly, Disruption may be the rhetorical analogue to their "staking systematic claims" and Cost the effects of staking a knowledge claim on the structure of community knowledge. Again, this is different from the term stasis, as currently used in rhetorical theory.

14. This formulation seems to leave Stasis empty when a text that opens directly with a statement of the PROBLEM. But if the PROBLEM is *already known to the community,* then that PROBLEM has all the characteristics of Stasis – shared consensus, whatever the community shares. Disruption would be the announcement that the PROBLEM has been solved. I am less than completely confident about this formulation, but it allows us to fit evidence to the model and thereby preserve it.

15. Although I list Gist of Solution and Promise of Solution as alternatives, the cognitively privileged choice is to state the Gist of the Solution at the end of the introduction.

16. I omit, for example, a common element that I concluded my own introduction with – a roadmap of the structure of this essay. Jeanne Fahnestock has also pointed out to me that some writers will begin by establishing their own credibility through an anecdote apparently unrelated to the substance of what follows. Needless to say, this essay does only some of the groundwork for more research on this topic.

17. See R. Brown for a more general account of narrativity and rhetoric.

18. There is implicit here a notion of "recoverability," roughly analogous to deletion in transformational-generative grammars. I do not assert

complementarity, only analogy Under any circumstances, it is always a mistake to bind oneself to a set of theoretical conditions and constraints when the theory that one binds oneself to is not in fact appropriate to the object one is trying to account for. The theoretical constraints on transformational-generative grammars are simply irrelevant to the object of study here.

19. It is in this sense that Bitzer's claim that "every exigence has an observable factual component" (1980, 24) cannot be the case. It is particularly not the case that "My colleague in physics who discovers a principle and composes a report about his discovery needs no mediating audience. I seek to express my views on the nature of rhetoric; my verbal representation of my thoughts does not need to engage a mediating audience. In these and similar instances exigencies are not rhetorical" (1980, 27). Bitzer is concerned entirely with tangible problems; i.e., no audience to acknowledge the problem. In this sense, I am more sympathetic to Scott's responses to Bitzer (particularly 56-59). Bitzer, however, is good on the distinction I make between being interested in and having an interest in (1980, 28).

20. These difficulties, I think, speak more directly to the issue of "academic discourse" and its discontents than do concern with tone, vocabulary, or other such accidental features that are often cited as characterizing academic vs. non-academic writing. They are trivial by-products of attitude, not defining features. One of the defining features of academic discourse is that we pursue it for the sake of creating more discourse. The most telling sign that a student is not ready to participate fully in academic discourse is not the "inappropriate" use of the first-person singular or not enough nominalizations but rather the conclusion that attempts to shoehorn a pure conceptual (i.e., academic) problem into a tangible one, something on the order of "Therefore, if President Clinton could understand the strengths and weaknesses of Oedipus and Lear, he would be a better leader." Nothing wrong with that impulse. But it bespeaks someone not yet secure in the idea that solving a conceptual PROBLEM is worth the trouble. Furthermore, these several pages, I think, speak more directly to the matter of socialization into academic discourse than do some other discussions I have seen (in particular, Flower 1990, 1988; Carey and Flower). The definition of "academic" discourse offered there does not distinguish academic discourse from most other kinds and does not touch on what I think is the distinguishing feature of academic writing: the finding and posing of a PROBLEM whose solution has no necessary connection to any tangible problem, but only to the network of beliefs, knowledge, and understanding of a community of discourse. Moreover, a good deal of the on-line rhetorical problem solving

that the protocols in these studies represent seems at least to me a struggle not just toward some interesting "thesis," but toward the definition of problem that I have offered here. As a consequence, as I read those protocols, I was constantly beating back the impulse to say out loud, "What you are struggling toward – and what everyone studying you in fact wants you to find – looks like this." None of the records of those struggles will provide much insight into the cognitive processes of writers until those writers being studied understand *the nature* of what they are struggling toward. It is as if students in mathematics were struggling to solve a problem that only calculus could help them solve, but they didn't know calculus, and so what was being studied was their frustration in not being able to solve a problem the solution to which was beyond them until they understood calculus.

21. The strongest claims from this camp are, on the face of them, preposterous (in the original sense of that word):

    Our students are . . . not dependent on the results of linguistic science to learn to write. . . . Development of good writing style occurs via reading for meaning and writing to convey meaning. It has happened this way to millions of people, and there seems to be no way to shortcut the process. . . . There is no reason to try to accelerate or replace this natural process: It is efficient, rapid enough when input is provided, less expensive than its substitutes, and by far less tedious (Krashen, 37).

