### How Not to Get a DDRI Award



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Editor's Note: The Fall deadline for submission of full Doctoral Dissertation Research Improvement (DDRI) proposals to the Geography and Spatial Sciences (GSS) Program is the second Thursday in August each year (August 13, 2015). Learn more.

1) Construct a narrowly focused case study of process in a small community in a faraway land, emphasizing its uniqueness. The case will be of interest to a few others who work in the same area.

An acronym has been developed for these projects, "WISC" (Wallowing in a Specific Case). The GSS program and NSF in general does not prioritize support for WISCy proposals as it needs to support research that generates new knowledge more broadly and with relevance to US society.

2) Provide a clear statement about what the proposal is about only deep within the Project Description because the background is really important and the objective of the study can't be understood until that background is provided.

Realize that many DDRI reviewers are reading 12-18 proposals and are often reading proposals late at night. You need to grab them right away, in the opening paragraph, to tell them what the project is about and why it is important. Then you can provide the background and literature review before focusing in on methods and data analysis.

3) Write a jargon-filled dense proposal, steeped in the latest theory from your most recent graduate seminar that is only understandable to the few people out there who are within your narrow subfield.

Review panels consist of well-rounded geographers and spatial scientists some of whom may be from your narrow area well. NSF does its best to have your proposal be reviewed by people who know your area; however the reality is that most reviewers will more likely not be directly from your subfield. This makes it really important that you write a proposal that is readable to a broad audience as well as attending to adequate detail for experts. In order to prepare for this, share drafts with people from both within and outside your subfield so ensure comprehension.

4) Provide an excessively long list of research questions and/or sub-questions or hypotheses to be tested just to be sure you are covering all bases.

It is best to focus on a limited and tight set of research questions or hypotheses. This, especially when tightly integrated with methods and analysis, provides reviewers with much greater confidence that the project is feasible.

5) Take the "everything including the kitchen-sink" approach to methods to be used without any indication of how the various strands of data will be integrated or how all that data will be analyzed in order to answer research questions.

The selection of methods needs to be carefully thought-through as to how and why those are the best methods to answer the stated research questions or test the posed hypotheses. Justify your chosen methods and provide citations for them.

6) Spend only a paragraph or two on data analysis and declare that your data analysis will consist of entering field notes into NVivo or that you will perform some statistical analysis.

Most proposals are declined because insufficient information is provided on data analysis. Many proposals spend a lot of space on literature review, theoretical framing, and, sometimes, on methods, but much too little on analysis.

Don't do this. Competitive proposals develop a comprehensive data analysis plan in which statistical analyses are specified and details provided on coding mechanisms to be used in NVivo or other software package. Also be sure to tie the data analysis back to your research questions or hypotheses.

### 7) Include language specific to Intellectual Merit and Broader Impacts in the Project Summary but then not discuss Intellectual Merit and Broader Impacts in the Project Description.

Note that Intellectual Merit and Broader Impacts are the basis of review criteria at NSF and these are the aspects that reviewers/panelists are asked to evaluate your work by. Become familiar with what NSF means by these and address how your proposal addresses both these in the project description as well as the summary.

### 8) Ignore Broader Impacts, especially in the way that NSF sees these.

Your advisor might have said "don't bother with Broader Impacts, they don't matter" and that might have been the case in the past, however, this has changed a lot, and you need to read carefully about what is meant by Broader Impacts, and think creatively about how your research might contribute to society. Recall that NSF is a US taxpayer funded federal agency and is overseen by Congress; therefore, where possible, find a way to highlight how your research and findings might have some impact on or relevance to US society. It does not mean that you have to do this in the project, but you need to think of how the new knowledge generated in your project could be used to benefit society.

# 9) If submitting a proposal for the second time, don't pay any attention to suggestions that reviewers made because it is clear that the reviewers simply didn't understand your fabulous project.

Even though a resubmitted proposal is treated as a new proposal, some reviewers who read it before will read it again and remember, and might note that you did not respond to suggestions from the last time. Realize that reviewers provide feedback to let you craft a stronger proposal. Despite this, for GSS it is generally best to avoid including a statement explaining what you did, just do it, and use the space for more important information.

### 10) Include a sloppy, incomplete, poorly, and inconsistently formatted References Cited section figuring that reviewers don't look at it.

