

Build your own table of contents here. This is an ordered list of all the materials in the packet. Please leaf through them and insert the correct page number, for ease in finding things later. Paul

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3. Rutgers Ethics		
4. Syllabus		
5. <i>Agre & Rice (smileys)</i> Kantor	light-hearted introduction to research as social activity Notes on computer use.	
6. D'Andrade	Three scientific World Views	
7. Grinnell	Ambiguity concealed in scientific discourse	
8. Burrell&Morgan	Dividing social scientists using 2 axes	
9. Sproull	How to identify and label variables	
10. Littlejohn	About theories; classifying; evaluating	
11. DeSolla Price	Numerical historical sociology applied to science	
12. Kuhn	Science as a social activity: paradigms; revolutions	
13. Polya	Chance: The alternative hypothesis	
14. Anderson	Qualitative Research: textbook (See K also)	
15. Denzin and Lincoln	Overview of Qualitative Research	
16. Haack	Making sociology of science reasonable	
17. Rice	Qualitative participant research	
18. Von Neumann & Morganstern	Extract from a book that has been cited as redefining social science in the 20 th century	
19. Nueman	Making scales, indexes etc. for concepts/constructs	
20. Wimmer & Dominick	Content analysis: basics	
21. Compeau & Higgins	An example paper on effects and magnitudes	
22. Tague-Sutcliffe	Experimental design for information retrieval	
23. Gergen	Generative power as a value in theories	
24. McConnell &Brue	Economics is the oldest of the social sciences	
25. Saunders	An example of model development	
26. Mullins & Kopelman	Best seller lists as an unobtrusive measure	
27. Kuhlthau	Example of Qualitative approach to information use	
28. Sokal	A notorious spoof	
29. Hassard	Many aspect of the firehouse in many approaches	
30. Lee	Analysis of Nardulli's analysis of courts	

Rutgers University: SCILS 16:194:602 Research Foundations
Fall 2001 Tuesday 6:30-9:10pm. Room 301 SCILS
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Grading Scheme:

Assignment	Percentage
1. Select problem/write	5
2. Use of online resources	10
3. Analyze theory/paradigms	10
4. Concepts and explanations	10
5. Develop and defend hypotheses	25
6. Course Evaluation	N/A
7. Simulated Research	25+5
8. Participation	10
TOTAL	100

Grade ranges: A= (95) 93-99; B+=(90) 88-92; B=(85) 83-87; C+=(80) 78-82; C=(75) 73-77; D+=(70) 68-72; D=(65) 60-67. The number in () is used to convert a letter to a number. The range is used to convert weighted sums of numbers back into letters.

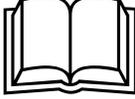
Borderline grades are resolved by considering attendance and apparent interest and knowledge. It is hard to earn an A, and rare to earn a C or below.

¹ This course maintains continuity with earlier versions, created by Prof. Ron Rice. The text book and most of the readings are the same. In order to ensure that graduates of the Ph.D. program at SCILS are exposed to the same body of material I have retained the core from 1995-2000, and have added materials which expand that in valuable directions or are otherwise quite timely.

Schedule of Assignments and Due Dates

In Readings K:= Krathwohl. C12 means Chapter 12; P= Packet from University Copy.
Items are referred to by author. An X means is an "eXample" of the research in this unit.

