Anthropology 636: Preparing Grant Proposals

Instructor: A. Rogers

Fall 1994

1 Nuts and bolts

Class meets: Mon 1–4PM in 103B Stewart Hall

Office hours: 11–12 Tue, Wed in 206a Stewart Hall

Grading: Proposal: 80%, Class participation: 20%

Sources of information

On grants

1. [1]NSF. *Grant Proposal Guide.* Essential. Xerox the copy on reserve in the department office, download a copy using Gopher (see below), or ask NSF to send you a bound copy.
2. [1]*Application for Public Health Service Grant.* Basic reference for preparing proposals to NIH.
3. [1]University of Utah. 1989. *Principal Investigator's Handbook.* Contains little information on preparing proposals, but lots on submitting them and on administering grants.

On writing

1. [2]Strunk, W., Jr., and E.B. White. 1979. *The Elements of Style*, 3rd Edition. MacMillan, New York. About writing clearly. Know this by heart.
2. [3]Day, Robert A. 1994 *How to Write and Publish a Scientific Paper*, 4th edition. Oryx Press, Phoenix, AZ. Also useful, since grant proposals are similar to scientific papers.
3. (a) [2]Fowler, H.W. 1965. *A Dictionary of Modern English Usage*, 2nd edition. Oxford University Press.
   (b) [2]Follett, Wilson. 1966. *Modern American Usage.* Hill & Wang, New York.

   Useful reference works on questions of English usage. Look here to learn the difference between "which" and "that," or to find out what I mean by "sociologese" and "abstractitis."

[1]on reserve in the department office.
[2]at the General Reference Desk, Marriot Library
[3]on reserve at Marriot Library

4. [2]University of Chicago Press. 1993. *The Chicago Manual of Style*, 14th edition. University of Chicago Press. Every person who writes needs a copy of this book.

On sample size

1. [3]Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*, 2nd ed. L. Erlbaum Associates, Hillsdale, NJ. HA29 .C66
2. Hintze, J. 1991. *The SOLO Statistical System: Power Analysis.* BMDP Statistical Software, Los Angeles.
3. [3]Kraemer, H.C. 1987. *How Many Subjects?* Sage Publications, Newbury Park. Q180.55 .S7 K73

2 Syllabus

Class meetings will include (1) occasional lectures as indicated below, (2) mock NSF panel meetings, and (3) discussion of old grant proposals that I will place on reserve.

Sep 26 (1) Overview. (2) Research questions.

Oct 3 *Turn in three copies of a 3–5 page grant proposal on an assigned topic.* These proposals will be distributed to other class members for review.

Oct 10 Mock NSF panel meeting.

Oct 17 Students will describe in class the proposals they plan to write. *Turn in outline of proposal.*

Oct 24 Lecture: The Institutional Review Board.

Oct 31 Lecture: Budgets. *Turn in 1st draft of grant proposal. Use NSF format, but do not exceed 10 pages.*

Nov 7 Open

Nov 14 Lecture: Power analysis. *Turn in 2nd draft of grant proposal. Same format.*

Nov 21 Student presentations

Nov 28 No class: Thanksgiving recess

Dec 9 Student presentations *Turn in final draft of grant proposal. Same format.*

No final

3 Writing clearly

Good prose is simple. Many proposals fail because their authors adopt an abstruse prose style, presumably in order to convince reviewers that they are literate. Here is an example taken a review of an NSF proposal. (I have deleted several proper nouns to maintain the author's anonymity.)

> I found this proposal very difficult to read and understand, although I don't think it is because the ideas are inherently difficult. I would like to encourage the authors to re-read Strunk and White's *The Elements of Style*, and take its messages to heart.
>
> To see the nature of the problem, take the very beginning of the project summary:
>
> Second sentence, as written: "Previous research has shown the nutritional consequences of these taboos to be associated with reduced fertility among horticulturalist women."
>
> Second sentence, suggested rewrite: "We have found that women who follow these food taboos have reduced fertility because of poor nutrition."
>
> Third sentence, as written: "A second survey of taboo-related beliefs from proposed fieldwork should provide an empirical baseline from which to calculate the rates and direction of socio-historical evolution in this belief system."
>
> Third sentence, suggested re-write: "We would like to re-study food taboos, to see how they have changed."
>
> (The very first sentence is just as bad, but I am not suggesting a re-write because I don't know what it means).
>
> It is an *enormous* effort to plow through prose like this. Please give your readers a break, and write in simple, active prose. The problem of prolixity exists at the level of paragraphs and sections, also. The proposal could easily be cut in half, with great improvements in clarity.

