
8 Concepts Every Grant Writer Must Master for a Successful Grant Proposal

Learning These Concepts is Like Finding the Hidden Backdoor to Funding

By Morgan Giddings, PhD

<http://www.grantdynamo.com>

<http://morganonscience.com>

<http://fourstepstofunding.com>

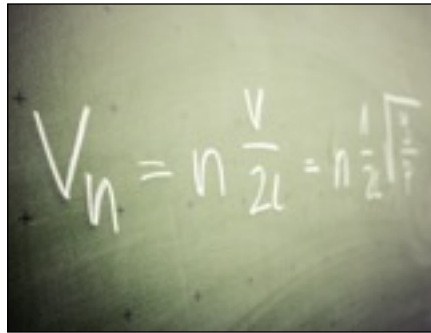
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Part 1: Forget What You Think You Know!

How to Get Grants Funded is a topic full of advice based on anecdotal evidence, and not much more than that.

The problem is this: it is very hard to take a “scientific” approach to grant writing, because **each grant that we write is a major investment of time and energy**. Who has the time and/or energy to submit multiple different grants, statistically testing various parameters for “what works” and “what doesn’t work”?



Yet for many academics, non profit organizations, and even for some businesses, getting grants is a key to survival and success. **Grant funding is what allows us to do our work in the world.**

And grant funding is usually hyper-competitive. For certain grants from the National Institutes of Health (that funds biomedical research), funding rates can be as low as 1 in 10 grants submitted (i.e., 10% cutoff).

So, given the necessity combined with the scarcity of grant funding, a lot of people are focused on “how to do it well.”

Perhaps you've heard one or more of the following "anecdotes" about grant writing:

- You have to know people on the study section or grant review panel
- You have to have a long-term established track record in the field
- You have to have a clearly enunciated hypothesis in any scientific grant proposal
- You have to do a thorough literature review in the introduction (background) for your proposal
- You have to be seen as the utmost "expert" in your proposal or it won't be funded
- You have to provide excruciating detail about everything you plan to do
- You have to have numerous papers in "reputable" journals before getting funding

That is only a small sampling of the rumors and anecdotes that I've heard about grant writing.

I've violated just about every one of the "rules" listed...yet my grants often come out scoring very well...

Now, every time I say that, I must add a qualification - my scientific work is leading edge, and we work hard at it. So our "product" is good.

But I've seen plenty of other grant writers with a great "product" (i.e. the project or science they are proposing to do), who fail miserably to get funding. And, usually, they're following one or more of the above-named myths about grant writing, while still failing.

If you want to move beyond failure into something that works, you have to drop all the anecdotes and rumors. You have to ignore the "advice" of your well meaning colleagues and co-workers, and you have to approach grant writing as you would a science experiment.

But, wait, didn't I just say that you couldn't do that?

You can't do it directly. But let's say I could show you the hidden back-door that allows you to approach grant writing scientifically, without having to perform time-consuming and costly experiments on your own?

Would you be interested?

Part 2: The Hidden Back Door!

Most of us would like to think that our work and our grant proposals will be judged by some independent arbiter of "truth."

But there is no independent arbiter of truth. That's akin to believing of a magical "eye in the sky." Most of us teach our kids not to believe in magic, so why do we persist in that belief?

There is no right and wrong when it comes to getting your grant funded. You're not right and your reviewers aren't wrong.

There's only human judgment, and that's all there is.

I see people argue all the time that the judgments of their peers aren't "fair" or "right."

Who is to say what is “fair” or “right”? The magical eye in the sky? You?

I see it all the time: colleagues writing to me or talking to me about how “unfair” the system is. How “wrong” the reviews that they received were.

I will lament with them a bit about it to give them some solace, but I also realize how ineffective this mental approach is. I’ll say that again: this approach is ineffective! There is no fairness! **There is only a bunch of humans trying to arbitrate and bargain over limited resources.** That’s it.

Once you realize the “fairness” beliefs for what they are (basically, no better than New Age mystical thinking), you can then proceed to the back door to funding. But not before.

So, are you with me? Are you ready to drop your beliefs about “fairness” or “reviewers wronged me?”

Good, then let’s proceed.

