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ANTY 601.01: Seminar in Proposal Preparation and Research Design

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ANTY 601: SEMINAR IN PROPOSAL PREPARATION AND RESEARCH DESIGN

1. PROFESSOR

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2. COURSE DESCRIPTION

Anthropology 601, Seminar in Proposal Preparation and Research Design, is designed to provide students with direct hands-on training in the production of research proposals. The course will provide students with knowledge of the fundamentals for developing anthropological research designs and writing proposals. This knowledge will be useful in a wide range of environments, whether projects are derived from public sector compliance with laws or represent purely academic research as might be supported by the National Science Foundation. Students should emerge from the course with critical tools for successfully performing in the increasingly competitive world of anthropology.

3. TEXT/READINGS:

Required Text:

Hall, Mary and Susan Howlett
2003 *Getting Funded*. Continuing Education Publications, Portland.

Additional Recommended Texts:

Archaeology:

Black, Stephen L. and Kevin Jolly
2003 *Archaeology by Design*. Altamira Press, Walnut Creek.

Collins, James M. and Brian L. Molyneaux
2003 *Archaeological Survey*. Altamira Press, Walnut Creek.

Carmichael, David L., Robert H. Lafferty III, and Brian L. Molyneaux
2003 *Excavation*. Altamira Press, Walnut Creek.

Socio-Cultural Anthropology:

Bernard, H. Russell

2006 *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Altamira Press, Lanham.

Physical Anthropology:

Lasker, Gabriel W.

1993 *Research Strategies in Human Biology: Field and Survey Studies*. Cambridge University Press, New York.

4. SEMINAR EXPECTATIONS AND GRADE DETERMINATION:

Well-executed research typically begins with an appropriately designed proposal. Proposal writing has been described as both art and science combining both disciplinary knowledge and salesmanship! The ability to produce successful proposals can only come from practice and participation in the production of proposals. This course will strongly emphasize proposal writing via production and critique of proposals. Assignments will allow the student to progress through the proposal production process from research design to budget preparation. Students will also participate in peer review, a critical aspect of the proposal production/review cycle.

Assignments will permit each student to write a complete proposal. Primary emphasis will be on developing appropriate research questions and associated research methods. Assignments will require the student to develop a proposal for research involving an anthropological research project. There are a wide range of possibilities. For example, your project could include an archaeological survey of some landscape, an ethnographic survey of a community or communities, an examination of biological samples derived from multiple contexts, a single site excavation, an ethnographic study of a specific group in a particular place, or an analysis of a single biological sample (e.g. skeleton) or population (e.g. cemetery). The key element in this process is defining one or more anthropological research questions and explicating an appropriate methodological approach to address those questions.

Grades will be based upon completion of assignments and class participation. Assignments must be well written with minimal grammatical problems, spelling issues, etc. If you have writing problems you should seriously consider visiting the university writing center for extra help. Assignments must demonstrate an attempt by you to obtain and cite the critical anthropological literature associated with your research topic. Assignments with minimal citation of the literature will be scored low (that is also what will happen to you in the “real world”).

Class participation will include presentation of topics and assignments in class and peer review/constructive critique of proposals produced by class members. The seminar will be divided into two groups to facilitate discussions of theoretical and methodological issues associated with your proposals. Students will develop one or two recommended

readings for each scheduled seminar discussion. These will be passed on to other seminar members one week in advance of scheduled presentations as PDFs via email or as articles in scholarly journals, accessible to all at the Mansfield Library.

Students will develop two types of presentations to the seminar: topic discussions and formal proposal presentations. Topic discussions will introduce relevant theoretical and methodological issues associated with your proposals. Proposal presentations will outline specific results of each proposal preparation assignment. Students should be prepared to defend their approach to project develop and proposal design.

Grades will be determined on the basis of total points achieved:

Assignments (see below)	700 Points
Seminar Participation	50 Points
Total	750 Points

Students with 90% (675 points) or more will receive an "A," etc. Deadlines are extended only in cases of illness (with a doctor's note) or an emergency. The professor retains the option to use + and – grades when final scores are close (within a point on a 0-100 scale) to an up or down transition.

