

Institutionalized Nihilism in the Review process

Open Letter to National Science Foundation

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Dear NSF Officials,

I was not expecting a response to my email to the NSF officials, of March 24 2024, following the email to decline my proposal. I am old enough to know that that is the standard operating procedure. After rejection of a proposal, the PI may write some angry letter and NSF ignores them. However, I am writing this open letter, to voice the open secret how dysfunctional the review process in pure Mathematics has become and NSF is totally complicit with the same. **This is a shameful abuse of government money that NSF drains out every year, by institutionalizing this dysfunctional review process.** I can only talk about Algebra Number Theory (ANT) area of program, and more in particular about **Commutative Algebra** (CA). I am not comfortable being classified as a commutative algebraist, but that is how I am pigeon-holed. (*I am hopeful that review process is more credible in other areas of (pure) mathematics, which I doubt.*)

My credentials include publication of two books. One of them was published most recently (July 2023) on Algebraic K -Theory, which is a central area of research in Algebra. I published about fifty papers, including two papers in prestigious *Inventiones Mathematicae*. Further, I served my department in the capacity of the Chairperson, for two and a half year. I joined my current job in University of Kansas (KU), as a Professor in 1988, after immigrating to US in 1987 with a postdoctoral job in MSRI. I submitted, approximately twenty proposals to NSF and all of them were declined. So, I have a lot of experience, from the receiving end of this institutionalized dysfunctional review process of NSF.

One can argue whether the review process was perfect in the good old days. However, in these 35 years since I immigrated, the review process has degenerated to a fully political, utterly dishonest, and cronyism is the rule of the game in the review process (in the ANT program). When I talk about the review process, I mean the review process in all the facets of mathematics machinery of the nation - review process of Journal publications, review process of the funding organizations, promotions and appointments in colleges, to name some. It is not a secret (*and not even an open-secret*) anymore, that when we write

recommendation letters, we are obligated to untruthfully exaggerate the credentials of the candidates, to match the exaggerations of the credentials of the other candidates. Perhaps, this is when normalization of untruthfulness begins, and then there is nothing to stop it.

Whole system is controlled by a cohort of Beltway insiders, mostly based in the elite colleges. It would not be far from truth that it is controlled by a cohort of White American (non immigrant) Professors within the Beltway. Some non white groups may have a "quota" within this cohort, but they are usually closely tied to the white authority (as a former student or collaborator etc.). Immigrants like me are skirted out, at the NSF system, by two levels of screening: (1) First, journal review process will dampen our contributions by forcing us to publish in lower level journals, and then (2) NSF reviewers will start with the dampened resume and marginalize it further, ruthlessly. If you have the blessings of the Beltway authority, they will inflate your grant proposal beyond proportion; and if you do not have the blessings of this authority, they will trash your grant proposal down to nothing. Bottom line is that the reviewers do not have to be **TRUTHFUL**. They can write down anything **without any place for cross checking their comments**. The anonymous review process gives the reviewers license to write down anything, without any need to be truthful. Such incredible untruthful comments are treated as **holy grail of expert opinion**. Often, these reviewers are **very narrowly trained**, and do not have a wider perspective and expertise needed to review such a wide range of proposals. Due to the existing ruthlessly politicized and competitive culture of this community, the Reviewers know, if selected, that their job is to inflate the proposals of their friends and kill the rest ruthlessly.

I am writing this open letter because someone must speak out on this unfortunate dysfunctional situation, while millions of government dollar drains out every year. **Someone has to say that the King has no clothes on!**

1. **My personal History:** While my case constitutes a single data point, I am one of many immigrant mathematics professors in a university in this nation. My experience is not unique, while I may be among few who refused to give up, continued to be productive and continued to file proposals to NSF, for over thirty five years. I came to US in 1987, with a postdoctoral job in MSRI, Berkeley. In 1988, I took my current job in Kansas. As an immigrant, I could never make a dent into the impregnable control of the NSF organization, by this lobbyist Beltway group. I submitted, approximately twenty proposals to NSF. All of them were declined. Reviews are standard, subjective and vague: (1) Broader Impact is weak, (2) Not Motivated. It is ironic that, it is used to marginalize a proposal, that a narrowly trained reviewer is deficient to get motivated in a wider variety of mathematics. And, **weaponization** of Broader Impact is well known, as is addressed subsequently.

Early part of my career (till 2011) I was specializing in Projective Modules. Since then, my interest broadened to Quillen K -Theory. At the dawn of my career in US, research in projective modules bifurcated, due to the work of Quillen on Algebraic K -Theory. Algebraic K -Theory used to be part of the study of Projective Modules, and both were considered as part of commutative algebra. After the work of Quillen, Algebraic K -Theory spun out of the area of Commutative Algebra and evolved to an

independent subarea of Algebra, by itself. The new methodologies of Algebraic K -Theory, which became highly topological, and that of Commutative algebra, were left with little in common. In this separation, the area of projective modules became part of commutative algebra, which was an erroneous allocation. I tried to hang around with Commutative Algebra and found nothing in common. Neither they could excite me; nor I could excite them. Richard Swan retired early, and M. P. Murthy followed. I became the loan expert in Projective modules in this nation, and eventually moved into Algebraic K -Theory.

