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.

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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?