READING LIST AND SCHEDULE

JANUARY 29: INTRODUCTION AND BACKGROUND

FEBRUARY 5: RESEARCH QUESTIONS

Reading:
Hall and Howlett, Chapters 1-4
Black and Jolly (entire book)
Collins and Molyneaux, Chapters 1-3
Bernard, Chapters 1 and 2
Lasker, Chapters 1 and 2

Assignment 1 and seminar presentation due on Feb 5: Project Research Goals (100 Points)

FEBRUARY 12-26: PROPOSAL INTRODUCTION: RESEARCH PROBLEM AND JUSTIFICATION

Reading:
Hall and Howlett, Chapters 5-11
Black and Jolly (entire book)

Collins and Molyneaux, Chapters 1-3
Bernard, Chapters 3-5
Lasker, Chapters 2-7

Group #1 Discussion Feb 12
Group #2 Discussion Feb 19

Assignment 2 and seminar presentation due on February 26: Research Question (100 points)

**MARCH 4-18:
HYPOTHESES AND TEST EXPECTATIONS**

Reading:
Hall and Howlett, Chapters 5-11
Collins and Molyneaux (entire book)
Bernard, Chapters 6-15
Lasker, Chapters 2-7

Group #1 Discussion March 4
Group #2 Discussion March 11

Assignment 3 and seminar presentation due on March 18: Hypotheses and Test Expectations (100 Points)

**MARCH 25 – APRIL 15:
DATA COLLECTION AND ANALYSIS**

Reading:
Hall and Howlett, Chapters 5-11
Collins and Molyneaux, Chapters 8 and 9
Bernard, Chapters 16-21
Lasker, Chapters 2-8

Group #1 Discussion March 25
Group #2 Discussion April 1

Assignment 4 and seminar presentation due on April 15: Research Methods (100 Points)

**APRIL 4-8
SPRING BREAK**

**APRIL 22:
BUDGETS**

Reading:
Hall and Howlett, Chapter 12

Assignment 5 and seminar presentation due on April 22: Cost Proposal (50 Points)

**APRIL 29:
THE FINAL PROPOSAL**

Assignment 6 and seminar presentation due on April 29: Final Proposal (150 points)

**MAY 6:
PROPOSAL EVALUATION**

Reading:
Hall and Howlett, Chapter 13

Assignment 7 and seminar presentation due on May 6: Proposal Review (100 Points)

**MAY 13:
OPEN OFFICE HOURS (2:00-5:00 PM)**

Pick up and discuss proposals

Assignment #1

Project Research Goals and Analysis of Funding Sources

Throughout this semester we will be working on the development of research designs and budgets for projects driven by explicit research questions. Once completed, your proposals should be suitable for submission to a grant funding agency like the National Science Foundation, the National Geographic Society, and the Wenner-Gren Foundation for Anthropological Research. Your skills in the production of research proposals will be useful in your career whether you are applying for unsolicited research grants or responding to federal or private contract solicitations.

Grants are fundamental to support basic anthropological research. Research grants are offered by many organizations at federal, state, municipal and private levels. Generally, the larger the granting organization, the more they will be able to support. For example, The Wenner-Gren Foundation for Anthropological Research Inc. will not fund research grants over \$25,000 while the National Science Foundation regularly funds projects costing well over \$100,000 (though dissertation improvement grants are capped at \$20,000 plus university indirect costs). Research proposals in this framework must develop and justify a specific piece of research in light of its potential contribution to the discipline of anthropology and as a source of knowledge useful to the general public. Grant proposal review may be accomplished by staff of the funding entity, but more typically is done by peer-review by established experts in the field. Reviewers in this context are expecting state of the art research and can be particularly tough.

Research conducted within a government compliance framework is usually initiated by proposals responding to a Request for Proposal or RFP. This document outlines a very specific piece of research required by that entity which could be funded at levels ranging from several thousand dollars for smaller scale research to mega-projects costing millions. Responses to RFPs are designed to demonstrate how well the investigator understands the project as exemplified by his/her research plan and statement of qualifications. These proposals are generally less difficult to write since the government or private sector entity has already spelled out the goals and requirements of the project. Review of proposals is usually accomplished by a Technical Proposal Evaluation Committee or TPEC made up of staffers within that agency or company. In this context reviewers seek to assess the degree of fit between their needs and the approach outlined in the proposal.