I developed my own program on Homotopy obstructions for projective modules to split off a free direct summand. Upon my arrival in MSRI, Berkeley in 1987, I became aware of the advent of a certain program in commutative algebra, which remained hot for the rest of my career. Many youngsters in this program got funded, and I did not feel inspired. I do not know what transpired out of such programs and out of the millions of dollars that went into such programs. **While I did not work on such high profile (*over sold*) programs, I formulated my own program.** I was able to give a complete shape to my program in homotopy obstructions, affirmatively. I did not follow any leader, and I provided leadership in this area. I proclaimed myself as a self-made Algebraist. **Independent thinkers have no place in NSF/ANT.** However, in this Beltway controlled NSF, you might have had some chance if you could earn some blessings from some Beltway God Father. In any case, that would not be easy for a dark skin immigrant, who did not even go to the graduate-schools, in US. Often, the PhD advisor is your God Father to arrange the necessary blessings from the Beltway God Fathers. Reviewers would know who is whose God Father, and respect.

2. **Designed for the Beltway crowd:** NSF review process (in ANT) is designed to institutionalize the monopoly of the Beltway crowd, on the NSF money.

(a) **Specific Problems and Methods:** One thing they routinely demand is statement of specific problems and methods to solve them. This rules out any room for developing theory. I work on developing theory. The methods lead to a theory, that is intuitively foreseen. **NSF review process is willfully ignorant about it.**

If I knew exactly what problem I plan to work on, I would, most likely, solve it before submitting the proposal. Then if I also knew the methods to solve them, then there is nothing left to propose. **Mathematics is not an experimental science that you propose to design an experiment and run the experiment.** ANT program purposefully uses it to facilitate institutionalization of the monopoly of the Beltway crowd.

(b) **Conjectures:** By specific problems, what they may appreciate, are statements of some "conjectures" by some white giant (*I am trying to avoid naming names*). Olden days, a "conjecture" meant something. These days these white giants are spinning out so called "conjectures", which are essentially easy problems for their students to solve or propose in such NSF proposals. In many cases, they many already know how to solve these problems (so called conjecture), and only

thing remains in these "conjectures" is to fill up the details. I went to a talk in an AMS meeting entitled "Seven Conjectures in Tight Closure Theory" (*as close as I can recall*). It is conceivable that seven fresh graduates in Tight Closure Theory were funded by NSF to solve these seven "conjectures". Who would challenge the invincibility of a conjecture of such a giant (*with due respect*)? In reality, in most cases these are some exercises for some designated youngsters. Barring few exceptions, nobody is working on any original conjecture. They are solving simple exercises, labeled as "conjectures". It is particularly so, if they already know the problem statements that is destined to become theorems, and also the methods. (*Direct summand conjecture was solved, which did not use any of these foreseeable methods that NSF/ANT supports. The Jacobian conjecture is still open, and nobody is working on it.*)

There is no place for originality in NSF, and this is how monopoly works. Unless you work on "conjectures" of such white giants, you are nobody to NSF. I work on building theory. During last ten years, (1) I built a theory on Homotopy obstructions, (2) I moved into K -Theory, (3) I established invincibility of CM -modules, (4) I completed a book in K -Theory. These are not conjectures of a giant. I developed them single handedly. I showed some originality.

- (c) **NSF is about Future, not past:** Before I submitted the proposal to NSF, in October 2023, a Director of ANT program pointed out to me that NSF is about future. He meant, it does not matter what you did during last ten years, it is what you propose to do. I am sure that the Director was trying to help me (*and thank you*). However, when the ground rule is that the credentials of a PI does not count or matter, **it gives NSF officials and reviewers a license to fund any PI, whose only capital is his/her pedigree, PhD Advisor's name and social network. It gives them the license to ignore any credible PI**, without good social network. If you are an immigrant, your social network is likely to be weak, and you are doomed, as far as NSF is concerned. This is how racial bias works.

A proposal is a promise to do some work. Then, NSF does not have a mechanism to follow up whether that work was executed or not (**no refund policy!**). This approach is another building block for the institutionalization of the monopoly of the Beltway crowd.

- (d) **Broader Impact and its weaponization:** This is certainly a criterion (of the two) that is designed (or used) purely for the purpose of the institutionalization of the monopoly of the Beltway crowd. **Reviewers weaponize the Broader Impact criterion**, for evaluation. Reviewers can simply write down that Broader Impact part of the proposal is "weak", since NSF guidance is TOTALLY vague on this. It is so vague that it is ONLY anybody's opinion, and in this case with the assurance that the reviewer's comments will not only be taken seriously, but it will also have the desired killer effect.