These passages illustrate what Fowler (*Modern English Usage*) called "abstractitis" and "sociologese":

> **abstractitis** The effect of this disease, now endemic on both sides of the Atlantic, is to make the patient write such sentences as *Participation by the men in control of the industry is non-existent* instead of *The men have no part in control of the industry; Early expectation of a vacancy is indicated by the firm* instead of *The firm say they expect to have a vacancy soon; The availability of this material is diminishing* instead of *This material is getting scarcer; A cessation of dredging has taken place* instead of *Dredging has stopped; Was this the realization of an anticipated liability?* instead of *Did you expect you would have to do this?* And so on, with an abstract word always in command as the subject of the sentence. Persons and what they do, things and what is done to them, are put in the background, and we can only peer at them through a glass darkly. It may no doubt be said that in these examples the meaning is clear enough; but the danger is that, once the disease gets a hold, it sets up a chain reaction. A writer uses abstract words because his thought are cloudy; the habit of using them clouds his thoughts still further; he may end up by concealing his meaning not only from his readers but also from himself, and writing such sentences as *The actualization of the motivation of the forces must to a great extent be a matter of personal angularity.*

> **sociologese** . . . Sociology is a new science concerning itself not with esoteric matters outside the comprehension of the layman, as the older sciences do, but with the ordinary affairs of ordinary people. This seems to engender in those who write about it a feeling that the lack of any abstruseness in their subject demands a compensatory abstruseness in their language. Thus, in the field of industrial relations, what the ordinary man would call an informal talk may be described as *a relatively unstructured conversational interaction*, and its purpose may be said to be *to build, so to speak, within the mass of demand and need, a framework of limitation recognized by both worker and client.* This seems to mean that the client must be persuaded that, beyond a certain point, he can only rely on what used to be called self-help; but that would not sound a bit scientific. . . .
>
> There are of course writers on sociological subjects who express themselves clearly and simply; that makes it the more deplorable that such books are often written in a jargon which one is almost tempted to believe is deliberately employed for the purpose of making what is simple appear complicated, exhibiting in an extreme form the common vice (see ABSTRACTITIS) of preferring pretentious abstract words to simple concrete ones.

Sociologese, I should add, afflicts anthropology as much as sociology.

4 How to write a grant proposal

Your grant proposal must convince its reviewers that your research is feasible, and will answer some interesting question(s). The shorter and clearer you make it, the better its chances will be.

As they read your proposal, your reviewers will try to answer the following questions:

1. What activities are being proposed?
2. What question(s) are these activities intended to answer?
3. Are these questions interesting?
4. Are the proposed activities feasible?
5. Would they really answer the questions?

Don't include anything that does not help the reviewer answer one or more of these questions.

4.1 Outline of a proposal

Each funding agency has its own conventions concerning the organization of grant proposals. The following outline is appropriate both for NSF and NIH, apart from some minor differences regarding the titles given to particular sections.

4.1.1 Summary

The proposal begins with a one-page summary, which should summarize the activities to be performed, and the questions to be answered.

4.1.2 Response to prior reviews

This section is needed only when you are re-submitting a proposal that was not accepted the first time around. It should list and answer each objection to the previous proposal.

4.1.3 Prior NSF support

If you've been the Principal Investigator on any NSF-funded projects within the past five years, describe those projects here and include a list of publications that acknowledge the grant.

4.1.4 Specific Aims

List the activities to be performed (in general terms) and the questions to be answered.

4.1.5 Background and Significance

Explain why the research questions are important. This often requires a literature review, which shows that people are interested in the questions that your research will answer. For example, if you plan to find out whether the toenails of chimpanzees are longer than those of orangutans, it would help to show that people have argued about this issue in the literature. Otherwise, your reviewers may ask: Who cares?

But do not use this section as an excuse to parade your knowledge—don't include any discussion of literature that does not help establish that your research is important.

Make the purpose of your literature review clear. For example, as you review the literature on primate toenails, be sure to point out that your research will resolve the ongoing debate.

4.1.6 Preliminary studies

This section has a single purpose: to show that your research is feasible. It contributes to this goal in two ways.

