Content Analysis: Forums on Racial Disparities in Peer Review and More

In response to multiple calls from the external community for NIH/CSR to address racial disparities in NIH funding and potential bias in peer review, CSR held three public forums in July 2020. The July 8 and 14 meetings were held in a small-group format with 18 participants in each and the July 15 meeting was held as a webinar and had 56 participants in addition to CSR staff. CSR publicized the meetings through communications relayed to reviewers by SROs and by a Director's blog post ([Review Matters June 12](#)). Everyone who expressed interest was invited to one of the forums. CSR did not collect systematic information on the participants. Many were Black/African American, and the group was diverse with respect to gender, career, and area of science. The forums were originally conceptualized as a dialog, as a chance for CSR to hear from our reviewers and for CSR to discuss data and planned actions as they relate to peer review. In fact, the majority of time in each of the three meetings was spent listening and in open discussion. This report collects *major recurring themes* in the concerns, suggestions, and opinions of forum participants expressed during one or more of the forums or in communications received by CSR on this topic.

The views are those of the participants. The report is not an endorsement by CSR or NIH of these statements or suggested actions. It is meant to capture the major themes and frequently recurring comments that emerged in these forums so that the views expressed can be conveyed to concerned parties at CSR and the NIH more generally.

Executive Summary

The overwhelming message CSR heard is that the extramural community is weary of slow progress and frustrated that NIH is not effectively using its power or leadership role to combat the effects of systemic racism on the scientific workforce. Participants asked for broad and urgent action by the NIH. Ideas about how NIH should address these matters generally fell into one of three categories – related to peer review processes, related to processes outside of CSR's purview but within NIH, and systemic racism that goes far beyond the NIH. However, it was noted by participants that these lines of responsibility are not entirely clear; if the NIH or CSR establishes specific policies or regulations, the external research community is likely to adapt.

Discussion related to peer review processes was focused on ways to reduce bias. A strongly held, predominant view was that bias on the basis of race (and to a lesser degree, gender, career stage, institutional affiliation) is a problem in peer review. Ideas to mitigate bias discussed were double-blinded review, bias training, and diversity of panels. Double-blinded review was seen as having some potential in reducing bias by keeping review focused on ideas and rather than on aspects more prone to biases such as the Investigator or Environment review criteria. Likewise, some thought that bias training could be effective and called for additional training for scientific review officers to enable them to take more proactive measures against bias when running a review meeting. Some participants, however, were skeptical as they felt such measures could not possibly overcome the effects of systemic racism that compound over the course of one's career. There was also concern that reviewers tend to be biased against scientific topics favored by Black scientists and that simply focusing on idea-based review may only compound this scientific bias. Much discussion also centered on the diversity of review panels with participants asking CSR to broaden the pool of reviewers to include those without R01 grant support and to articulate clear benchmarks to be met.

Related to NIH-wide issues, participants voiced frustration at the investment in "pipeline" programs and called on NIH to make broad sweeping changes. They suggested that NIH close the funding gap quickly by considering awarding grants from underrepresented minorities that score just beyond the pay line, by altering the pay line for investigators who are underrepresented minorities until a certain level of diversity in the scientific workforce is reached, and to create new programs such as a MIRA award aimed at minority investigators. Participants called for NIH Institutes and Centers to engage with underrepresented minorities to prioritize and fund studies to examine institutionalized racism, and to expand NIH support for topics important to underrepresented communities. Participants also urged the NIH to be cognizant of the specific needs of minority groups and intersectional groups (e.g. Black women) in applying new policies.

Much discussion also centered on systemic and institutional racism. Underrepresented minorities suffer from the effects of systemic racism, meaning that racism and bias pervades all aspects of their career. This is important in understanding who is successful in gaining NIH funding and why – by what measures are scientists assessed? Many measures that NIH and other institutions use to judge merit are impacted by bias and racism. One example raised is that publication history is central to funding but can also be affected by relationships between investigators and journal editors that often break down by race lines. Systemic racism drives publication and funding rates, and funding drives productivity, creating a cycle that is difficult to break.