No.	Date	Content Etc.	Written Assignment	Readings
1	Sept 4	Introduction Orientation. Problems. Variables. Measures. Diagrams		Web site is http://scils.rutgers.edu/~kantor/t/602/2001/ P: Not mandatory, but fun to look at: P: Agre; P: Smileys; P:UNIX K: Introduction for the student
2	Sept 11 88pp	Social Science Process, Models. Metatheory. Ethics	Complete the NIH Ethics course	K: C5 Research Chain (15pp), C4 Find a Problem (23) P: D'Andrade – 3 World Views ..(22) P: Grinnell – Ambiguity ..(1) P: Burell & Morgan 3chs– Assumptions ... (37) <i>Browse: APA Manual</i>
3	Sept 18: 85pp Jewish Holiday	.Constraints, Ethics, Examples, Theory	1. Problem Paper 3pp – but look ahead!!!	K: C9 Constraints on Research (18) C10 Ethical Issues (19) C1 2 Example studies (20) P: Sproull – Identify Variables (9) P: Littlejohn – theory as part of inquiry (19)
4	Sept 25 106pp	The Research Enterprise Building on the Past Sudden Changes		K: C2 Varieties of Research (17) C3 Scholarly communication (22) C5 Reviewing a literature (25) P: de Solla Price Quant. Study Science (30) P: Thomas Kuhn – Paradigm shifts (12) <i>P: Rutgers Alex Lib Guide for Comm+Jnlsm Research</i>
5	Oct 2 116pp	Understanding causation Inference from observation	Explore the Rutgers Human Subjects Course	K C7 Causality (33p) C8 Samples, Inference (29) P: Polya – Chance, the alternative (54)
6	Oct 9 108pp	Qualitative Methods Theory and 2 methods	3, Paper (5pp) 4a, 2 problems	K: C11 Qualitative Methods (24) C12 Fieldwork (Skim this) (37) C13 Interviewing (Read this) (18) P: Anderson – Intro to Qual Res (18) [see note after table]
7	Oct 16 101pp	Qualitative Methods	 present your topic	K: C14 Analysis of Qualitative (27) C15 Reporting of Qualitative (24) P: Denzin & Lincoln – Landscape (33) P: Haack Sociology of Science (7) PX: Rice – Bulgarian Bagpipe (Fieldwork) (11)
8	Oct 23 84pp+ 33 skim	Quantitative methods Surveys and Statistics	4b – Present your 1 page 3 min answer	K: C16 Surveys (35) C17 Desc. Statistics (40) C18 Measmnt & Testing (skim) (33) P: von Neumann & Morgantern – EconBeh(9)
9	Oct. 30 70pp+ 60 skim	Quantitative Methods Experiment and MetaAnalysis		K: C19 Inferential Statistics (48) C:20 Experiment (Skim) (60) C:21 Meta-Analysis (22)
10	Nov 6 No Readings	ASIS Conf. No Class – You may want to meet anyway	5. Present Hypothesis no more than 14pp	Please deliver the papers on time, to my office. They are due Tuesday evening at the ending time of our class.

11	Nov 13 Prof. Rice 59pp+ 93 re-skim	Scales and Indexes Content Analysis Study design & interpretation		K: Review 18 & 20 (93 skims pages) P: Neuman – Scales and Indexes (24) P: Wimmer&Dominick – Content Analysis (24) PX: Compeau&Higgins – Reactions to technology (11)
12	Nov 20 64pp+ (12 10 28)	Group Work “IAS” Seminar (will be explained)	Online exercises 2, 2c must be done by now	P: Tague-Sutcliffe – Experiments (24) P: Gergen – “Generative Theory” (17) P: McConnell & Brue – Economic Models (13) Plus 1 from Examples (Saunders Mullins & Koppelman Kuhlthau) (various lengths)
*	Nov 27 46pp+ joke	Thanksgiving Week. No class but do keep reading		PX??: Sokal . <i>Can you tell that this was notorious/celebrated satire, in 1997</i> K:C22 Historical Research (18) C23: Action Research (28)
13	Dec 4 72pp	Multiple Approaches	6. Evaluation of this course (optional)	K: C24 Multiple methods (17) C25 Science in Society (17) PX: Lee – Integrating approaches (23) PX: Hassard – Multiple Paradigms (25)
14	Dec 11	Final Presentations	 7. 2c Whole final paper.	<i>You will be busy enough writing and preparing your presentation. Thank you.</i>

Details on Assignment for Oct 23.

At the Oct. 9th meeting, for the Oct 23th meeting each member of the class will be assigned one section of the material by Anderson: An Introduction to Qualitative Research, or from Krathwohl, Chapter 15. You may use this to note which one you have been assigned:

- _____ 237-240. Intellectual traditions of qualitative research (up to Schutz)
- _____ 240-241 Alfred Schutz: the constitutive interpretation of experience
- _____ 242 The intersubjectivity of meaning
- _____ 242-244 The theory of ideal types. Phenomenology and normal science
- _____ 245 Basic Concepts of Qualitative Research; Normative Characteristics of Qualitative Research,
- _____ 244-249 Inductive (deductive); eidetic (atomistic); subjective (objective); contextual (generalizable); mundane (purified); textual (measurable); preservationistic (aggregated) interactive (independent) interpretive (material). A summary analysis of qualitative norms.

Krathwohl Chapter 15. Qualitative Research Methods.

- _____ 227-228 Overview; introduction
- _____ 229-233 Uses and advantages of Qualitative procedure
- _____ 233-238 Variety of approaches; Qualitative as a point of view.
- _____ 238-241 Finding a problem; ways of generating data
- _____ 241 Overview of the qualitative process

You will be asked to talk about it at the October 16th meeting.

Required Texts:

Krathwohl, David. (1998). Methods of educational and social science research: An integrated approach. 2nd Ed. NY: Longman. ISBN: 0-8013-0255-2.

Collateral Text (not required)

Publication Manual of the American Psychological Association. . Latest Ed. Washington D.C. (paper).

