Lessons From a General Education Oriented Principles of Economics Course

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I. Concerns about the Traditional Principles Courses [1]

For some time now I have been concerned about the focus and effectiveness of the principles of economics course at Mary Washington College. Principles of Economics, as it is typically taught, is a predominantly lecture-based course using one of a variety of standard, voluminous texts, where students are exposed to a daunting array of concepts, theories and methods. In principle, the course has two objectives. The first is to serve as a preparatory course for students taking more advanced offerings in the discipline, especially economics majors, where the focal point is on theory and analytical constructs that are not necessary for principles students per se, but which students will need later in their economics careers. The second objective is to satisfy a general education requirement, specifically, to give students a broad-based and representative introduction to the social sciences. In practice at Mary Washington College and other universities, the course tends to focus on the first objective to the detriment of the second. I believe this is ill-advised for several reasons.

[1] This paper has benefitted from insightful comments by Julie Heselden, Carol Manning, Dennis Palmini, Margaret Ray, and Robert Rycroft, as well as able research assistance by Tricia Waldrop. Any remaining flaws are my own.

Most students who take principles do not become economics majors. In fact, the majority do not even take another economics course after principles (or the principles sequence). At MWC, of the roughly five hundred students who take principles each year, only twenty become majors. Thus, the course misses the mark, in terms of its chief rationale, for some ninety-six percent of principles students[2]. This concern is not unique to Mary Washington College or to the economics discipline. Criticizing introductory courses generally, Karen Spear (1984) writes,

> Instead of being dominated by a concern for the vocabulary and taxonomy that are presumed necessary for further study in the discipline, introductory courses should be organized around the liberal education ideals of critical analysis, problem solving, the formation and expression of values associated with the discipline, and the development of an understanding of the nature and process of inquiry as it is conducted from one field to another.

If this criticism is not enough, standardized test scores suggest that the typical approach to teaching introductory courses may be ineffective in terms of student learning. The most widely used outcomes assessment instrument in economics is the Test of Understanding of College Economics (TUCE). For the micro/macro combined TUCE exam, the national average score is only about fifty percent [3]. Opinions may vary on the extent to which this indicates a problem, but however much is learned from principles, additional studies suggest that retention of the material diminishes fairly substantially over time[4]. Anecdotal evidence seems to support this pessimistic view. Conversations with colleagues over the years reveal a widespread feeling that students aren't getting as much out of the principles courses as they should.

These concerns lead one to ask how the principles course can be made more effective. How can it be modified to better fulfill a general education requirement? How can learning, retention and presumably the usefulness of the course be improved? Several possibilities come to mind.

Students often view education as a passive process, where instructors are the sources of knowledge which will be dispensed to them if they simply do two things: attend class and take

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[2]Dennis Palmini correctly points out that a significant number of principles students are those who take economics not for general education reasons, or as a major, but rather because their majors (e.g. business administration, or international affairs) require training in economics. While a general education oriented principles course, by design, omits certain technical aspects which would be useful to students in related fields (as well as economics majors), such a course, if designed appropriately, should provide all students with an adequate basis for taking more advanced courses either in economics or other disciplines. The difference between an adequate and an optimal preparation represents a cost of this general education approach. The more technical aspects of economics can always be obtained in the intermediate theory courses.

[3]See, for example, Saunders (1981), Table 8, p. 20.

[4]See the studies cited in Siegfried & Fels (1979), pp. 951-953, and Saunders (1980).

copious notes. Lecture-based introductory courses seem to reinforce this notion. In contrast, the literature on general education and economics education suggests that active or participatory learning is more productive than passive learning. John Hamlin and Susan Janssen (1987) observe,

> The concept of active learning is simple: rather than the teacher presenting facts to the students, the students play an active role in learning by exploring issues and ideas under the guidance of the instructor.... Instead of memorizing, and being mesmerized by, a set of often loosely connected facts, the student learns a way of thinking, asking questions, searching for answers, and interpreting observations.

Mark Walbert, a proponent of active learning in the economics discipline, summarizes this idea succinctly as "I hear and I forget; I see and I remember; I do and I understand" (Walbert, 1989).