Content Analysis: Concerns and Suggestions

Concerns and suggestions in the forums and in all communications spanned three major categories: CSR peer review-oriented, larger NIH practices, and larger world concerns (academic pipeline etc.). These are detailed below. *The comments represent the opinions of forum participants and their appearance in this summary is not intended as an endorsement by CSR or the NIH.*

CSR peer review-oriented:

1. There were two distinct schools of thought about CSR implementing a double-blinded review. The first set thought this was a good idea and would be extremely helpful in decreasing bias in review. The second, larger group, opposed and stated that it will not aid in reducing review disparities or decreasing systematic racism in academia.
    a. One participant stated that the two-stage review proposal with initial masking of the applicant's identity is a good idea but thought will need to be given to what justification would be required if a reviewer wishes to change their score after unmasking. Concern was expressed about the level of justification required for voting outside of the range for non-assigned reviewers and it was suggested that a more extensive written explanation should be requested.
        i. One participant also stated the opinion that two-stage review would positively impact Black PIs who are new or inexperienced based on their observations at review meetings of panel members stating that an investigator is "new" or does not have enough experience.
    b. Other participants felt strongly that a two-stage review or a blinded review would not significantly reduce bias.
        i. Participants voiced the opinion that blinded review could not overcome the effects of systemic racism that exists in academia. Black investigators may not receive the same mentoring/grant writing support at their institutions. Multiple participants strongly believe that reviewers/NIH should acknowledge the race of investigator and directly state that a more diverse group of investigators should be funded. Much like acknowledging ESI status, participants thought that this would combat implicit bias by pushing reviewers to re-evaluate their decision-making.
        ii. It was also stated that double-blinded review might not correct for biases related to institutional prestige, or bias against community-oriented research for minority populations etc.; participants also thought that refocusing the conversation on merit will continue to alienate Black scientists in their topics of interests as long as the funding priorities remain unchanged.
        iii. There was also a concern that a double-blinded review would correct for the effects of some biases, but not for topic as it relates to evaluation of significance, as there can be some subjectivity in this criterion which varies across fields.
2. There was tremendous support by participants across all forums for changing investigator and environment to non-scored criteria and/or left to program staff to evaluate.
    a. Participants stated that well-known investigators are often given the benefit of the doubt while others are not, and their observation has been that often the researcher's reputation overrides assessment of the scientific merit of the application. There was consensus that reviewers should be judging the

        application placed in front of them and not based on assumptions about what the group can do; bias in favor of well-known researchers or research groups, as well as bias against more junior investigative teams, must be diminished.

    b. Participants proposed that the investigator criterion be non-scorable and the question reframed as "is this investigator capable of doing this?", with yes/no options and then passed to program staff for further evaluation. Participants suggested that if program staff find issues with the investigative team, then the contact PI should have an opportunity to respond.

    c. Some participants thought that evaluation of investigator is prone to bias because there is too much variability in how investigators are assessed.

    d. Similarly, participants suggested that changing Environment to a non-scoreable criterion could reduce the bias against minority-serving institutions that may not have the same amount of resources as other institutions. Evaluation could be refocused to determine whether the investigative team has access to facilities required for the proposed project.

3. There was majority consensus across the first two forums that the composition of committee membership and ad hoc reviewers should be broadened beyond people who have been awarded R01s.

    a. Participants suggested that, in order to break the conservatism of review, investigators without R01s should also be part of the review process. Participants were of the opinion that review panels should be reflective of applicant pool and include more junior professors and those without R01s. Participants expressed the opinion that many investigators who do not hold R01s are expert and capable of serving as a reviewer. One benefit to investigators of having earlier access to the review process is greater insight on what a successful grant looks like. The "Matthew effect" was pointed out - studies demonstrate that if two investigators start at the same starting point, but one receives and award and one does not, their experience bifurcates – once one person gets an award, they are more likely to receive more awards. And vice versa, if an investigator didn't receive that first award, they are less likely to receive other awards.

    b. Participants voiced the opinion that relying on productivity (publications) as a mark of expertise is problematic as URM (underrepresented minority) investigators face barriers in getting published, including the expectation from institutions that Black investigators take on more administrative duties that then prevents them from developing a strong research portfolio. Systemic racism drives publications and funding, and funding drives productivity; this creates a cycle that is hard to break.

    c. One point that all participants overwhelmingly agreed upon, is that the composition of research teams studying racial disparities should be more carefully considered in review; when an application studying racial disparities is composed of an all-White research team, there are concerns of whether the research is being done right, ethically, and in the interests of the population being studied. Also, what is significant to the researcher might not be significant to the research population. Participants were concerned that this is not routinely detected or brought up in critiques or discussion, and/or panels are not receptive to these issues being brought up.

    d. One counter perspective made by a participant is that some experience in managing a research project is valuable; the importance of having experience managing a research project varies from field to field and relies heavily on what the nature of the specific field is.

4. There was strong interest in increasing Black/African American membership on peer review panels, both standing panels and special emphasis panels, along with cautions that small increases may be ineffective.

    a. One participant said that, out of 183 panel members on the most recent rosters of panels he would typically submit to, he counted approximately 3 Black members. The speaker proposed that instead of aiming for "younger panel members that are theoretically more diverse", that CSR should aim for "more diverse" as their benchmark. The speaker stated that it would make more sense to change the benchmark to close the disparity instead of taking an indirect approach.

      b. Many participants stated that diversity should be reflective of the applicant pool, and that if Black/African Americans are not in the room as panel members, then they do not have insight of the peer review process which may be preventing them to becoming successful applicants. Nor are they able to serve as mentors to others who are applying for funding

      c. Another concern raised was that having a just a few reviewers on a panel who are underrepresented minorities might not be effective in changing scoring of the panel.