22. In 1992 and 1993, Greg Colomb and I had the good fortune to work with the faculty at Knox College on these questions and others. Many of the faculty seemed especially interested in applying the heuristics of problem-posing, and it now appears to be a fixture across several departments and levels of instruction. In the judgment of many of them, it has made a substantial positive difference in the performance of their students. More information can be gained from Lane Sunderland, Department of Political Science, Knox College, Galesburg, Il. 61401.

23. I am indebted to Greg Colomb and his students for this point.

Appendix

The Corcyreans start by talking about justice but spend most of their time explaining about what's in it for the Athenians to join them. They first apologize for asking the Athenians for help against the Corinthians because they always were independent of alliances before and so they don't think they deserve any gratitude for anything from Athens. But they say they are now threatened by the Corinthians, so they think they have to make an alliance with the Athenians for protection.

Then they give three reasons why Athens should join them in an alliance.

> First, because your assistance will be rendered to a power which, herself inoffensive, is a victim of the injustice of others. Secondly because all that we most value is at stake in the present contest, and your welcome of us under these circumstances will bear proof of good will which will ever keep alive the gratitude you will lay up in our hearts. Thirdly, excepting yourselves, we are the greatest naval power in Hellas.

The Corcyreans say that the Athenians can search history and not find anyone who could gain all three things at one time, particularly the last. They predict that a war is coming and that Athens should be prepared for it by having the advantage of their navy. They say that they were treated unjustly by the Corinthians and that Athens should not be deceived by the Corinthians about that. But finally, they say that they have the second most powerful navy and that they will be a valuable ally to Athens in the looming war.

The Corinthians start by attacking the Corcyreans for claiming they treated them unjustly. The Corinthians say the Corcyreans are criminals because they didn't honor their mother city and that Athens would be unjust to take them as allies. The Corinthians claim that the Corcyreans only came to Athens because they couldn't win on their own. Then the Corinthians start appealing to the Athenians' sense of loyalty because of the treaties and gratitude that the Athenians owe to the Corinthians: "Corinth

is at least in treaty with you; with Corcyra you were never even in a truce." They conclude their speech by saying that war is uncertain, that they the Corinthians should have the right to punish their allies, and that the Athenians should not accept the Corcyreans as allies because it would be unjust and dishonorable to do it. The Athenians show their real values, however, when they reject justice, honor, treaties and side with the Corcyreans.

If we had not read these speeches, we might think that Athens would be motivated by justice and a sense of honor because Athens is the birthplace of our ideas about justice. But when we see in the Corcyrean speech the reasons the Athenians sided with Corcyra, we can be better judges of the real reasons why Athens does what it does later . These speeches show us that Athens values self-interest more than justice and honor.

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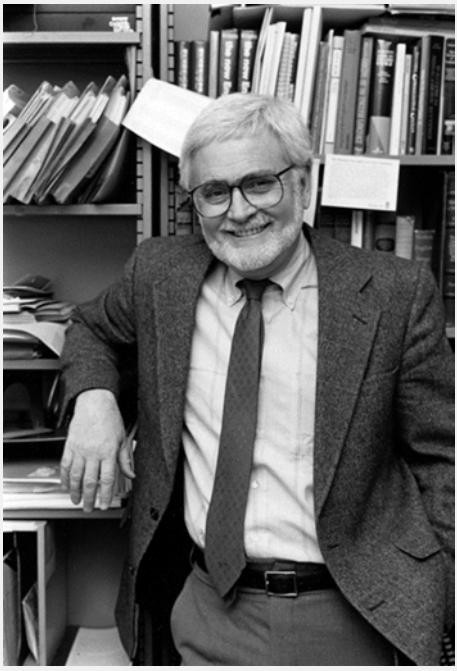
Problems into PROBLEMS

In 2004, Joseph M. Williams began looking for a home for a monograph he'd written about problems. "I wrote a rather lengthy piece on problem posing and matters of teaching it," he told me, noting that he had incorporated elements of his thinking about the issue into books he had written with Greg Colomb and that the entire piece had been referenced by scholars including Gerald Graff. "If there is a server somewhere where it could be downloaded, I'd be happy to send it along."

Williams' monograph quickly found a home on the Clearinghouse, where it was available as a featured resource in the CLearinghouse Teaching Exchange. In 2011, the monograph was re-released in a new Clearinghouse book series, Practice and Pedagogy, along with other useful work, such as Richard E. Young's *Taxonomy of "Small Genres" for Writing Across the Curriculum*.

Williams' thoughtful analysis offers much to both writers and teachers of writing. He situates his monograph by referring not only to existing work on problem solving in rhetoric and composition, but on our treatment of problems in our writing and teaching.

- Mike Palmquist, Series Editor



Joseph M. Williams, 1933 -2008

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