Many reviewers turn first to the references cited section to know, at a glance, what the literature is that you are drawing from. Also, it simply does not look good if you have left out key references, or if these are referenced poorly. Attention to the detail of an accurate References Cited section reflects well on your ability to be attentive to detail, which helps assure reviewers that you are capable of executing the project.

# 11) Ignore your own positionality in research in which this might affect access to certain populations and how it might impact the research process itself.

It is important to note this if relevant. Reviewers need to assess the viability of your project and this is a component that might affect that.

### 12) Declare that your project is the first ever to research what it is you are doing.

You may believe so given your literature review that is mostly internet-based, however buried somewhere in a dusty library might be something similar. It is best to emphasize what is new and fresh about your work, not that it is the first ever.

You might be surprised at how many decisions about your proposal are made that rely only on the title. It is best to use a clear declarative title.

#### 14) Provide poorly rendered maps and figures that are so small that that they are illegible.

Many maps included in proposals are quickly generated using a GIS and are almost meaningless. You are submitting to the Geography and Spatial Sciences Program, so consider proper cartographic conventions and design. Only include legible figures and only if they add to the narrative.

# 15) Use the smallest and densest font available, and leave no spare lines of white spaces in order to cram as many words and sentences into the 10 pages of the project description.

Do pay attention to the look and flow of the proposal; 'style' matters. You want to draw the reviewer's eyes to the key points, without cluttering their view with too much bold and underlining. Definitely include spaces between sections so that you proposal breathes. Recall that reviewers are often reading these late at night when they are tired and you don't want to irritate them by making the reading hard.

# 16) Provide a Data Management Plan (DMP) that does not follow the current NSF format and does not indicate clear plans for long-term data access and archiving plans using institutional data repositories.

DMPs are a relatively newer additional to the proposal and many advisors remain unaware of their importance and the need to comply with the format. Publicly funded research, such as that by NSF, needs to have data generated with its funds to be made available to the public (that which is not projected under IRB). Careful attention to this demonstrates that you are careful with details and follow directions. Note – keeping data on a "secure hard-drive" and stating that "data will be made available upon request from the co-PI" are no longer adequate. Inquire with your institution as to what they have available for long term data storage and curation.

### 17) Use a hypotheses-testing research design when a research question approach is more than adequate.

Do not force your research into a hypothesis-testing format if this is not necessary for your research design. Much research funded by NSF does not involve testing hypotheses, but you do need to clearly construct a set of research questions and then provide clear methods and data analysis to answer these.

### 18) Propose doing research in a country in which you will need to speak another language and have no evidence of having learned that language or propose no plans (or budget) for the use of translators.

Preparation for fieldwork needs to be demonstrated via preliminary or other means. Do not be afraid to discuss how you have achieved cultural competency to work in a foreign place. This provides reviewers with assurance that the project is viable. If you need to use translators, be sure to budget for these and address the challenges of the need to work with them.

### 19) Use whatever indirect rate your institution's Sponsored Research Office (SPO) tells you must be used.

If your proposed research is to be conducted away from the main location of your university, be sure to inquire if there is an "off-campus" indirect rate that can be applied to your proposal's budget. This rate is usually lower and would provide more money for the actual research. Busy budget people sometimes forget to consider this.

### 20) Use language such as "I will explore the such and so in place xyz."

The verb "to explore" comes across as too preliminary for some reviewers. For NSF better verbs to use are action verbs such as "to analyze" or "to investigate."

#### 21) Avoid dealing with alternative scenarios regarding the viability of your data collection plans.

Many DDRI applicants are doing research in foreign places with groups and individuals that may or may not be open and accessible to planned data collection when it is actually tried. Outlining a Plan B, i.e. alternative ways of accessing data you need in order to answer you research questions, shows that you have really thought through your research design and have tempered your plans with a dose of realism.

### 22) Rely on your advisor for all answers to your technical questions about NSF GSS proposal submission.

Advisors may know the answers, but many things change at NSF, including due dates and necessary parts to proposals. Do not rely on old habits that may no longer be current practice. Be sure to read carefully through the website and the solicitation for GSS DDRI proposals yourself. Also do not hesitate to contact the program officers; they can answer any questions you might have. Use this handy email address, gss-info [at] nsf [dot] gov.

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The opinions expressed in this document are those of a former Geography and Spatial Sciences Program Director at NSF who is not working at the agency at the time of writing. Any opinion, finding, conclusions, or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation (U.S.A.).