Our focus in the seminar will be on open grant submissions for research. However, whether your proposal is a response to a government initiative or an outline for original research you will need to be able to define and justify research questions. Consequently, this first assignment asks you to develop a research problem and consider some potential funding sources.

Assignment:

1. Develop an anthropological/archaeological research project requiring

anthropological data collection. Your problem should be within a theoretical, methodological, temporal, and geographic framework that is at least somewhat familiar to you. It should also be of a scale that will be appropriate for you to envision completing within one to three years and potentially fundable through multiple sources. **Most critically, you should seek to solve, or at least significantly impact discussions of an important research problem in anthropology (e.g. developing an explanation/understanding of culture change, organization, adaptation, or some other similarly conceived problem).** Ideally, it will include field and laboratory/office data collection and analysis. I *do not* want proposals for teaching and educational assessments, National Register of Historic Places evaluations, data base compilations, rehabilitation of historic places (e.g. buildings and towns), artistic projects, ARPA case evaluations, predictive modeling studies, public education projects, planning studies, needs assessments, or any other project that does not offer the opportunity to increase our understanding of human language, culture, or biology.

2. Find and analyze five potentially appropriate funding sources. Defend your choices by asking how each source is appropriate (consider potential budget, time frames, thematic goals, required expertise levels, and review time). Potential sources can be found in the Mansfield Library, in archaeological and anthropological society newsletters, and online.

The completed assignment will include a short introduction to the research project (one page maximum) and a review of five potential sources (two pages maximum).

Assignment #2

Research Question(s) and Justification

In order to be successful in the grant proposal arena you must have a clearly defined and well-justified research question. This is not as simple as it may sound. Reviewers will be looking for several things. First, they will want to see a clearly defined research question and a justification of the importance of this research. Next, they will want a demonstration that the research context is appropriate for solving the research problem. Then, they will want to know that you, the applicant, are competent in this realm of study. This is usually accomplished by a review of the relationship of the proposed research to currently active or recent research of this nature by yourself and others. Finally, they will need to know that you fully understand all of the issues associated with the research problem. This is especially important for complex research projects integrating multiple data sets. You can demonstrate this understanding in your discussion of research areas or problem domains.

The reviewer will know you are unprepared if you demonstrate a weak understanding of the problem or hypothesis, an inappropriate or shallow justification, a poor context, an insufficient review of current literature, and/or unclear or incomplete review of problem domains. Thus, it is critical for you, as the researcher proposing a new study, to carefully define your problem and place it as essential for future advancement of your discipline. Most granting agencies allow limited space to accomplish these tasks. Therefore, you must be terse in your writing style. This also means that *you must cite critical literature* in your text.

Assignment:

Outline and justify your research project in several parts:

1. Introduce the research project focusing on the question(s) to be addressed.
2. Define the cultural, temporal, and geographic context for this project.
3. Justify the research question or problem in light of current theoretical issues in your discipline. It is here that you demonstrate how this study impacts your discipline at this broader level. NSF calls this **intellectual merit**.
4. Write a short justification of how the project contributes to other societal concerns. NSF calls this **broader impacts**.

Please use *American Antiquity* or *American Anthropologist* style and do not exceed eight double spaced pages (excluding references cited). Please be prepared to present your work for seminar discussion. Expect questions on the research problem and its context, theoretical basis, potential contribution, and its domains.

Assignment #3

Hypotheses and Test Expectations

Once the research problem has been introduced and justified you will be required to outline precisely how you will go about completing the project. Probably the most critical part of your proposal is defining your hypotheses and test expectations. This will provide structure to the rest of your proposal.

Anthropological research projects typically start with clear research questions and are structured by hypotheses. Hypotheses are general statements (not questions) positing potential conclusions about empirical phenomena which for anthropologists might include human organization, evolution, adaptation, history, and the like. Next, good hypotheses will have clear test expectations as in “if Hypothesis A, then expect these data signatures...” This should provide you with expectations as to what you should see in your data to confirm or reject the hypothesis.