Two methods of promoting active learning, not widely used in introductory classes, are class discussion and writing. W. Lee Hansen (1983) writes of effective class discussion, "its benefits will have lasting value in sharpening students' reading and thinking skills, deepening their knowledge of economics, and contributing to the goals of a liberal education." By explicitly requiring input from students, discussion is, by definition, active learning. Discussion is an excellent way to generate student interest, which is known to be highly correlated with student learning.

Writing, like discussion, is also a form of active learning, especially when instructors apply the principles of the "Writing Across the Curriculum" (WAC) approach[5] . WAC views writing, not simply as a **product** which reports ideas or summarizes knowledge, but rather as a **process** which generates ideas and creates knowledge. From this perspective, sometimes called "Writing to Learn," writing can be used as a tool to enable students to explore economics at the principles level.

In addition to discussion and writing, active learning probably requires further reading by students. More extensive use of the textbook is not the answer. Textbooks provide a useful role in presenting the basic material, but they are not the best resource for promoting discussion, writing, or even learning beyond simple content issues.

A better approach might be to use 'real books'. Hansen (1988) points out,

> What our introductory economics students need most is not more and better introductory textbooks; ... Instead, they need to read more 'real' books, books that reveal how economists think in a sustained way about important economic problems and issues. ... These books can reveal the power of economic analysis in a way that textbooks can

[5]This point is stressed by Petr (1990). For several articles describing the theory and application of "Writing Across the Curriculum," see the Summer 1993 issue (Vol. 24, No. 3) of the *Journal of Economic Education*, especially Cohen & Spenser.

never do.

These observations about teaching and learning are not novel, and it would be inaccurate to suggest that introductory courses never use discussion, writing, or supplements to the text. But I have come to believe that they do not use them as much or as well as they could. In short, it may be that a principles sequence which makes intensive use of reading, writing and discussion would be more effective than the traditional lecture based approach. The purpose of this paper is to report the results of an experiment to teach principles in this way.

II. Description of a Non-Traditional Principles Sequence

Since the Fall of 1990, I have taught a non-traditional, two-semester principles sequence (macro/micro) based on the three themes discussed above. Exhibit 1 lists the topics covered, excerpted from the course syllabi. The sequence covers the same theory and applications as a more traditional course, but it puts relatively less emphasis on technical details, and relatively more emphasis on (what I consider to be) the bigger picture: the process of applying economic models and data to real world issues, and understanding how different schools of thought reach different conclusions about the same problems or issues in economic history.

While the content of each course is traditional, the instructional approach is not. The material for each course is divided into roughly ten topics. Each topic is explored using: (1) a list of readings covering the material, (2) a list of study questions to guide the students' reading, (3) one or more writing assignments revolving around the study questions, (4) one or more in-class assignments, including discussions of specific issues, in-class experiments, simulations and debates, and (5) one or more traditional lectures to fill in the gaps.

The readings include a variety of "real" books, government publications, articles from popular periodicals and "soft" economics journals, in lieu of a formal comprehensive principles text[6]

The writing assignments include reflective essays, as well as more technical assignments involving formal economic analysis. Over the course of the semester, the assignments become progressively more complex. Early on they may simply ask for an opinion; later they ask students to summarize the ideas of some author or to explain the prediction of some economic model. Ultimately they ask students to apply an appropriate model to some specific economic situation or issue, and to evaluate the results.

The in-class assignments include formal discussions on the workings of a market economy, the

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[6]Hansen (1988) lists a number of excellent "real" books. Another excellent source is Bernard Saffron's regular column, "Recommendations for Further Reading," in the *Journal of Economic Perspectives*. I have used Heilbroner, *The Making of Economic Society*, Blinder, *Hard Heads and Soft Hearts*, and Friedman and Friedman, *Free to Choose*; I have also drawn widely from the popular press and government publications. For a complete list of readings I have used, see Appendix A.

nature of money, the nature of government, comparison of the different schools of thought, the responsibilities of business, and the politics of welfare and poverty. In addition, there are experiments and simulations which demonstrate the Keynesian expenditure multiplier, various auction markets, and diminishing marginal returns in consumption and production.