Both of these books are available at the Rutgers Bookstore in Feren Mall. Their relation reflects the failure of the advice given by the Duchess in Lewis Carroll's book Alice in Wonderland. "... and the moral of that is - `Take care of the sense, and the sounds will take care of themselves.'" Alas, we have rules for the sounds, and the APA is one of many such sets of rules. Wherever you publish you will also have to follow some set of rules.

Unfortunately, APA lets us represent authors by their initials. Some scholarly publications require us to know the author's full names. *Keep this in mind* when taking notes. APA goes into almost infinite detail about such things as punctuation and capitalization. Many of these rules fill "much needed gaps", which are otherwise negotiated by common sense and experience with the language. **If English is not your mother tongue**, I suggest that you get a good **handbook** such as the **Harcourt Brace** one, to guide you on some of the nasty issues involving articles, and agreement of subject and verb.

Please avoid errors of spelling, usage and grammar. I will mark off credit when they catch my eye, and this is a realistic reflection of how people respond to such errors in otherwise scholarly presentations. Allow yourself time to proofread your papers, and to make corrections of this type. Example problems are: effect vs. affect; agreement in number [in other words, I still don't think the phrase "every single person must exercise their discretion" is good English]; use of parallel construction. It's versus its. And so on.

Lecture 1. In-Class Exercise

We will develop, together, a very rough example of each of the 5 stages in the research loop, drawing on a topic to be announced. You will work for a few minutes in small groups to develop some ideas about the problem, and then we will work together to develop a "mini-paper" about them. We will pretend to do all the stages of the research cycle.

Lecture 2. In-Class Exercise

During introductions, each student is asked to note his or her height (in feet and inches) and sex on one 3x5 card, and to note height and weight (in pounds) on another (different colored) card.

During the second class we do an exercise which represents both qualitative research, and quantitative research. The class is divided into two groups. Group 1 does a Qualitative task while Group 2 does a quantitative task. Then they switch roles.

Discussion points for the readings

I assume that you will read the assignments before the class and will be prepared to address the discussion questions in terms of the readings. This list is not a contract, that is, I do not guarantee that any one in the class will be compelled to discuss every one of these questions on the day assigned. – paul kantor

As you work on a problem, do you expect to achieve insights (and even to make decisions) about the several steps in the research chain (a) in the order that they are dealt with and completed or (b) in a more or less random order?

By publishing his argument as one chapter of a book, would you say that de Solla Price has followed or bypassed the chain of authentication described by Krathwohl?

Do you expect your teachers in the Ph.D. program to exhibit one of: dogmatic authority, authority by reason of position, or reasoning authority? or a mixture? Why?

Discuss the statement “When Harvey discovered the circulation of blood, he knew a fact about human beings. It would be valid even if no one else accepted it.”

If there are N people in this class and, without any collaboration or communication, they each try to pick a different integer from the set containing {1,2, ..., N} what is the chance of no two people picking the same number? What does this have to do with de Solla Price’s discussion of disputes?

If there are two views about change (call them A,B), and two views about ontology and methodology in social science (call them X,Y) how many combinations are possible? If views on change form a continuum, and views on social science do so also, how many combinations are possible? How would you label or describe them?

Discuss the statement: “in some of my research I use the heliocentric view and in other parts of the research I find the geocentric model more useful.”

Discuss the statement: “Moving from one research paradigm to another without publishing a retraction of your earlier work amounts to scientific fraud.”

A construct is a kind of “collectivized abstraction”. Is the collection {Rainfall in Toledo, Age of the President, Color of the sunset in Abilene} a construct? Why not.

In educational testing an entire test (containing scores or even hundreds of items) may address a single construct. The test may be thought of as measuring student progress or teaching effectiveness. Discuss how the notion of construct validity applies to each of these points of view. Generalize your remarks into two ways to look at the productivity of people using a computerized system of some kind.

Discuss the claim: “If test items (or scale items) have very low correlation then the corresponding construct is ill-defined; but if they have very high correlation then most of them are irrelevant.”.

If you were managing an advertising campaign for a media literacy project, how might you operationalize the construct: “an appealing child role model for use in promotional video”?

If we were to accept the assertion that “Validity is subjective rather than objective”, attributed to Cronbach, we might conclude that a finding is valid when presented to one audience, and not valid when presented to another. Are you comfortable with this? Can you see any way to separate the “finding” from the “presentation”? Can you learn anything from someone who does not speak the same natural language as you do? If not, how do natural languages come into existence?

Find arguments in support of the claim that “more recent interpretations of a remote event are more accurate even though details have been lost over time”. What other word might replace “accurate” here? Perhaps “persuasive”?