The back door is this: a certain breed of scientists have already been studying human responses to things very similar to grant proposals for more than a hundred years, and you can learn a lot from them.

These are people who scientifically study the psychology of persuasion, influence, and marketing.

Groups small and large use these results. Every successful politician has studied this science. Every large corporation has a room full of marketing types that know all about this.

And if you’re going to get the results that you want from your grant writing, then you need to study it as well.

You need to come to an understanding that your grant proposal starts with a great project, but that you can only seal the deal through effective persuasion and influence.

You might think to yourself: “wait, what you’re telling me isn’t true, I know there are exceptions.” Perhaps there are. But if there are exceptions, those are the 1 in 1,000 projects that are so inherently valuable that almost nobody would turn them down, regardless of how poorly the “persuasion” was done inside the proposal.

Assuming that you don’t want your career or your projects to be on hold until you come up with that 1 in 1,000 project, then **you’ll need to learn about effective persuasion and marketing.**

Even if you don’t believe me on that, consider this: despite what you may think, even if yours is that 1 in 1,000 project that will “change the world,” it is *very unlikely* that reviewers will “see” its value automatically! Many major discoveries (the kind that get Nobel Prizes) were in fact rejected when grant review panels and paper reviewers first heard of them.

I know of many scientists who could have saved themselves years of agony, fighting to “prove” the “truth” of their breakthrough to overly skeptical and conservative colleagues, if they had only learned better persuasion.

Part 3: Persuasion Does NOT Equal Manipulation

“But, wait! I don’t want to ‘manipulate’ people, I just want to do my great work without having to do all that nonsense.”

The world is filled with great, forgotten works produced by people who didn’t want to have anything to do with persuasion or “marketing.” Those are people who slaved for years over creative projects, pouring their life and soul into them, and never getting any recognition whatsoever. Those

are people who often died poor and cynical. “The world just doesn’t recognize my gifts!” they cried, until they died.

I’m not saying this to be mean. I used to hold that very same attitude. And I was on the path to becoming one of those people, until a peculiar set of circumstances took me down a different, and more fortunate path.

See, I had that same “fairness” and “eye in the sky” thinking when I co-founded a bike shop. I saw all the problems with oil dependency around - obesity, pollution, oil spills, etc - and wanted to do something about it.

I got mortgaged to the hilt to open the shop. When not enough sales materialized to repay that money, I got a little desperate. I started pointing fingers - “it isn’t fair, the deck is stacked against small businesses!” I’d bemoan. “People are clueless - why don’t they want to ride bikes more to get rid of this evil oil dependency?? People are just stupid, that’s why they’re not buying bikes!”

You may read that and laugh at me, but then think back to the last grant rejection you received. What was your response, and how similar was it to the above thinking I had?

Fortunately, I had a realization - I was having exactly the same kind of desperation I’d once felt after I started as an assistant professor then had four grant rejections in a row. It was the same blaming and finger pointing.

I looked at what I’d done then, after the rejections, and I realized there was one critical thing I’d done to turn the grant situation around: accepting responsibility for the problem, then seeking meaningful help to turn it around.

It worked for me in grant writing, and that was the start of the turnaround for the bike shop. The key to turning it around was looking at myself, and realizing that I had taken an ineffective approach, which needed to change if I was going to make progress.

And then I had another realization: that my earlier failure to get grants funded, and my more recent failure to convince people to buy bikes, had one thing in common: I was approaching these things with the “I’m an expert and I have a great product (science or bikes), so you should listen to me” mentality.

It finally dawned on me: being an expert, or having a “great product” is only one part of the equation. The other part - the thing that had turned around my grant writing - was applying methods of persuasion and marketing to convince other people that I had something to offer.

Is this manipulation? That’s one way that some people may try to view it.

But, by such a definition, you have to realize that you are manipulating people simply by being enthusiastic about your work. Your enthusiasm will often rub off on others and “manipulate” them into being more enthusiastic about it too. (That’s one thing I’ve always had going for me: unbridled enthusiasm about whatever I’m doing - and the more you can implement that, the better off you’ll be. I’m talking about the authentic sort here. Fake enthusiasm will be seen through for exactly what it is.)

