

UNDERSTANDING THE NATIONAL SCIENCE FOUNDATION CAREER AWARD PROPOSAL
GENRE: A RHETORICAL, ETHNOGRAPHIC,
AND SYSTEM PERSPECTIVE

by

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The research focused on a study of two key subjects: 1) a corpus of 20 texts that included 12 funded proposals and 8 unfunded proposals from across NSF programs, and 2) an ethnographic analysis comprised from interviews with 14 NSF program officers (PO) from varying programs. This work answered the overarching research question, “What are the factors that lead to a successful CAREER proposal? Are they conventionally textual, content, rhetorical, or more systemic (both genre and/or social oriented)?”

As required by NSF and as established in these findings, addressing intellectual merit appropriately is critical to securing any funding. Including specifically detailed plans that outline broader impact (both direct strategies and tertiary outcomes) is absolutely necessary. Accomplishing all that through effective use of rhetorical and generic strategies can help provide the edge a researcher needs to increase likelihood of being funded by NSF. Identifying and understanding what those strategies are and knowing how to incorporate them into the writing of a fundable proposal, of course, remains the challenge. This study’s findings shed clarifying light on many of those strategies that include the following recommendations.

- Proposing research that moves in creative, innovative directions
- Emphasizing a sufficiently detailed education and overall project plan
- Including meaningful engagement with underrepresented groups
- Developing integrated education activities that go beyond the conventional, the expected, and the pedestrian
- Aligning one’s research with collaborators as appropriate
- Formatting document design deliberately with rhetorical intent to help navigate, emphasize, highlight, etc.
- Using graphics judiciously and with attention to good design (i.e., anticipating and accommodating readers’ needs)
- Avoiding leaving assumptions about the project plan up to reviewers conclusions

From a rhetorical analysis and relative to the proposal’s project content, the first key finding was that a CAREER proposal writer should take seriously the requirement to integrate a detailed, innovative *education plan and activities*. The successful proposals from this study’s corpus averaged **four distinct education activities and predominately integrated those activities and the research into coursework**. As regards treatment of NSF priorities, successful proposals also meaningfully incorporated underrepresented groups into research activities at a much higher rate than unfunded proposals.

Where rhetorical and genre analysis meet in this regard, findings showed that 92% of studied proposals included a dedicated education plan section with its own heading. Findings from this part of the study also demonstrated that, overwhelmingly (more than 90%), successful proposal writers emphasized

their *collaborative efforts* as well as the *novel and exigent* nature of their research. From a purely generic, conventional perspective, a conglomerate picture emerged from among the proposals in the study corpus of features most expected by reviewers, which include the following: non-complex graphics, captioned with figure/table numbers, standing alone in text (i.e., not text wrapped), and referenced in the proposal's text; 11 pt. serif font; italicized key words in the text (but not overly applied); bottom center pagination; one inch margins, right justified; and bolded, numbered (e.g., 2, 2.1, 2.1.1, etc.), non-contrasting font style headings of varying sizes for varying levels. Further, Figure 8 illustrated the ideal structural format for proposal sections, their headings, and their related content.

The next set of research questions revolved around identifying influential variables that affect the funding process (and potentially funding success). I wanted to know if those who actually work inside the granting system and make funding decisions (i.e., program officers) could provide insight on the former question. As the study progressed, it revealed that POs could not only provide invaluable insight, but that they were also part of those influential variables. The interviews with POs and resulting ethnographic sketches in particular gave a peek into the collective mind of POs at NSF.

A key revelation from chapter 5 is that NSF is not a large impersonal entity—and that includes POs as well as the reviewers they assemble to help facilitate the review and funding process. On the contrary, the POs, personally, have collective concerns and priorities that translate into social interactions and personal facilitation that is accessible to investigators. Having said that, PIs must be sensitive to the fact that, just as themselves, POs and reviewers have enormous constraints on their time, and the more PIs irritate them through violations of conventional expectations and bad rhetorical moves, the further down the review scale PIs will slide.

The program officer ethnographic sketch also confirmed some already known—and revealed some new—common mistakes proposal writers make and outlined best practices to avoid those as viewed from inside the system (which answers the final research question about identifying proposal writing best practices). The most egregious of the common mistakes include not acknowledging or framing the research within the community's literature, not paying attention to NSF prescriptive documents (e.g., GPG), and committing a variety of writing and mechanical transgressions.

Interviewees' larger focus, however, was on proposal writing best practices, which included stating objectives clearly and up front, giving fair treatment to the community's literature, and identifying the correct program for submission (something POs can obviously help with, yet so few PIs avail themselves of). As a cure to the variety of mechanical transgressions, POs overwhelmingly suggested engaging a variety of other player-agents who can exert additional positive influence on the proposal. Working with the other player-agents includes mentors, readers, and other grant system professionals (e.g., at workshops) as well as a PI herself serving as an NSF reviewer to get a more clear inside view.

If researchers pondering how to best participate in the NSF funding system were to read this work and take only one thing from it, I hope it would be the paramount importance of developing a relationship with their PO. Researchers must recognize that the PO is a key and extremely influential player in the larger research community and a gatekeeper for funding within the NSF system. The advantage of face time (or phone time or email time) with the PO is the ability to move that player-agent's influence into the PI-dominated transformative locale and to apply her play scenarios on the PI's behalf.