It shows that you are competent. If you are proposing to measure primate toenails, then you should describe here any previous experience you've had measuring toenails, or dealing with primates, or doing statistical analyses of the sort your new study will require.

It introduces relevant data. Preliminary research is often a small-scale version of the proposed project. For example, suppose you have done a preliminary study of primate toenails, involving small samples of chimpanzees and orangutans. With this data, you estimated the means and variances of toenail length in the two species. Because of the small sample, none of the differences were significant. Nonetheless, the preliminary study is useful in two ways: (1) It shows the reviewers that you are capable of carrying out the proposed activities. (2) It gives a crude idea of the magnitudes of the mean and the variance in each species, and this will enable you (in a later section) to figure out how many chimps and orangs must be included in the sample of the proposed study.

If you have published anything relevant to the proposed research, describe them briefly in this section and include the publications as appendices.[1] Published work helps establish your credibility

[1] NIH only; NSF no longer allows such appendices.

as an investigator.

Omit this section if you have not done any preliminary research.

4.1.7 Research Design and Methods

This section describes the proposed research in detail. As you write this section, concentrate on helping the reviewer answer questions 1 (What activities are being proposed?) and 3 (Is the work feasible?). This section falls naturally into several subsections, as discussed below.

Data Convince the reviewer that the data you propose to study is adequate for your purposes, and that you have access to it. If you are going to the field, then describe your field site, and show that you have permission to use it. If you will analyze existing data sets, then describe them and show that you have permission to study them. Include relevant documents as appendices, and refer to those here.

Sampling How large will your sample be? Convince the reviewer that (a) your sample is large enough, and (b) it is not too large. This will ordinarily require a statistical power analysis.

Data collection What methods will be used to collect your data? Convince the reviewer that they are appropriate and feasible.

Data analysis What manipulations will be performed on the data (a) in the field, (b) in the lab, and (c) what statistical methods will be used?

Do not merely list the statistical methods that you plan to use. Instead, organize your discussion around the questions that your research will answer. I do this by listing the research questions once again in the "statistical analysis" section. Under each question I describe the statistical methods that will be used to answer that question. This shows the reviewer not only that each statistical method is appropriate, but also that each research question has been answered.

4.1.8 Schedule

This section tells the reviewer how long you plan to spend on each activity. If you fail to allow enough time for some activity, the reviewer may conclude that the project is not feasible. If you allow too much time, the reviewer may suggest that the budget be cut. Make the best estimates you can, and justify these if possible. It helps to say such things as "In my previous research, measurement of primate toenails has required two minutes per toe."

4.1.9 Budget

Use the forms provided by the funding agency to summarize your project's costs. Justify each budget entry in an attached section titled "Budget justification".

4.1.10 Appendices

Read carefully what your funding agency says about appendices. Material that is allowed by one agency may be forbidden by another. You will probably need one appendix for letters of collaboration from people who have agreed to help with your project. If you are submitting to NIH, you should also include any relevant publications of your own as appendices, and refer to these in the "Prior research" section. This helps to establish your credibility. NSF no longer allows such appendices.

I have also included papers that were still under review. However, I have never been funded when I did so.

Don't put essential material into appendices. The reviewer should be able to read and understand the proposal without reading appendices.

4.2 Miscellaneous suggestions

1. Keep it simple.
2. Where you cannot keep it simple, try to keep the text simple by putting technical details into footnotes.
3. Don't provide an extended discussion of theory or literature that does not help answer one of the four questions listed above.
4. Don't propose to collect data or to perform analyses (or to do *anything*) not clearly related to the objectives that you listed under "Specific Aims".
5. Inveigle famous scholars into serving as consultants. They will increase the credibility of your proposal. This is especially important for young investigators who have yet to establish a track record.
6. Mention each consultant in the "Project Description," and include a letter from each in the appendix. Do not include consultants who failed to provide letters.
7. Be aware that consultants cannot serve as reviewers. If you include every specialist in your field as a consultant, there will be no one left to review the proposal.
8. If you suspect that Joe Schmoe will give your proposal a hostile review, then it is in your interest to include Schmoe as a consultant.
9. Don't exceed the page limit.
10. Don't cheat on the page limit by using type smaller than 10 point, margins smaller than 1 inch, etc.
11. Text is harder to read if there are too many characters on each line. One-inch margins are fine with 12 point type, OK with 11 point type, but are not a good idea with 10 point type.