Should you stop being enthusiastic just because you are “influencing?” I’d say No to that question.

Learning the art of persuasion to get what you want always involves a balancing act. If you use it to take “more than your share” or to harm others then it can be considered untoward manipulation. But what if you’re using it to do good? If you have a potential cure for cancer, or HIV, or energy problems - then don’t you think a little persuasion to help you keep that work going is a good thing?

I hope that you answered “yes,” because if not then you’re in for a tough haul as a grant writer.

The bottom line is that this is not about manipulating people, but rather, helping them see the value of your work.

Part 4: Your Reviewers Are Blind To Value!

Humans don't know how to value things. Valuation of anything, be it abstract or tangible, is an ever evolving interplay between social dynamics and individual needs and desires.

Why is Gold valuable? Not because it does anything useful, but simply because it is scarce, at one time someone decided "because it is scarce, it is valuable."

If you study any human endeavor, value is arbitrarily defined. Pet Rocks were valuable for a short while, making their "inventor" a millionaire - then the trend faded and they became worthless. From valueless to valuable to valueless again.

That example illustrates that **there is no fixed notion of value**. The key point to realize is that *this applies to your reviewers when they read your grant proposal*. They don't know what its value is!

And here's the biggest secret: you have to tell them the value of your work, because they're unlikely to "guess" correctly on their own.

But you can't just go tell them "hey, I'm an expert and it is obvious that my work has value, so you have to give me funding." They will rightly see that as a bit too blatant an attempt at manipulation.

Instead, you have to do a more subtle dance, where you use a proven, step by step approach to illuminating the value of your work to your reviewer. Doing that is exactly what “influence” is.

Again, remember there is no fixed arbiter of “value.” Is your work more valuable than your colleague’s? Or less valuable? We cannot know. Often, major discoveries and major leaps forward are only recognized after-the-fact for the value they held.

Take the example of the Internet, and the value it holds in your life. Do you think that the original creators of the Internet saw that same value? I’m sure they didn’t. Perhaps they saw potential value, but almost nobody knew exactly what form that would take.

Since grant proposals are prospective devices, looking forward into the near future, you have to do the same thing. While you cannot know the ultimate value of your work, you have to be very good at illuminating the *potential value* that exists.

Your reviewer will not automatically see that. In fact, more often than not, the only way they will ever see it is if you spell it out in detail for them.

This is not saying your reviewer is unintelligent. Your reviewer is a person just like you.

Think about that for a second. Maybe if you can see your reviewer as someone just like you, you might take a different approach next time you get a grant rejection.

However, this is difficult because the communications channel between people is very limited. We take this vast reservoir of experience and thought in our minds, and try to distill it down to measly words on the

page, and then we get frustrated when someone else doesn't "understand us."

While the temptation is there to point to the reviewer for "laziness" or "lack of fortitude" or all manner of sins, the reality is that the blame always lies with the person translating thoughts into words in the first place.

That's you when you're writing grants.

And so, in your mind, your project has this great value, and that's why you're asking for grant funding, right? However, unless you convey that clearly when you distill your mind's knowledge down onto a page, the "value" gets lost. The other person never picks up that "value" when they read it.

You put some words on the page and you're probably assuming that the value is obvious. But as we saw above, value is arbitrary!

By assuming it is "obvious," we don't make sure that part of the message gets communicated to the person on the other end. And as a result, they almost always misinterpret that value, and that misinterpretation rarely goes in our favor!

So, the simple goal is this: illuminate the value of your work for your reader! (This goes not only for grant writing, but just about anything).

You have to spell it out. You have to tell them how much they should think it is worth. We're not talking about doing this in a crass and blatant way, like writing "Hey reviewer, this is the most valuable work ever, so you have to fund it!"

That's where the persuasion comes in. Ultimately, it is about persuading the reviewer, gently, about the value and promise of your work.

Once you can do that, you become a master grant writer!

Part 5: How to Teach Value!

Let's reconsider the internet example, it gives us a good venue in which to explore how to teach the reader about the value of your work.

Try to put yourself in the mindset of a computer science researcher in the 1980's who wants to get funding for his work on further developing computer networks like Arpanet that will later become the internet of today (i.e. it was vital work).