In the case of my recent proposal, I tried to reach out to the broader mathematics community, by writing a book and by other means. I would submit that research

in pure mathematics (Algebra) impacts the Broader population minimally, if at all. These days, most of the papers that are written, only a circle of coauthors would read, if any. Nobody else can read them because they are such technical jargon. That being the case, **the best you can do is to try to reach out to the Broader Mathematics community.** I completed my recent book with the same attitude. My recent book provides some credibility or intellectual merit to my proposal to write a book, to reach out to the broader mathematics community. **These did not qualify as Broader Impact for the Reviewers.** They used it as a weapon to kill my proposal. **Reviewers did what they were hired to do, by the Beltway crowd.**

Vagueness of Broader Impact criteria is well known. Sometimes in the past, NSF's guideline (PAPPG) had a paragraph on this vagueness, which I could not find this time. However, I found the site:<https://researchinsociety.org/wp-content/uploads/2021/02/NabiCurrentStateOfBI-011118.pdf>. This only reconfirms what everyone knows (e.g. (1) *BI criterion is unclear*, (2) *Random judgments on BI are common, and so on*). The qualification "judgment" is misleading or polite. **It is the weaponization of this criterion in ANT, that is common. And, it is in place for too long in this form.**

If the Broader Impact of ANT research is taken seriously, ANT program will not survive. *Mathematics is a form of art, and it is an acquired taste.*

- (e) **Reviewers:** Unfortunately, **reviewers are competitors to each of the PI they review.** Everybody is political and comes to the review panel to boost the case of the friends and kill the rest. NSF officials know this. Success in NSF means prosperity in your home institution, and possibly a justification for your employment. NSF money is scarce. Only way to have a slice out of NSF is to be part of an alliance and support each other. That is a broad enough alliance to dry out scares NSF money, which is the Beltway crowd.

I have been submitting proposals to NSF for more than 35 years. I was never asked to be a panelist. I do not have any insight how the panelists are selected, and **NSF does not publish the names of the reviewers.** It is my understanding that NSF has a revolving door panelist mechanism, and NSF selects panelists from the same Beltway crowd (the alliance).

This is a serious part of institutionalization of the monopoly of the Beltway crowd.

- (f) **Unchecked Credibility and Untruthfulness:** Reviewers are given unchecked credibility, while they sit there to help the Beltway crowd and kill the rest. They are not obligated to be truthful or meaningful; and they are not. Nobody will challenge the veracity of their comments. Anonymous review process is another powerful catch-twenty-two. Each one of the reviewers is a competitor (or part of the Beltway) to each PI. Hypothetically, even if the reviewer misunderstood something or failed to understand the importance of the contributions of the PI, PI does not have a chance clarify where the reviewer went wrong. In reality, reviewer knows what he is doing. Stakes are so high, and nothing prevents the

reviewer to be untruthful or purposefully unfair. Reviewers are not accountable for their work. *They are licensed to be untruthful and kill!*

Given this unchecked credibility attached to the reviewer's comments, while they sit there to compete with each PI, institutionalization of this unfair review process in NSF is purely by design, and not an omission. **Institutionalization of the monopoly of the Beltway on this government money is complete and invincible.**

- (g) **DEIB:** The Beltway alliance is home grown. So, it is natural that it will comprise mostly of some home raised white American professors. Immigrants who arrive late in their career have little chance to find a seat in this alliance. Other non white researchers may have a quota that is filled mostly with the students of this white alliance. So, there is an inherent bias against the non white community. It is particularly acute against the immigrant who arrived late. This is a bias based on Geographic origin and race (or in favor of only one group).

However, **NSF has no mechanism to correct this bias.** In my university (KU) there is a DEIB (Diversity, Equity, Inclusion and Belonging, after a name change) office. Any allegation of discrimination triggers some kind discussion or investigation. This is a federally required system in place. NSF does not have any such obligation, as far as I know. This invincibility of this Beltway crowd in NSF runs like a bulldozer.

This culture of competitive and shameless nihilistic review process is not limited to NSF. It starts with the journal publications. NSF picks up from this point. I am not saying anything here that is a great secret. Everybody knows this, including the NSF officials. In conclusion, question remains what are the alternatives? In my view, if you cannot provide a credible and respectable (as opposed to shameless) review process then either discontinue the ANT program or make it more equitable. ANT research will not impact the broader population in any meaningful manner. **So, do not be pretentious about Broader Impact of ANT research.** In my view, it is a form of art. Fund it like government funds art. **These is no place for institutionalization of malpractices (legalized) in distribution of government funds.**

Sincerely,



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CC: Open Letter!

This (a version) will be on my website, and elsewhere!

Chances are I will mail a copy to the President Joe Biden and the Education Secretary Miguel Cardona

I may publish an expanded version of the same.