5. Reviewer training and SRO training were discussed. SROs could do a better job of combatting bias by actively addressing it in critiques and discussions. There was mixed opinion about what form of reviewer training would help.

      a. Some participants thought that it would be beneficial to train SROs to detect bias so they can ensure that comments made by reviewers match what the grant is proposing instead of their own, potentially biased, perceptions of what the research should be. Some people stated that SROs need to read critiques more closely or more than one SRO should read a critique in order to catch some of these biases. There was wide consensus among forum participants that SROs should intervene more often during meetings; currently SROs are perceived as extremely passive.

      b. Opinions of participants on reviewer training was split; speakers had suggestions as to how training could be enhanced but ultimately stated the opinion that reviewer training will not be effective in changing reviewer behavior or beliefs.

            i. Many speakers stated that broader perspectives are severely needed to allow competitions of biases, attributable to unbalanced voices in the room (i.e. lack of perspective from underrepresented minorities). Many participants also voiced the concern that it is very difficult to change implicit bias among panel members, and implicit bias trainings are likely to make only an incremental impact.

      c. Another point that arose was the issue of cognitive overload and that it can increase vulnerability to bias. Participants proposed three solutions: a) increased SRO intervention to exclude reviewers who put little effort into their reviews; b) lower reviewer burden in general across the board; c) and decrease application loads.

6. One suggestion which gained significant consensus amongst participants in one forum was the idea to reconsider the structure of study sections; study sections need to be structured to appreciate what is significant about a project. Perhaps more targeted SEPs and more targeted recruitment of reviewers with specific expertise is needed.

NIH program: funding, minority scientist development, etc.

1. Participants stated that NIH's efforts should not be entirely focused on pipeline projects and efforts to increase application rates from Black investigators. Participants stated that pipeline programs have existed for years and data have shown that these programs do not work unless systems and cultures change. Black PIs and other minorities have been applying for funding unsuccessfully, not because they are not skilled or lack expertise. Participants though the emphasis should be on changing the internal culture of NIH, CSR, and study sections.

2. One important recurring topic across all three forums was the disparity in funding for Black applicants from NIH. Two opposing opinions were voiced. The majority of participants supported taking measures to close the funding gap through developing new programs for underrepresented minorities to gain funding easily.

      a. One proposed solution that gained traction among forum participants is some variation of a funding cap, or limit to the number of research projects that any one investigator can hold at one time.

      b. One idea supported by many forum participants is to increase positive funding decisions for Black/African American investigators in the 35th to 59th percentile ("the grey area" where most of the funding disparity exists). A smaller number of participants suggested a lottery for funding in this zone.

      c.   Another idea supported by many forum participants was to do what NIH has done for ESI investigators and keep the pay lines steady until the field is leveled. An alternative would be to fund a certain percentage of applications from underrepresented researchers or fund all applications from minority investigators that score above a certain threshold.

      d.   One statement that was made several times during this discussion was that the funding disparity is evidence that taxpayer dollars are not currently serving the people who pay them (underrepresented minorities).

3. Another idea raised by participants in all three forums was to develop MIRA/R35 and R01 type awards specifically for faculty of color.

      a.   It appears that the majority of panelists in all forums supported this idea; there was a common perception that MIRA/R35 awards are disproportionately awarded to White males. Development of specific award types for faculty of color, would allow them opportunities to take on more comprehensive roles, including serving on study sections, which would allow for greater representation and participation in a larger array of topics in review. Participants noted that if such a program were implemented, care should be taken to avoid requirements that could further alienate underrepresented minority scientists.

4. Some participants saw CSR's presentation of data (presented only in the July 8 meeting) on the relationship of IC award rates to funding disparities for topics favored by B/AA applicants (see [Open Mike Aug 12](#)) as "victim blaming".

      a.   Participants expressed the view that NIH should change institute priorities to align with the interests of Black scientists. The current scientific prioritization alone structures imbalances, which is compounded and has ripple effects in the external scientific community as to what the field sees as relevant and important.

      b.   Participants also agreed that another facet connected to topic choice and funding outcomes is that in some fields, such as in social sciences, there is an enormous amount of subjectivity about what the best approach/the best method is and this invites in bias.