Let me illustrate with three examples from the macro course. In past years, I taught students the workings of the market price system in something like the following manner. I asked them to read the ubiquitous chapter in the principles text, after which I delivered a lecture on the three functions of price and the efficiency with which markets allocate scarce resources. By contrast, now I ask them to read Radford's, "The Economic Organization of a P.O.W. Camp" (as well as the other items on the reading list in Exhibit 2). I have them write a two page essay exploring the article (as described in Exhibit 3). Then on the day the assignment is due, the class engages in a discussion of the gains from exchange and the workings of free markets in a manner which I never witnessed under the former approach to the topic.

Similarly, in lieu of lecturing on the macroeconomic aggregates, the disposition of national income and product, and the procedure for computing price indices, I ask students to write a brief essay
characterizing the state of the U.S. economy during the 1980s, using the readings in Exhibit 4, as well as data from the *Economic Report of the President* or other sources available in the library and some descriptive analysis. (The complete assignment is shown in Exhibit 5.) Upon completion of the essay, students are well prepared to discuss the concepts of GDP, inflation, unemployment, etc. in a context they understand.

Finally, in addition to presenting students with textual and lecture based information on Keynesianism, Monetarism, and other schools of thought, I ask them to compare and contrast the views of Heilbroner and Friedman & Friedman (from *The Making of Economic Society* and *Free to Choose*, respectively) with respect to the Great Depression. The assignment (shown in Exhibit 6) also asks them to describe and evaluate the model each economist has in mind. Then in class, the students discuss the applicability of each model to the contemporary U.S. economy.

These exercises are representive of what I use for each topic in the macro course[7]. I employ similar exercises in the micro course.

III. Lessons from an Alternative Approach to Principles of Economics

My experience with this non-traditional approach has produced five important qualitative lessons to date.

1. *The content of principles of economics can be divided into two categories: those broader*

[7] I will be happy to provide copies of all the reading lists and assignments to anyone interested.

issues which can most productively be taught through discussion[8] *or other non-lecture methods, in conjunction with the use of "real" books or articles as source material to make students think and reflect; and those technical or analytical constructs which are best taught by lecture methods, and which benefit from a traditional text to be studied.*

More of the principles material than instructors typically think is amenable to the former approach. In my experience, the fraction of such material might be as high as seventy-five percent. These topics are often, but not always normative. For example, my courses include discussions on the appropriate role of government in the economy, (which is a normative issue), as well as on the workings of competition and the profit motive in a market economy (which in large part is a positive issue).

By contrast, my courses also cover such topics as the mechanics of supply and demand, and the profit maximizing models of the theory of the firm, which seem to require the repetition, reinforcement, and multiple examples of a formal text. Use of a textbook also allows the material to be outlined in class, leaving it to the students to learn the details on their own.

Given that both types of material are essential to an effective principles course, and that a significant share of the course should be devoted to each, one workable solution is to combine a variety of "real" books and articles with a one semester, combined micro/macro principles text such as Paul Heyne, *The Economic Way of Thinking*, or McCarty, *Dollars & Sense*. In the last two years of teaching my courses, I have added the McCarty book to my reading lists. Essentially all the problems associated with not having a formal text disappeared, but at the same time the advantages of the less formal materials were retained. One additional benefit is that "condensed" texts are usually less expensive than comprehensive principles texts, and they can be used for both semesters of the principles sequence, freeing up budgetary resources for the other resource materials.

2. This next point is likely to be controversial. *Principles courses are probably too technical in orientation; they try to cover too much so that many students end up not being able to distinguish "the forest from the trees."*

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[8]By discussion, I mean both formal discussions as well as everything else described by Hansen & Salemi (1990) as "two way talk".

This is no new insight. Taylor described it in 1950, and Stigler echoed it in 1963. But this lesson, like others in economics, clearly needs repetition to be learned. It is more important for students to remember the big picture (i.e. the "principles" of economics) than the details of specific analytical techniques. After all, if students don't recall **why** the techniques are useful or under **what** circumstances they should be applied, knowing **how** to apply them mechanically is not very helpful[9].

The greatest challenge in a principles course is getting students to think like economists, that is, getting them to naturally approach problems in the context of some economic model, and to use the model's predictions to understand the problem. This is, after all, the ultimate "big picture" in neoclassical economics. More often than not, students go with their intuition or their memory, rather than applying some appropriate theory.