Say that someone asks you about your work.

"I develop computer networks."

Where's the value there? See, in the 1980's, precious few people new about networking, and those who did mostly were annoyed by how unreliable it was.

If you were the typical person at the time, would you have been in the least bit excited by his work? No.

We could make it a bit better, by adding a simple "why" - "I develop computer networks to allow researchers to transfer data back and forth rapidly."

That certainly communicates some value. If you're a physicist in the 1980's and you're collecting reams of radio telescope data, not having to ship computer tapes back and forth sounds like it has very high value. But again, this is fairly narrow appeal. So, while a physicist might be interested, most other people would not.

So we can take it to the next level - "I develop computer networks to allow new kinds of interaction and collaboration that will revolutionize how people share data and work together remotely."

While you can't have known all the possible uses the internet might be put to (Facebook? Twitter? Youtube?), you are starting to get at a bigger picture, illuminating some value.

While our statement about "revolutionizing how people share data and work together remotely" may be enough for funding in some instances, often that isn't enough. It is too vague.

That's the funny thing about we humans. Most of us know that nobody can predict the future, but when it comes to reviewing grants, we want the writer to have a crystal ball. We want the writer to be *very specific* about the future. We don't want vague wishy washy statements like "might revolutionize yada yada." We want to know *exactly what problem will be solved and in what way*.

It doesn't matter that it is all a fantasy (again, nobody that I know of has a functioning crystal ball). But that's what we want when we're reviewing grants.

So, when you're writing grants, the more of that you give, the more value your reviewer sees. This is perhaps one of the most difficult mindset changes you have to make in grant writing.

Let's revisit the internet example. Say that physicists are doing important radio telescope work at a remote site in the desert, and their data is presently being transferred from the telescope site to the university where it gets analyzed, by Jeep. This presents all sorts of impediments to the search for extraterrestrial life.

By identifying a specific problem like this, and then telling your reviewers *how you plan to solve it* with your new technology, you provide more perceived value.

You might expand your nascent proposal to say: "Physicists are in an important race to find extraterrestrial life, but their work is significantly

impeded because the massive data sets they collect must be transferred physically on remote desert roads by Jeep. Our new networking technology will connect the remote site with the data processing center to allow data transfer and collaboration in real-time, dramatically accelerating the project.”

That statement conveys much more specifically what problem it is that you're going to solve with your technology and how it might solve it. This increases it's perceived value.

But you must note a few key points here. First, if you are an early internet pioneer, the ultimate “value” of your work is far greater than just allowing physicists to transfer data back and forth. As we know now, the internet has revolutionized commerce, science, politics, and many other aspects of life. It is far beyond what our 1980's grant writer would have envisioned!

So, should this grant writer have broadened his statement? Maybe, but not necessarily.

The key to this lies in identifying the audience who will be reading the grant proposal.

If the panel of grant reviewers are mostly going to be academic physicists, with a few computer scientists mixed in, then this narrow focus is going to be appealing to them. But if the review panel is mostly computer scientists, they might want to see a broader vision for this technology than just allowing physicists to rapidly transfer data.

If needed, broadening the statement wouldn't be difficult. You could, for example, talk about the challenges presented by classroom learning and the need to be physically present to attend a lecture, and how this impedes learning in rural communities. Or you could talk about the problems faced by the military in coordinating troop movements by phone. There are

plenty of communication problems to be solved that could be addressed by your new computer networking research.

So the take-home message is: identify one or more problems and show how your work will lead to a solution!

Part 7: Reviewing is an *emotional*, not a *rational* decision!

You need to *realize and internalize in your thinking* that your reviewer's enthusiasm is an emotional reaction, not a rational one. That emotion can be based in part on rational reasoning, but there is also a part based on a visceral response to the "feel" of your proposal. It comes down to whether you strike a chord with your reviewer or not.

Hence, if you approach grant writing like most people do, by playing solely to the "rational mind," you are going to struggle. You may have perfectly rational arguments, but if that is ALL you have, at best you'll get a lukewarm "there's nothing really wrong with this proposal, but..." type of response. Simply put, reviewers won't be excited.

In most grant funding situations, a lukewarm response isn't enough.