Using either “accurate” or your substitute term, would those arguments support the claim that “future interpretations will be more X than is the present one”?

Krathwohl points out that “ex post facto” studies are unlikely to be published unless they confirm the author’s model or hypothesis. If only one out of 20 such studies gets published, and authors consistently use a 95% confidence level in all their tests, what can you conclude about “ex post facto” studies that use statistics?

It would seem obvious that you cannot deduce useful information if you do not know what question a respondent has answered. Warner's method shows that this is not so, but Krathwohl notes that we lose all links to demographic information. Explain how to modify Warner's method to yield demographic correlations.

Since we may expect a response rate of say 20%-30% in a mail survey, what are the ethical considerations in asserting, in a contact letter that "your response is very important to us". Does this relate to privacy, confidentiality, consent, or what? How might it produce selection bias? [If you don't already know what selection bias is, the glossary in Krathwohl will help.]

The Regression effect: *Here is a way that we can all see the regression effect, by doing a simple simulation. Suppose that there are 9 people in a population, and that for the attribute of interest their values are:*

Reality 1, 2, 2, 3, 3, 3, 4, 4, 5.

The test:

The retest

[This is a poor man's bell-shaped curve]. Now suppose you study them using an (unbiased) test which never gives the right score for a person. Half the time it is one point high, and half the time it is one point low. "Apply the test" to each of them, using a coin toss, and counting "heads" as +1, and "tails" as -1. Write down the test results below the true scores. Now choose all the cases whose test score is 4 or higher. Retest them, by tossing the coin again, and write the new scores in the third row. Is the average of the new scores higher or lower than the average of the first set of scores, for these selected cases. Note that there was no treatment whatsoever!.

Ethics: *In the early 1960's some obstetricians felt that it was unethical to permit women to suffer the pains of childbirth without anesthesia. Discuss how an ethical consensus may prevent the advance of human knowledge. How would you distinguish ethical precepts from dogma?*

Can you situate Gergen's interest in generative theory among Krathwohl's "other criteria of research"? If not, do you have some basis on which to accept it?

How would you respond to the claim: "Researchers hide behind the use of multiple paradigms when their preferred methods have failed them. Therefore every use of multiple paradigms must involve a concealed failure, and thus a violation of scientific ethics."? Critique this statement on both logical and metascientific grounds.

*In preparing your presentation to the class, ask yourself: "How would I explain this to a classmate if we were at the bus stop, and I could see her bus approaching about 2 blocks away, in moderate traffic?" **Please bring a one page handout, with the visual model on one side.***

Words of wisdom:

Second only to asking a good question, operationalization is the key to productive and significant research. The descriptions given should be so clear and precise that your worst enemy, or a complete imbecile, should be able to follow the description and come up with the same results that you will. This elimination of "room to maneuver" is hard to accept. Young researchers often fail to obtain research grants because they want to allow room, during the research itself, for some absolutely brilliant maneuver that they haven't quite thought of yet. While this is very tempting, it is the kiss of death. Spell it all out. Do what you promised. Then have a brilliant insight!

Details on the Written Assignments.

The core assignment of this course is to select a **problem**, identify **some papers** on it, **critique** one of those papers, and **develop a coherent framework** for dealing with this problem. You will have to identify the key concepts and abstractions, hypothesize relations among them, and make up some data, whose analysis will show that you can pull together a coherent picture. Please read through all of these assignments before making the commitment to a specific problem and paper. A wrong choice here may make it very hard to complete the other tasks well. *Warning: Every year some students select a paper at the last minute, and then find that they cannot use it as a foundation for the rest of the work. They are very embarrassed.*

Each written assignment will have parts, labeled A, B, etc. The job of doing the assignment will often involve steps which are not handed in. They will be described as needed.

ASSIGNMENT 1. DUE on SEPT 18.

Select a research topic in which you are really interested. Find and select one article, published in 1998-2001, on this topic. Please don't use an article which you are covering for some other class. The article won't be usable unless it includes discussion of (1) the nature of the research problem (2) the theoretical foundations motivating the research (3) some kind analysis of some observations - whether qualitative or quantitative (4) a discussion of the results and their implications. *Note: Many of the readings in this course packet would not meet those requirements. Scrutinize articles before making a commitment to one of them.*

Hand in one copy of a 3pp paper in APA style, page numbers, headings etc. (But don't spend an extra page for the title or references). Begin the first page with Title and author, and then continue with the paper. *Please include a copy of the paper you read, for me - clean enough to use in a future course, thanks.* Your paper must have the following sections:

- A. (1) **Briefly describe the problem** (2) Why are you interested in it? (3) Why is it important to others, or to you? [Not the same as (2)]. (4) What is some important theoretical aspect of the problem (5) What is some important practical aspect of the problem?
- B. Briefly summarize the article you have selected. This is **not** the important part of this assignment.
- C. List the full reference information for the article, and for any other material you cite, in the reference section which must end on the second page.
- D. Use the 3rd page to show a visual model of the primary relationships among variables and concepts discussed in the paper you selected.