This lesson is more likely to be learned in a course which emphasizes the overall approach of economics, that is, the economic way of thinking, rather than the details, depth and variety of economic analysis. Do principles students need to be exposed to the income/expenditure model, the IS/LM model, and the AD/AS model? Probably not. Instructors in the principles course would be better advised to choose one model, preferably the simplest one, and use it as an example of how models help economists to understand the real world.

Instead of trying to create "economists" on the basis of one or two introductory courses--an almost impossible goal--instructors should attempt something more managable--showing students **how** economists analyze issues and getting them interested in learning more.

[9]A corollary is that the presentation of some topics in principles should be restructured to better fit this philosophy. For example, instructors might spend less time on the technical details of perfect competition and monopoly, and more time on practical applications of imperfect competition.

3. *Effective use of writing, reading, discussion or any non-lecture oriented approach depends on proper structure and guidance for the students* [10].

Good teaching tools take time and effort to craft. Just as a successful lecture requires preparation, so does an effective writing assignment or class discussion. But in an important sense, the latter are more difficult to prepare for. Since students play a more active role, there is more room for error. Written assignments can be misinterpreted. Discussions can go off the track or never even get started. Adequate preparation on the part of the instructor can make the difference between a "meaningful experience" and a waste of time. Much of this preparation is fortunately a fixed cost; that is, it is only incurred when the course is developed.

Guidance can be provided in a variety of ways. Study questions are an effective way of assisting students in drawing out the essential insights from non-traditional text materials. Writing assignments become more focused when they are based on a handout describing the objective of the assignment, describing as clearly as possible what is required, and perhaps suggesting how to go about completing the assignment[11]. Giving students a writing assignment prior to each class discussion makes it almost certain that they will be able and willing to participate. Simply telling students to "be prepared to have a discussion" on such and such a topic, or to "study such and such a reading" is more likely than not to lead to a superficial activity.

4. *Non-lecture methods require more time than lecture methods to "cover" material.*

The lecture is an efficient method of presenting material. Thus, almost by definition, less content (though perhaps more insights) may be learned in a given period of time using non-lecture methods. This is true for several reasons.

Activities such as discussion and writing require more reflection, interpretation and analysis by students than simply listening to lectures. With lectures, these higher-order tasks have already been completed by the professor. The student benefits from the distillation of the process but misses out participating in the process. When employing non-lecture methods in class, these higher-order tasks require time, leaving less time for content.

Most non-lecture assignments also benefit from time spent in the classroom explaining them before they are attempted and/or discussing them after they are completed.

An additional consideration is that students must **learn** non-lecture skills. Students have a great

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[10]Hansen & Salemi (1990) make this point in the context of class discussion, but it is true of any non-lecture approach.

[11]Some might feel this is "spoonfeeding" students, but I disagree. This is a way of managing the workload at the introductory level, of insuring that the range of student responses is narrowed. Besides, if students do not give you what you want, it may be because you failed to communicate your desires.

deal of experience with lectures. By contrast, it takes a while for them to feel comfortable with, and efficiently utilize non-lecture methods. Even in discussion, most students expect instructors to dispense the essential knowledge. It often takes time for them to realize that they are expected to figure out the insights themselves through the give and take of discussion. Thus, one should expect the first non-lecture exercises to be more tedious and to go more slowly than expected.

Since a course of this type requires more intensive effort with less breadth of coverage, a crucial question then becomes what theories and concepts included in a standard principles course can safely be left out. As a general rule, instructors ought to be able to leave details and technical topics to the intermediate theory courses. I only present one macro model, currently the income/expenditure model. I do not use AD/AS or other macro models. I don't do international economics per se (i.e. as a topic) in the macro course, though I do integrate international elements where appropriate. I do not go into the details of the money multiplier (e.g. the deposit expansion
process). I do not go into rational expectations or other contemporary macro-theoretical issues. In the micro course, I omit indifference curves and isoquants. I do not cover elasticity. (This may be heresy, but is elasticity a general education concept?) Nor do I go into capital markets (e.g. present value, etc.).

