

Interviewing Schrödinger's Cat

Copyright 2012 Academic Research Funding Strategies. All rights reserved.

By [Mike Cronan](#), co-publisher

([Back to Page 1](#))

Ambiguity introduces significant uncertainty into the research narrative, although ambiguity in the narrative does offer one certainty—***an unfunded proposal***. This is because ***ambiguity in the project description imposes unwanted riddles*** on program officers and reviewers alike that may lead them to believe reading the research narrative is an experience somewhat akin to attempting to interview [Schrödinger's Cat](#) without opening the box to determine its state, either dead or alive. However, narrative ambiguity exists in only one state—***confusion***.

Ambiguity originates from many sources, including ambiguous solicitations and researchers' ambiguous readings and understandings of a well-crafted solicitation, the latter being the most common source. Ambiguity may also originate at the interface between the agency's research vision, goals, and objectives and your research expertise and research interests. Ambiguity may arise when your research expertise does not map well to the agency mission priorities, or when you engage in some wishful thinking and try to force fit your research expertise and interests to an agency solicitation, or when you ignore the agency research interests and put yours forward in hopes the program officers and reviewers won't notice the mismatch.

As the physicist Richard Feynman once commented, "*The first principle [in science] is that you must not fool yourself - and you are the easiest person to fool.*" This is also sage advice to follow when you are tempted to view a solicitation as a mirror of your own interests rather than as a reflector of the agency's interests.

Unfortunately, ambiguity in the proposal process is like Whac-A-Mole, raising its ugly head throughout the proposal landscape. Ambiguity has the potential to lurk in every crook and cranny of a proposal, and eternal vigilance is needed to root it out, ensuring that it doesn't metastasize throughout the project description. ***Regrettably, ambiguity is a scalable scourge.*** It can infect an abstract, a project summary, a section of a proposal, or the entire proposal. Larger proposals, partnership proposals, and proposals with multiple PIs representing multiple disciplines can often be a spawning ground for ambiguity. It is entirely appropriate in ***writing and editing a proposal narrative*** to adopt a rallying cry as strongly felt as the "Live Free or Die" motto seen on New Hampshire license plates. Perhaps "***Eradicate Ambiguity!***" would suffice for the research development and grant writing personalized license plate.

Other favorite hiding places of ambiguity include proposal planning and development meetings, proposal outlines and templates, draft narrative sections, emails among participants, visuals and graphics to amplify the text, as well as wherever communications among proposal team members takes place, regardless of team size. In fact, ambiguities are the grant writing equivalent of termites in wood, silently and relentlessly destroying the structural fabric and logic of the proposal narrative.

If this problem is not identified and corrected prior to submission, program officers and reviewers, who in this case can be seen as inspectors called in to examine your proposal, will

Research Development & Grant Writing News

determine that, unbeknownst to you but obvious to them, your proposal is “full of holes,” created by linguistic termites identified as various species of the genus “*ambiguous*” and thereby to observe that your proposal needs an “ambiguity exterminator” to correct the problem if a resubmission is being considered.

Of course, the two arch enemies of ambiguity are simplicity and clarity, keeping in mind Professor Albert Einstein’s observation: “*If you can't explain it simply, you don't understand it well enough. Most of the fundamental ideas of science are essentially simple, and may, as a rule, be expressed in a language comprehensible to everyone.*” Unfortunately, some authors consider ambiguity as evidence of their own brilliance, making it difficult to suggest that clarity is needed where the author sees only dazzling prose (See *Observations on Critiquing a Proposal*, March 15, 2012). Very rarely does the ambiguity in a research narrative approach the heady sort described by the late physicist John Wheeler-- “*If you are not completely confused by quantum mechanics, you do not understand it.*” A more apt guideline will suggest that if reviewers are even slightly confused by your proposal, they will not fund it. Reviewer confusion is the progeny of ambiguity in the research narrative. Moreover, ambiguity is a function that defies narrative integration and synthesis, two key characteristics of successful proposals.

Given the above, the best way to expunge ambiguity from a project narrative is to first clearly understand the expectations of the research sponsor as defined in the solicitation, and then draft an organizational template and outline of the project description to guide your writing of draft iterations. Use the template as both a guide and a prophylactic, or linguistic vaccine, to prevent ambiguity from occurring rather than trying to treat it after it has infected a completed proposal.

In many cases, ambiguity can arise in proposal development meetings, or afterwards, as in the children’s “telephone game” in which one person whispers a message to another, passing stepwise around a circle of people until the last player announces the message to the group. Invariably, errors accumulate in the retellings, so the statement announced by the last player differs significantly from the original. Team meetings, particularly ones where so-called brainstorming is encouraged, are fertile ground for ambiguity. In part this is because verbal communication lacks the permanence and logical structure of written language, and so has a half-life measured in days or even hours.

In the end, the cure for ambiguity lies in writing multiple drafts of a narrative, taking care that each iteration of the proposal improves its clarity and eliminates ambiguity. ***Expunging ambiguity from the proposal is as important to the proposal team members as it is to the final reviewers.*** On multidisciplinary efforts, it is next to impossible to write an integrated project narrative that achieves the needed research synergy and value-added benefits when the contributions of research team members are bedeviled by ambiguity rather than clarity at the disciplinary boundaries.