Note: for assignment 5 (further down this list, you will have to consult two literature reviews about **the problem**. It might be prudent, before committing yourself to the choice of problem, to look around for such reviews to see if (a) they exist and (b) you can make sense of them.

ASSIGNMENT 3. Paper analysis/ paradigms/ criteria for good theory. (DUE Oct. 9)

Summarize and critique **the theoretical argument only**, of the paper you have selected. Submit a 5 page double spaced paper in APA style, but with no abstract, and T/A Text all on first page. Keep the reference section continuous with the text, and all must fit within 5 pages. Use a running head. Please name the sections as outlined below. (then write sections that match the names ☺)

- A. Summary of Theory. State in one sentence the theory of the article, and in one or two sentences the implied or assumed causal links among the concepts or constructs in the theory.
- B. Evaluation of Theory. Apply Littlejohn's list of criteria to this theory, and consideration of elegance. Comment on specific dimension of quality, citing briefly the text of the article. Make and defend a summative judgment as to the overall quality of the theory presented.
- C. Paradigmatic Stance. Identify the paradigmatic stance of the article. Make reference to the 4 classes proposed by Burrell and Morgan. Explain why the article either fits in one of the classes, crosses one or more boundaries in that classification, or requires the introduction of new dimensions of paradigmatic variability Also, situate the article with respect to the 3 kinds of science described by D'Andrade..
- D. Implication for Your Problem. Turn to the research problem of interest to you. Consider the implications of adopting the same paradigmatic stance you have found in this paper. Would that be helpful or harmful to solving your own research problem? Briefly, why?

Since you have only 4.5 pages to do all this, **do not get tangled up** in issues of data, method, and analysis.

ASSIGNMENT 4A and 4B. Identifying and explaining concepts. DUE Oct. 9; Oct 23

For any of the readings assigned up through the day that 4A is due:

4A: Pick out two concepts that you don't fully understand, or whose explanations seem to be muddy, or which seem to be frankly contradictory. Using one page for each of these concepts:

Identify the topic

Provide a precise (page and paragraph) pointer to the problem

Describe what it is that troubles you about the concepts selected.

You needn't fill the page, for either of these, but put each on a separate sheet. One of these two problems will be given to one of your class mates, to study and resolve.

4B (Due Oct 23). Take the "problem" that has been assigned to you, and go back to the source, to prepare a one page explanation of the troublesome concept.

and, show, on a second page, how the troublesome concept might actually be applied to your own research problem.

Prepare two copies of these explanation; one for the inquirer and one for me. Use condensed APA style, with running header.

...and, you will give a 3-minute oral presentation of the explanation. Prepare to do this without using written notes or overheads. You may use the blackboard. This is an exercise in presenting a concise public explanation, based on a clear understanding of what you have to say.

...and, you will be expected, when the person who dealt with your problem has presented an explanation, to question that presenter, and pass "judgement" on whether the explanation was satisfactory to you.

ASSIGNMENT 5. Develop and Defend a Hypothesis. (DUE Nov. 6). 14 pages.

[This is quite a difficult assignment, with many parts which must stand in a logical relation to each other. Start on it **early**, so that you have time to throw out your first attempt and start over again. :>.]

Prepare a paper (no more than 14pp. double spaced, APA style. One of these will be the title and abstract page, a second will be the references, and a third will be the Figure. This leaves 11 for doing all the "pieces". The sections of the paper should be headed as indicated below.

Begin by reading at least two literature reviews dealing with prior research relating to your hypothesis about your problem. Incorporate ideas from this reading in your presentation. Remember to keep focused on the THEORY here.