Economists may differ on what theories and concepts to leave out, but if they decide to pursue this approach to teaching principles, they must be prepared to cover less material in the course. This is the major variable cost associated with using non-lecture methods.

5. *A non-traditional approach, using a variety of teaching methods including reading, writing, and discussion in addition to lectures, has the potential to be a more effective method of teaching a general education-oriented principles of economics course.*

This is true for several reasons. First, non-lecture methods involve students more actively in the learning process. There is widespread evidence that active learning is more effective than passive learning, and that active learning leads to different types (or higher orders) of learning[12].

Writing assignments engage students in ways that formal textbooks or lectures rarely do. Writing assignments allow students to create their own insights rather than being presented with the insights of others. Often times students who never participate in class or distinguish themselves on exams write very thoughtful and thought provoking essays. Writing is, moreover, a good way to spur class discussion, since effective discussion requires knowledge of and opinions about the issues, both of which can be stimulated through writing assignments. After completing an essay on some topic, most students find they have something to contribute to a discussion. Class discussion allows for a free-wheeling investigation of some topic. It promotes confrontation of different views, and it strikingly reveals the differences between normative and positive analysis. Regular use of class discussion seems to increase the quality of students' participation, as well as the proportion of the class involved. Discussions work particularly well

[12]See, for example, Walbert, 1989.

to either introduce or conclude a broad topic (e.g. the theory of the firm).
An additional reason why this alternative approach may be more effective than the traditional, lecture-based approach is that all teaching methods do not work equally well with all students, or phrasing it differently, different students learn best from different methods. Some students have an affinity for discussion, and find it a productive method of learning. For others, writing may work best; and for still other students, the key may be listening to lectures. By using a variety of methods, which appeal to different students, an introductory course is likely to reach more students effectively[13] [14].

IV. Conclusions

Whether or not non-lecture methods improve teaching effectiveness is ultimately a testable hypothesis, though devising an instrument to evaluate the multiple dimensions of such an approach is difficult[15]. My own experience in conjunction with the positive reaction of my students has convinced me that much can be gained from using non-traditional readings, writing, and class discussion. Instructors who fail to put appropriate emphasis on these methods will miss out where these alternative methods are powerful.

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[13] Siegfried and Fels (1979), p. 924, also mention this point.

[14] Similarly, different students find different authors or types of text materials more enlightening. Using a variety of text materials makes it more likely that each topic will be presented appropriately, and that there will be some text which communicates well to each student. Siegfried and Fels (1979), p. 939, indicate that "choice of textbooks" doesn't seem to matter in course effectiveness, but they were considering alternative standard texts, not textbooks vs. real books, vs. popular journal articles, etc..

[15] As a first stab at such a test, I compared the scores of students in my non-traditional courses on the combined micro/macro TUCE with students in other principles classes at my institution. My students scored higher, though the difference was not statistically significant. In any case, it is not clear that the TUCE was designed to test the sorts of higher order skills promoted by my course.

EXHIBIT 1: List of Topics Covered

PRINCIPLES OF MACROECONOMICS

1. The Economic Problem and the Economic Way of Thinking

2. What Most Economic Questions Can Be Broken Down to: Demand and Supply

3. Alternative Ways of Solving the Economic Problem: Command versus the Market Pricing System

4. The Role of Money and the Banking System

5. A First Look at the Macro Economy (or What is GDP?)

6. What is the State of the Economy and How Does One Tell: How to Take an Economic Temperature

7. The Role of Government in the Market Economy

8. What Determines the Level of Economic Activity?

9. What Determines Changes in Aggregate Economic Activity: Economic Growth and Business Cycles

10. Stabilization Policy: Solving Contemporary Economic Problems

PRINCIPLES OF MICROECONOMICS

1. The Micro Economic Way of Thinking: Six Principles

2. What Most Economic Questions Can Be Broken Down to: Demand and Supply (Review)

3. Experiments in Market Clearing

4. The Theory of Consumer Behavior . . . or What's behind the demand curve?

5. The Nature of Costs and Production

6. The Theory of the Firm 1. . . or What's behind the supply curve under conditions of competition?

7. The Theory of the Firm 2. . . or What's behind the supply curve under conditions of monopoly?

8. Market Structure in the Real World: Supply Under Imperfect Competition

9. The Economics of Income Distribution and Poverty

10. The Economics of Pollution and Environmental Problems

11. The Economics of International Trade and Finance

12. Conclusions?

EXHIBIT 2:

READING LIST FOR TOPIC 3:

Alternative Ways of Solving the Economic Problem:
Command versus the Market Pricing System

Heilbroner, *The Making of Economic Society*, Chapter 1, especially pp. 8-16, Chapters 2, 3 and 13

Friedman and Friedman, *Free to Choose*, Chapter 1, esp pp. 1-15

"The Modern Adam Smith,", *The Economist*, July 14-20, 1990, pp. 11-12

R. A. Radford, "The Economic Organization of a P.O.W. Camp," *Economica*, Vol. 12, 1945

Heilbroner, *The Worldly Philosophers*, Chapter 3

Lawrence Weschler, "A Reporter at Large (Poland)" *The New Yorker*, Nov 13, 1989, pp.59-105.

STUDY QUESTIONS FOR TOPIC 3:

What are the different ways of organizing an economy to solve/deal with the economic problem?

What are the advantages and disadvantages of each?

How does a market economy solve the economic problem?

How does this differ from a command economy?

What are the functions of price in a market economy?

Why does exchange take place?

Who gains from exchange?

If a product is simply traded from one individual to another, can there be a net gain to society?

What caused the collapse of Communism in Eastern Europe?

EXHIBIT 3:

Principles of Macroeconomics
HOMEWORK ASSIGNMENT

Write a one to two page review in your own words of the R.A. Radford article, "The Economic Organization of a P.O.W. Camp." A review of an article is similar to a book review. The purpose is to briefly describe the article, and then critique it, describing its strengths and weaknesses.

Begin your review by summarizing the article in a paragraph or two. At a minimum your review should consider the following:

What is the overall point of the article? How is the point made? For example, what are the major sections of the paper about?

Describe the market discussed in the article. How sophisticated was the market? In what ways was the market typical or atypical of most markets today?

How do you account for the development of the market described in the article? In other words, why have a market at all in a P.O.W. camp?

What was the role of middlemen in the market? Did they contribute to the social value of the market? Why or why not?

What determined the prices of items in the market? Were the prices fair? In what sense did the market contribute to allocating resources more efficiently in the camp?

What did you learn from this article? What do you believe are its strengths? What are its weaknesses?

TO GET CREDIT FOR THIS ASSIGNMENT, YOU MUST TAKE A DRAFT OF YOUR PAPER (AND THIS ASSIGNMENT SHEET) TO THE WRITING CENTER FOR THEIR REVIEW. BEFORE YOUR VISIT, YOU SHOULD DECIDE WHAT SPECIFICALLY YOU NEED HELP WITH.

EXHIBIT 4:

Principles of Macroeconomics

READING LIST FOR TOPIC 6

What is the State of the Economy and How does One Tell?

Roy Webb, "The National Income and Product Accounts", in *Annual Editions: Macroeconomics 90/91*.

John Steele Gordon, "Why It Costs So Much To Be Rich?"

Herbert Stein, "Big Book, Small Pictures: Budget of the United States Government: Fiscal Year 1992 - A Review"

STUDY QUESTIONS FOR TOPIC 6:

How does the government measure GDP and other economic variables?

What is inflation? How do we measure it? What is a price index? How does one use and interpret a price index?

What is the difference between a real and a nominal variable?

Why is the difference important?

What is unemployment? How do we measure it?

What is the "misery index"?

EXHIBIT 5:

Principles of Macroeconomics
HOMEWORK ASSIGNMENT

A common task of economists is to use data to develop a conclusion and then support the conclusion in a written argument or report. The purpose of this assignment is to give you experience with this task.

A perennial question of concern is the state of the economy, that is, whether current economic conditions are good or not. In your own words, write a well-organized two to three page essay to characterize the state of the economy during the 1980s; i.e. was it good or bad, to what extent, and why? Your essay should integrate text and statistical information in an appropriate way, and should incorporate the following issues, as well as any others you think important:

How does one measure the state of the economy?

What is Gross Domestic Product (GDP)? What were the values of real and nominal GDP, and the GDP deflator in 1990? Explain how you got these values.