Normally, proposal reviewers will be looking for at least a primary hypothesis and a counter-hypothesis. More complex research problems may have more than two alternative hypotheses. Remember, as part of doing research you must enter the process without a clear answer. A famous scholar once said, “Begin the research process by admitting your ignorance!” Hypotheses give you potential answers that you can test for in your research.

Assignment:

Outline the hypotheses and test expectations section for your proposal. Include the following components:

1. Generate at least two alternative hypotheses about your phenomenon of interest. Argue for the importance of each hypothesis.
2. Develop a set of matching test expectations for each hypothesis. Justify these in reference to prior research.

Please use *American Antiquity* or *American Anthropologist* style and do not exceed 5 double spaced pages (excluding references cited)

Assignment #4

Research Methods

One of the most critical components of any proposal is the description of proposed methods to be used in accomplishing project tasks. The prospective researcher must not only offer an excellent project description and proposed theoretical basis, but he or she must also provide the link between the general theoretical problems and the proposed methods for accomplishing project objectives. In this way the reviewers learn about the scholar's theoretical orientation, proposed field and laboratory methods, the expected project results, and the overall benefits of utilizing this approach.

Once hypotheses and test expectations (previous assignment) have been made clear then methods of data collection (including use of measuring instruments*) should be explicated. There should be a logical flow from research problem to hypotheses and test expectations to data collection methods. All proposed methods must be justified by either new methodological research or, more typically, by citing published methodological research that offers that justification.

The methods section provides the final link between hypotheses and the development of final conclusions and recommendations. Most critically, it is here that the proposal must clearly state what data are to be collected and how meaning will be assigned to the collected data. Archaeologists will need to discuss specific field techniques and laboratory analyses designed to generate data from such things as artifacts and features. Socio-cultural anthropologists are normally able to directly examine their field data using qualitative and/or quantitative tools.

Assignment:

Please write a Proposed Research Methods section. Be sure to use the project description, theoretical concepts, hypotheses, and test expectations outlined in your previous assignments as the basis for this assignment. For purposes of this assignment, methods will include **field data collection and lab/office analysis of materials and data collected in the field**. Therefore, you need to be concerned in particular with the nature of data to be collected, analytical and inferential procedures, and final reporting.

The assignment should be typed, doubled spaced, in *American Antiquity* or *American Anthropologist* style, and limited to no more than seven pages. Please be prepared to present this assignment for seminar discussion.

*Measuring Instruments. We accomplish our field and laboratory data collection for hypothesis testing through the development and use of instruments or techniques for measuring variability in the empirical world. Since anthropological research questions are wide-ranging we rely upon an equally wide array of instruments for making sense of our world. Social anthropologists often depend upon questionnaires and personal

interviews to assess such things as health history, beliefs, or social relationships. Archaeologists use such things as surveys, excavations, and a barrage of laboratory techniques like assignment of artifact types designed to measure aspects of past behavior. Archaeologists and physical anthropologists also rely upon actual physical instruments like calipers or scales.

Regardless of the type of instrument used in data collection, all researchers must be concerned with the data consistency or reliability and data accuracy or validity. In other words, before any meaning can be assigned to data, the researcher must know that the instrument itself is not providing spurious results. An unreliable instrument will produce data patterns that are hard to interpret due to excessive random error embedded within the measurements. In contrast, a reliable instrument will not be unduly affected by random error and will therefore have a better chance to reflect the phenomena of interest. However, a reliable instrument is still not necessarily valid. Validity can only be achieved if the instrument actually measures the phenomenon of interest in a theoretically logical way. So, for example, poor performance on a math test should reflect poor knowledge of the material; or, an old radiocarbon date in an archaeological site should reflect an old human occupation.

Measuring instruments are defined and tested in methodological research. To accomplish this, we apply new instruments to well understood phenomena. If the instrument provides reliable and valid measurements from which we can draw defensible inferences then we will tend to accept that instrument. Sometimes a new research project will be predicated on trying out a new measuring system or substantially refining an older one. Part of the proposed research may include a test of the instrument itself. This is accomplished in many disciplines with a pilot study. Looking at a smaller subsample allows the researcher to test the method for reliability and validity prior to expending the larger effort. For archaeologists, methodological research may include experiments or ethnoarchaeology where new instruments are tried out under conditions whereby the researcher knows what processes led to the formation of the archaeological record.