There may be instances where you're applying for funds with little competition. But any time there is a competition for funding, those writers who excite both the emotional and rational sides of the reader are going to win the game.

Hence, your proposal must "feel" exciting and interesting. It must feel innovative. It must feel important. It must feel reviewer friendly.

That last point is particularly important. Many of us are tempted to fill our proposals full of facts and logic to try to make our cases "irrefutable."

However, this flies in the face of two realities:

- Since your proposal is prospective (i.e. doing something in the future), the logic is almost never irrefutable. If someone wants to pick it apart, they can usually find holes, since their crystal ball is just as good as yours.

- Filling your proposal with too many dry facts and too much logic will simply annoy many reviewers and readers, because it will be dense and hard to follow. Since the typical reviewer is reading 8-12 proposals, those that are annoying - even for simple reasons like this - become less likely to get the vote.

To be clear, we do need our proposals to be logical and well constructed. We're not talking about just going off into a peace-love-and-flowers emotional scree. That won't work any better than the purely logical proposal.

You must achieve a balance between the emotional and the logical, by leading with emotions and justifying them with logic. That's how the human brain operates.

If you're like most scientific writers, bringing in some emotion that inspires your reviewers – without going overboard – is the most difficult challenge you will face.

Part 8: The Steps to the Proper Mindset!

If you want to start using these principles to reduce your rejections and increase your funding, here is a summary of the steps you need to take:

1. Convince yourself that any problems that your reviewers have with your proposals are due to your ineffective communication, rather than due to their deficiencies. While it may be true that some reviewers have deficiencies, pointing the finger externally will not serve you in any useful

way. **Accepting full responsibility** for any issues or problems will serve you very well.

2. Once you realize where the “problem” lies with getting grants (inside your head), resolve to be a constant learner to improve it, making your grant writing experience far easier and more effective at getting the grants that you want to.

3. Show your reviewer the value of your work. **This is the hidden back door.** The best way to do this is by identifying a specific, concrete problem, and a group that this problem affects, and focus the proposal around solving that problem. It is ok to briefly mention other potential applications of the work, but stay focused.

4. When showing the value of your work, convey facts that carry emotion to inspire your reviewer. Do not fill your proposal with tedious literature reviews thinking that they will be impressed - at best, they will be bored.

5. Be concise and logical in what you write, staying focused on the problem you want to solve, and tying it into the “big picture.”

6. Share your work with colleagues and friends. Then ask them whether it inspired them. Most people, if given nonspecific instructions such as “please give me feedback on my proposal” will give feedback on grammar and low-level stuff like that.

But that’s not what you should focus on as you develop an idea. **Instead, you should focus on how inspiring the idea is to the reader, and all your attention should be focused on making the most inspiring story possible.**

Once you’ve developed your inspiring story, only then is it time to work on the details of grammar and flow.

Part 9: The Next Step!

Take a few moments to reflect on some specific facet of your work (no phones, no email). Take out a piece of paper and write a one sentence “elevator pitch” for your work. Now look at what you wrote. Does it reflect clear value that almost anyone can understand? Or does it convey just some arbitrary facts and details that you think are important, but that few others will understand?

For example, it used to be when people asked me what I do, I’d say “Bioinformatics and Genomics.” I mostly received quizzical looks, because non-scientists have no idea what those are, and for scientists these are vague. I was poorly conveying value. Now I tell people things like this (corresponding to one of my projects): We figure out how and why bacteria become resistant to antibiotics so rapidly, by developing and applying new computer tools to analyze bacterial genomes, so that we can ultimately develop better treatment strategies to save lives.

Try to craft a statement that clearly spells out the value of one of your projects - then run it by a few colleagues to get their feedback.

Having this well-crafted statement in front of you as you write your next grant proposal will be a major boost in your ability to write clearly and concisely about value. (I can’t overstate how valuable a clear Elevator Pitch is to directing the flow of your grant.)

Additional Reading And Resources!

If you want to drill deeper into the concepts of influence, showing value, and balancing emotion with logic, there are several resources available:

1. "Influence" by Robert Cialdini
2. "Predictably Irrational" by Dan Ariely
3. "4 Steps to Funding" by yours truly, Morgan Giddings

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