- A. *Problem Statement.* Define the problem and explain why it is important to "your field". Remember that a good problem definition is a major part of the solution. Remember also that research problems will generally ask the question What? or How? or Why?.
- B. *Theoretical framework and model.* Using either a model you found in your reading, or a new model of your own, develop the details of the model along the following lines. Identify and name at least two primary concepts in the model. Describe the theoretical motivations for introducing these concepts to solve your problem. Describe how these primary concepts relate to each other. Suggest why study of these concepts should lead to a satisfactory resolution of your research problem.
- C. *Present a visual model with named variables.* Summarize the model in a Figure, and, in the text, explain the relations represented in the Figure. Your model must be complex enough to include at least one dependent variable (DEPV); two independent variables (INDV); one intervening variable (INTN) and either (or both) a moderating variable (MODV) or a variable that interacts with one of the INDVs (INTR). If a relationship can sensibly have a direction, place a (+ or -) on the corresponding arrow. Are there some INDVs which can serve as experimental settings or "controlled" variables? Explain very clearly how the moderating and intervening variables have the effects that you postulate. What kinds of interactions do interacting variables represent? Some examples of model diagrams can be found in the course packet, and in Littlejohn's book.
- D. *Hypotheses.* Present two specific hypotheses (calling them H1 and H2) which flow from your theoretical model. They must involve the variables (and only the variables) presented in your model. They must be, at least in principle, capable of falsification. For each hypothesis you must provide exactly one null hypothesis, whose confirmation would be a serious blow to your hypothesis.
- E. *Operationalization.* [This part is hard. See the "Words of Wisdom"].² E1: Give an unambiguous and complete operational definition of one of the variables in your model. Tell exactly how you will measure: give wordings for interview instruments, procedures for compiling published data, or whatever is appropriate.
- E2. For a second variable or concept in your model, show that you can think of 5 different ways to define it. [Of course, each choice means that the resulting concept is somewhat different. You may quite reasonably prefer one of these to all the others. But they should all be plausible to someone who thinks the problem is important.
- E2a. Give a simple dichotomous measure
- E2b. Give a measure with 4 nominal classes or levels(not in a natural order)
- E2c. Create one 7-point Likert type scale or semantic differential.
- E2d. Identify some measure for this concept which is naturally a continuous ratio measure.
- E2e. Cook up 5 different measures of the concept which could plausibly be combined to yield a single scale measure of the concept. Explain how the scale value is to be computed.
- Note: If the concept can admit measures of type E2d and E2e then it must seem to you that it is by nature continuous and perhaps even of ratio type. It follows then that it can be "crudified" into an ordinal scale, or a binary one. It is less obvious that it can be represented by 4 non-ordered categories. So the only way to tackle this problem is to approach each part by erasing your brain, and taking a completely fresh look at the concept. This means that you can't answer E2d by saying "happiness is measured in annual income" and answer E2a by saying "less than 60,000 annual income means unhappy". Your resulting 5 measures will probably *not* be mutually compatible. But each should have at least face validity to an interested observer.
- F. *Threats to validity.* Of your two hypotheses, select one, and show how:
- F1a. the relationship might appear to hold, even though the theory is wrong (Type I error), for reasons that are systematic, rather than merely statistical.
- F1b. the relationship might appear not to hold, even though the theory is accurate. (Type II error).
- In each case, explain the specific situation that would lead to this unhappy state of affairs and, if it corresponds to something discussed in the readings, attach the appropriate label to it (such as instrument decay, sampling bias). If you are uncertain about the label, say so. The key issue is to identify the situation in a way that is specific to your problem.

ASSIGNMENT 6. [Optional, but valued] Course evaluation. (DUE Dec 4.)

At the penultimate class, please hand in a one or two page evaluation of the course, with specific suggestions for improvement in the topics, the readings, the assignments, the discussions etc. The course executes a kind of random walk, as suggestions from each year's students are incorporated into the next year's version. Of course the suggestions often contradict, but we keep trying! I expect this evaluation to be given anonymously.

If you are comfortable with revealing your name, feel free to do so. Generally there is little room for your comments to affect your own grade. But some people are concerned. In a recent class (not this one) I had all students but one choose to sign their comments. The one anonymous evaluation included a lengthy critique of the notion that anyone could want to hear student responses for any reason other than to pass judgment on the students. I could not resolve the ethical question of whether to tell this student that her colleagues had, in a sense, unanimously deprived her of anonymity. How would you have solved this?

ASSIGNMENT 7. Develop/present simulated study of your problem. Dec. 11 25 pp.

This is the culmination of the course work. It takes the form of a long paper.

A. *The first part of this paper is a revision of what you did in ASSIGNMENT 5, so that any problems which we have found with it are cleared up. I will ask you to present this in a rigid framework, so that it is not mixed up with the remainder of the paper. Maintain all of the sections of ASSIGNMENT 5, but boil it down to 10 double spaced pages.*

B. *The second part of your final paper is a report on simulated application of three different research approaches to your problem. Note that in real life you would be expected to only have one research approach in a paper, and having more than one may be interpreted as a danger sign by your readers and friends. You must choose your three approaches by taking no more than one from each of the following four broad groups:*

Group 1. A cross-sectional survey, or panel study, or cohort study, with a clear definition of how the instrument is administered to the respondents.