5. Participants called for NIH Institutes and Centers to engage with underrepresented minorities to prioritize and fund studies to examine institutionalized racism, and to expand NIH support for topics important to underrepresented communities. Simultaneously, there was strong call for action from the NIH rather than more studies.

      a.   Participants thought that studies of racial bias in academia, funding disparities, and workforce development are not well received at NIH. Some reported experiences with NIH Institutes that have said "take it to NSF". Analysis of funding rates isn't sufficient – participants requested more data on award size, renewal rates, how much budgets are increased for renewals, fellowship candidate outcomes. What is the amount of money people are receiving on renewals? The data could be used to examine all the ways bias compounds over the course of careers.

      b.   Participants identified a need for more collaboration across NIH Institutes and Centers in order to make a home for these types of applications; until that is done, it was not clear to participants how NIH could review grants of this nature.

      c.   There were many suggestions for NIH to engage with Black PI's and to hold focus groups to understand both barriers and facilitators for minorities in peer review and funding and to determine strategies of success and shape policy in this area.

      d.   However, it is important to note that many participants voiced the opinion that additional study of systemic bias is unnecessary and instead NIH should focus on implementing solutions.

6. One topic that gained some traction during the first two forums was the idea of extending implicit bias training to NIH program officers (PO), as well as providing more targeted outreach to underrepresented minority investigators.

      a. It was stated that POs serve as access point of applicants to the NIH system and lack of engagement from POs can disadvantage applicants from getting the information needed to submit a successful proposal. Related to this, POs can influence whether a grant ultimately gets funded and participants voiced the concern that this could be based on professional relationships with the investigator that often break down on race lines.

           i. It was also proposed that in order to boost the low proportion of Black applicants, NIH could provide special outreach to midcareer scientists or provide diversity supplements at career stages beyond early career.

      b. One solution proposed, in addition to providing implicit bias training, was to encourage POs to proactively reach out and provide support and resources to assistant professors who are underrepresented minorities; doing this will reduce the learning curve for this population and hopefully begin to level the playing field.

      c. Other support that POs could provide is guidance to Black PIs on resubmissions, as it is seen that Black PIs do not resubmit at the same rate as do White PIs. One participant shared his own experience of not wishing to resubmit because he found the critiques to be "terrible" and biased. The resubmission process can also be disadvantageous to investigators in limited resource institutions.

7. During the course of discussion there were several other notable ideas.

      a. One suggestion was to reconsider single (per institution) submission policy for any funding announcement. Single submission policies are viewed as harmful as it places Black/African American PIs in competition with White PIs, particularly at primarily White institutions. The decision as to which investigator may submit is left to the university, possibly making the decision subject to bias/internal politics.

      b. One participant also proposed making the R01 research strategy more like a research performance progress report. Introduction of more structure in the research strategy could help offset stylistic advantage that comes from having access to the right research networks (which underrepresented minority faculty typically have limited access to).

Larger concerns – academic pipeline, etc.

1. The conversation varied from more training for underrepresented minorities, to barriers in productivity for them.

      a. Some participants thought that minority investigators should be provided with more than just a courtesy invitation in educational and training grants (i.e. beyond involvement in external advisory or stakeholder committees), so they can learn how to write grants, build portfolios, increase publications and be more successful in the peer review arena.

      b. It was suggested that publications in high impact journals are often based on relationships with journal editors which break down race lines. Systemic racism drives publication and funding rates, and funding drives productivity, creating a cycle that is difficult to break. This suggests that using journal publications as an indicator for productivity may further disadvantage minorities, both in the realms of reviewer qualifications as well as investigator qualifications for proposed research. Another underlying contributor for the disparity in funding for underrepresented minorities is that what is typically seen as "low productivity" in publications and research projects is actually reflective of other administrative duties expected by the institution, and/or dedication to their clinical careers.

Request for Items

Data/information requests covered many topics, with some requests having more support than others. Most of the data requests from forum participants were requests for data pertaining to the peer review process and NIH funding practices. Data pertaining to patterns of scoring ranges was asked for frequently and forum participants were interested

in finding out if reviewers tend to vote towards the harsher end of a scoring range if the investigator is an underrepresented minority and what the spread of scores was for applicants of different backgrounds. Many participants were interested in knowing the scoring patterns for non-discussed applications and if one harsh score has the potential to worsen all scores from the panel. Another popular request was for CSR to assess whether there is a correlation between Black/African American membership on peer review panels and scores for applications from minority investigators.

A request was made of CSR to articulate its benchmark for the number of individuals of color that should be in the room each time a study section met. Participants were also interested in obtaining more information about how NIH Institutes and Centers determine funding priorities and pay lines. Other frequently occurring requests included plans on how CSR can decrease the impact of the Matthew effect and if it is possible for NIH to set up a diversity R01 similar to diversity K awards. Many forum participants expressed interest in finding out what the NIH could do in terms of establishing diversity awards, within what is allowed by the Office of General Counsel.