Assignment #5

The Cost Proposal

The cost proposal is an integral component of any complete proposal. First, cost proposals provide prospective grantees with the opportunity to further demonstrate their knowledge and potential effectiveness in pursuit of the proposed research. Second, cost proposals provide the opportunity for researchers to cover their costs of completing project work as well as associated overhead, fringe benefits, etc.

Assignment:

Please write a cost proposal utilizing project assumptions developed in your technical proposal.

Please provide:

1. Salary rates per employee class; fringe benefit (can include Workman's Compensation Insurance, Health Insurance, retirement benefits, etc.) rates; indirect or overhead rate; profit (if applicable); and travel rates (per diem, lodging, vehicle mileage)
2. Expected hourly or daily time requirements by employee class (add up total costs)
3. Expected travel: Number of days/nights requiring per diem and lodging (add up total costs)
4. Expected mileage and other travel expenses
5. Subcontract Costs (if necessary): radiocarbon dating, faunal analysis, historical research, etc.
6. Expected ancillary costs: supplies, communications, photocopying, etc.

Clearly, much of this information could only be derived from a cost accounting analysis of your business or institution. Therefore, for purposes of this assignment you can estimate/invent cost factors (i.e. overhead or indirect, mileage rates, etc.). The primary purpose of this assignment is to provide you with experience in linking proposed research activities with budget parameters. Please provide your best assessment of what you think the project might actually cost (given your assumptions outlined above).

Please add all direct costs (labor, travel, lab. analyses, other expenses). Then add overhead or indirect cost by multiplying overhead or indirect percentage rate against total direct or total labor costs – your choice).

Items 1-6 can be presented in tables depicting complete cost breakdown for project. Notes should accompany the tables for clarification of specific cost items and justifying any assumptions made in budget preparation.

Please be prepared to present this assignment for seminar discussion. Expect questions regarding the relationship between project research requirements, time and labor allocation and expected project costs.

Assignment #6

The Completed Proposal

This assignment will allow you to integrate your previous assignments in order to produce a complete proposal. The completed proposal should clearly demonstrate your ability to successfully complete the proposed work. Excellence is critical as the proposal may be the only exposure reviewers will have to you.

A few pointers on final proposal preparation: Appearance and organization count. Make sure that there is a clear flow from (1) Project Summary, a maximum two page (double spaced) outline of the project that makes the case for its **intellectual merit** and **broader impacts**; (2) introduction (project goals, context, and importance); (3) research design (hypotheses, test implications, field/lab methods, summary statement emphasizing intellectual merit and broader impacts); (4) references cited; and (5) appendices (if necessary). The entire proposal **will not be longer than 22 pages double spaced** (excluding references cited and budget).

Please include the following: (1) complete technical proposal; (2) complete cost proposal.

In our next assignment we will exchange proposals and shift our focus back to that of the reviewer. To facilitate this process, please bring **two copies** of your complete proposal and budget (one for exchange and one to hand in).

As always, please be prepared to present this assignment for seminar discussion. Expect questions regarding the project research requirements, time and labor allocation, predicted project costs, and your actual bid.

Assignment #7 Peer Review

This assignment asks you to participate in peer review. Peer reviews provide funding agencies with critical input regarding the quality of the proposed research and subsequent advice as to whether or not it should be funded. As a reviewer you have the opportunity to help shape the direction of the discipline by affecting funding streams and publications.

As a reviewer, you will need to consider three key areas: First, does the proposed research have intellectual merit. Does it offer significant contributions to important anthropological discussions? Second, what is the broader impact of the proposed research? Will it result in a substantive contribution to knowledge? Will it offer educational benefits to current and future generations? Is the methodological approach adequate to address the problem? Finally, is it cost-effective?

Assignment:

Provide a short (no more than 2 pages double spaced) peer-review of a proposal generated by another seminar participant. Provide a concise assessment of the following factors in light of NSF review factors (see below):

1. Research significance (intellectual merit and broader impact)
2. Cost-effectiveness

From NSF (https://www.fastlane.nsf.gov/jsp/homepage/prop_review.jsp)

1. What is the potential for the proposed activity to:
 - a. advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - b. benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?

5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?