Group 2. A controlled experiment or quasi-experimental study (less controlled) or a naturally occurring "field" experiment. What is the unit of analysis?

Group 3. A study whose raw data are to be found somewhere in published form. A secondary analysis, or meta-analysis, or content analysis or historical analysis.

Group 4. Case study or interpretation of episodes. Either single or multiple case studies; define the level of observer participation in the situations. Note that this is not "a survey that is too small to support statistical analysis".

Two of these approaches will be "minors", and are to be described briefly. The third is to be described at great length. Here is how they should be described: (The numbering here looks like the Federal aviation regulations, but it will help you to make sure you cover all the points.)

Describing minor methods: For each minor method (a,b) , deal with four items in turn:

B1a(i). Pick one specific aspects of your study (either one of the two hypotheses, or the issue of interpreting the results) and explain why method (a) would be good.

B1a(ii). Discuss the potential linking power of method (a). What rival explanations, or threats, might pose a problem? What advantages and disadvantages do you see?

B1a(iii). Discuss the potential external (generalizing) power of this approach. What are the advantages, disadvantages and threats?

B1a(iv). Pick two criteria different from internal and external validity, and discuss how method (a) might be shown to satisfy them.

Now repeat this for the second (minor)method, in sections labeled B1b(i) --- B1(iv).

*Now repeat this for the third (**major**) method in sections labelled Bic(i)---Bic(iv), in order to build momentum for the next section.*

B2. Sampling. What is the population? What is the frame? What is the sampling unit of analysis? Populations may be made up of people, or libraries, or newspaper articles, or court decisions]. What is the method used to draw the sample? (about 1 page)

B3. Additional sources of data for this approach. In addition to the operationalizations described in Section A of this paper, what other sources of data are there for any of the variables or concepts in your theoretical model? Are there existing tabulated data? Can unobtrusive measures be adduced? Can you triangulate one or more of the concepts? (about 1 page)

B4. Simulated results for this approach. For this one approach only, either find (and cite) or simply make up (this is much more fun) results that could have been obtained if this major method were used. Summarize them in a clearly explained chart, figure, table or graph. Explain clearly how these "data" resolve (at least part of) your research problem, and whether they confirm or reject either of your hypotheses. Put the caption on the same page. Make the caption detailed enough to explain the content and significance of the data representation. Also summarize the results in the text proper. Follow APA style for reporting means, significance etc. Work within the limits of your own understanding of things technical. If you don't know what a Kruskal-Wallis or Friedman test is, don't pretend to have used one. (6 to 8 pages)

[This may be your last chance for a long time to have data do what you want it to do, so have fun with it.]

more on next page

B5. Integrate all three approaches. Explain why it would make **some** sense to use all three approaches in detail, and how you would expect to integrate the results of using all three approaches to give a thicker understanding of the problem, and of the context and meaning of the results of each method taken alone. In doing this you may imagine that you have "good" results from the other two methods, and adduce them accordingly.

B6. So what? Explain how the results you have "found" are of some value to (a) all humanity and (b) other researchers and (c) professionals in the very field that you have studied and (d) the individuals studied, if there are any. In other words, does this study have any utility (value, usefulness) above and beyond the fact that it got you through this particular course?

B7. Presentation to the class. (5 points of the course). Bring in enough copies of the abstract page to hand out to everyone. You should put the visual model on the back of the sheet to save paper. Remember also to distribute the text electronically. You will have **5 minutes** to 1. Identify the problem and theoretical issues; 2. Summarize your model; 3. Summarize one research approach; 4. Summarize the simulated results; 5. Summarize implications for theory and practice. You may use visual aids. Please don't "read" your paper.

This paper (25 points of the course) should follow APA style and **not exceed 25 double spaced** pages, of which no more than 10 can be the rework of ASSIGNMENT 5. This is tight. In reviewing your paper, make sure that each important point appears only once, and in the best possible place. There will be no room for unimportant points. My own papers often exceed recommended page limits, and could be trimmed.

Please keep a copy for yourself, and submit a copy to me.

I'll return your paper with final grade, to the Ph.D. mailboxes. If you would like it mailed please provide a SASE with enough postage.

ASSIGNMENT 8. About participation.

Education is a strange activity. During this semester I will do my best to introduce each of you to the social world of academic research, the mores of current social science, and the specifics of language and methodology. I will judge how well I have done that by reading your papers, and by talking with you. The grade, a measure of how well I have done, becomes yours to keep! What is the sense of this? It is that teaching is only a small part of learning, and learning is what you must do. Part of learning is asking questions, and taking risks.