What is the consumer price index (CPI)? What are the components of the CPI? (In other words, what commodity groups are included in the CPI.)

Construct table to show the inflation rate, as measured by the CPI, during each year since 1960. For each of the three decades, the 1960s, the 1970s and the 1980s, identify the year in which the inflation rate was the highest, and the year in which it was the lowest. (Please report what the inflation rates were in those years also.)

Construct a table to show the unemployment rate during each year since 1960. For each of the three decades, identify the year in which the unemployment rate was the highest, and the year in which (Please report what the unemployment rates were in those years also.)

What is the "misery index?" Calculate the "misery index" for each year since 1960 and identify when the years in which it was highest and lowest for each decade.

How did the performance of the economy during the 1980s compare with its performance in the 1960s and the 1970s?

Be sure to report the source of your information in enough detail so that I can easily find it. For each variable, your citation should include the title of the source, the page(s) and table(s) from which your information was obtained.

EXHIBIT 6:

Principles of Macroeconomics
HOMEWORK ASSIGNMENT

Economists evaluate economic and social issues by applying models to specific episodes in history and asking what policy insights can be obtained from the models. Different economists reach different conclusions in large part because they apply different models to the same problem.

This assignment in a real sense could be the final examination of this course--it asks you to write a five page essay, analyzing the writings of several economists, identifying the models they employ, and evaluating those models using what you have learned this semester. (Because this is an ambitious assignment, it will be worth twice the credit of the other homework assignments.)

Read Heilbroner, Chapters 7 and 8, and Friedman & Friedman, Chapters 3 and 4. It might also be useful to read Blinder, Chapter 3 and Schultze, Memo 29. Heilbroner and Friedman & Friedman provide two different analyses of the Great Depression, though each addresses the same questions: What were the causes of the Great Depression? To what extent was it caused by the instability of the
capitalist system, and to what extent was it caused by inappropriate government policy?

Compare and contrast the views of Heilbroner and Friedman & Friedman. Each espouses a particular School of Thought. Avoid simply "listing" the specific causes each author suggests, and instead read "between the lines" to identify the model each has in mind to explain changes in economic activity in general and the Great Depression in particular. (Note: neither Heilbroner nor Friedman & Friedman explicitly identify their models, but you should be able to infer them from each author's discussion.) Describe each model in detail, based not simply on the readings cited above, but on everything we have studied this semester. Next, explain how each model accounts for the Great Depression.

Once you have identified and explained each author's point of view (i.e. the model), you should evaluate them. What evidence is available to support each model? What do YOU think? Which model seems more persuasive and why? Can either model be profitably applied to the contemporary U.S. economy?

Your grade will be based on how well you identify, explain, and evaluate each model.

APPENDIX A: Readings for Principles of Economics

PRINCIPLES OF MACROECONOMICS

Robert Heilbroner, *The Making of Economic Society*

Marilu McCarty, *Dollars and Sense*

Alan Blinder, *Hard Heads & Soft Hearts*

McKenzie and Tullock, *The Best of the New World of Economics*

Maurice Levi, *Thinking Economically*

Stephen Rhoads, *An Economist's View of the World*

Robert Costanza and Lisa Wainger, "No Accounting For Nature: How Conventional Economics Distorts the Value of Things," *Washington Post*, September 2, 1990

Friedman and Friedman, *Free to Choose*

"The Modern Adam Smith,", *The Economist*, July 14-20, 1990

R. A. Radford, "The Economic Organization of a P.O.W. Camp," *Economica,* Vol. 12, 1945

Heilbroner, *The Worldly Philosophers*

Lawrence Weschler, "A Reporter at Large (Poland)" *The New Yorker*, Nov 13, 1989, pp.59-105

Michael Specter, "Capitalizing on Yankee Ingenuity," *The Washington Post*, A1 and A4.

Lawrence Wechsler, "Value: Part I - A Fool's Question," *The New Yorker*, January 18, 1988, pp. 33-56; and
Lawrence Wechsler, "Value: Part II - Category Confusion," *The New Yorker*, January 25, 1988, pp. 88-98.

Roy Webb, "The National Income and Product Accounts", in *Annual Editions: Macroeconomics 90/91*

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