So, in class, please do not be upset when you must ask a "stupid question". Please do volunteer contributions when I or others seem to be in error. If we seem to drift off the topic, bring us back to it. And don't meander. An occasional joke, if truly funny, is most welcome.

I will often ask you a "first order question". Such as "what is meant by the epoche"? Or I may ask a second order question, which will be about the answer that someone else has given.

I use a system of random lists to ensure that everyone has a chance to speak in class, and that I am not subconsciously playing favorites

Sometimes I will pose a small or simple problem, and ask you to reach agreement with the person sitting next to you, as to the solution. This is an "active teaching" device which, I think lets you sneak up on full participation, by practicing speaking in the class room..

Professor Rice, who created this course some years ago, has noted that many of you, being adults, are made very uncomfortable by the direct confrontation of ideas which is a feature of our class room. This is particularly difficult if you have worked in a profession in which human interaction is of key importance (communication, librarianship, etc.). But it is essential to the progress of our discipline. You must become comfortable with separating discussion and critique of someone's ideas from any sense of personal animus or disregard for the individual involved.

We hope that you will find this course extremely challenging, and that it will prove to be a good foundation for your future studies, and for a successful career as a researcher and academician.

Personal Statement

1. *The Ph.D. degree serves as a union card for the academic profession at college or above. That job is a teaching job. But the Ph.D. is, in practice, an apprenticeship in research. I believe that this is quite reasonable. As a teacher, you will teach the fruits of (primarily, other people's) research. You will teach them much better if you have been apprenticed in the process of creating such fruits. You will have a personal understanding of what is easy and what is difficult. In this way you will be much better prepared to serve those fruits of research to others.*

2. *This course serves as your first introduction to the range of research approaches that are used by SCILS faculty to study the areas in which we are interested. It is a survey in nature. It will not make you expert in any of these methods. We do hope that it will enable you to intelligently survey the landscape, and to perceive the relations among the ontologies (theories about the nature of being) and epistemologies (theories about the nature of knowing) that these methods presuppose or imply. Although we may call these several methods paradigms, we do so not in the Kuhnian sense of a framework that is so successful that it sweeps away competing views. Obviously, these methods don't compel in that way.*

3. *I believe that there are five activities which may be found, in various combinations, in the doing of research. These are: [find a problem]; [have a new idea], [find out what others have thought]; [solve the problem]; [tell the world]. You can form combinations by choosing some of these activities and leaving others out. I think that every one of the 31 possible combinations will be found somewhere under the label "research".*

4. *An interesting problem arises from the fact that two of these activities [find ...] and [tell ...] are themselves examples of the processes which we at SCILS study from our several perspectives. They are, in fact, the activity of our allied professions. Thus there is a dangerous tendency to overstate the importance of those two components because they are examples of the subject matter(s) of interest. We will try to be balanced*

5. *I believe very strongly that there is good research and there is "all other research". Like Tolstoy's *unhappy families* (this is a reference to the opening line of the novel *Anna Karenina*, by the Russian author Lev Tolstoy), bad research takes many forms. I believe that part of understanding good research must be the ability to recognize, and even to propose, "not good research". I like to refer to this as "bonehead examples". I believe that by the time you complete this course it should be very easy for you to propose poor methods, problems and approaches, and to explain why they are poor.*

6. *The phrase, "it all depends" and the associated concept of complexity and interaction of variables is an important one in the social sciences. Please be advised that I will always respond to the answer "it all depends" with the follow up question "give me two examples that go two different ways".*

7. *While the dialectic is not, in my judgement essential for understanding (on good days I will argue, for example, that tulips "understand" how to find the sun), discussion, criticism and argumentation are a key part of the apprenticeship process which the Ph.D. program represents. Please understand that in my (bizarre) value system, to make no response when I think you are misled would be to devalue you completely. I understand that you (collectively) come from a diversity of cultures and professional backgrounds, and that you may find the give-and-take of our classroom uncomfortable. Nonetheless, I expect you to question me when I am unclear, and to correct me when I am in error. If you do not, I will fear that you have devalued me.*

8. *Finally, but most important, I believe very deeply that research is, and should be, fun!. It can bring us the highest intellectual joys, as we find order in the dazzling complexity of the phenomena that interest us. It can bring us a different joy as our peers and elders ratify our insights, and it can bring us great joy as we see them taken up, and improved upon, by others. Good research, as the cartoon in my lab says "... makes us want to dance." If you cannot enjoy research, and you do not find pleasure in it, then I think that the path to a Ph.D. degree will be, for you, a barren one indeed. I would question the decision to traverse it*

Paul Kantor. August 2001.