



NHFP Essay of Findings (Unedited)

Introduction

Throughout the summer of 2021, I enjoyed the opportunity to serve as a panel member for the NASA Hubble Fellowship Program. As a member of this panel, I was able to work with erudite scholars and practitioners from across the nation in order to address the two main focus points for this particular project. The two areas of opportunity that the panel wanted to explore were: (1) Fellows' success and Program satisfaction and (2) equity, diversity, and inclusion in the program. As an expert and leader in the world of multicultural organizational development, I was able to position myself not only as an active voice in relation to providing clarity and insight on DEI best practices, but I was also able to formulate a series of observations and findings that I believe would be helpful not only for NASA as an organization, but for the field of Astrophysics as a whole. My findings are as follows:

Findings

1. BIPOC Support

According to Data USA, of the 1,168 Astronomy and Astrophysics degrees awarded in 2019, White students made up 697 of the degrees conferred, leaving a total of 471 to be distributed to the other races studied. Of the recipients recorded by race and gender, 299 *bachelor's degrees* were awarded to White men with 167 going to White women. Black men and women received 11 and 5 respectfully, while Indigenous Natives (Alaskan, American, Pacific Islander...) saw men and women receiving either 1 or 2 bachelor's degrees. Finally, of the 173 *doctoral degrees* awarded, White students received 101 (men = 66, women = 35) with the second largest group being non-resident scholars (men = 28, women = 26) whose race is not readily disclosed. For doctoral degrees received by BIPOC students (Black & Indigenous People of Color), there were 0 degrees conferred in all of 2019. (www.datausa.io).

One clear takeaway from this is the obvious gap between BIPOC success at the bachelor's level vs the doctoral level. There seems to be a sharp decline in attainment, reminiscent of attrition, for this group in particular. This type of decline, in alignment with the poor retention rates and overall access to opportunities for BIPOC scholars begs what I have found to be the overarching question for practitioners and faculty in the field of Astronomy, Physics, and Astrophysics: Is this field designed for the success of BIPOC scholars?



The main trend we have seen throughout the research of these fields is that scholars of color, both at the student and faculty levels, are not visibly present in the scholarly body overall. To be clear, efforts to retain such a group have manifested in many ways, such as AAS's 2020 decadal position on equity, and the equity and inclusion criterion from NASA's Hubble Fellowship Program evaluation. However, regardless of the different ways entities within the field have committed to DEI, there seems to be a failure to put into practice some of the rhetorical commitments that are shared amongst the community.

2. Anti-Blackness Predicate

After the deaths of George Floyd, Breonna Taylor, and Ahmaud Arbery, organizations and institutions around the world began centering their professional frameworks around diversity, equity, and inclusion with a diligence unlike we had seen in the past. Many workplaces were creating training and development opportunities, instituting strategic plans, and reimagining what inclusive spaces looked like. Yet, what is most unique about this change is that the vast majority of the uptick in institutional DEI work over the past year seemed to stem from these three deaths (George Floyd, in particular); which suggests, in one way or another, an acknowledgement of anti-blackness. Further, many institutions cited not only these three deaths, but anti-blackness directly as the impetus for their DEI work, yet, none of these institutions explicitly stated, referenced, or acknowledged anti-blackness in their existing work or future work plans.

This theme remained true throughout my work with the Astronomy, Physics, and Astrophysics fields and its relevant organizations, including as a panel reviewer for the NHFP. As a panelist, I found that there seemed to be a greater rhetorical commitment to anti-blackness from the parties involved in the DEI work rather than a practical one. One obvious reason might be the exclusionary nature of anti-blackness work which almost exclusively focuses on Black issues and not those of other racial and ethnic identities. This matters because, if the focus of one's work is diversity, then inherently the focus needs to be on all identities. However, this becomes a promulgation of anti-blackness when institutions and organizations use issues that are historically unique to the Black community (such as police brutality) as a steppingstone to gain support for larger issues that do not concern this community directly (such as making a broad case for diversity in general vs. issues that directly involve Black identities) – which is evidenced by the lack of harkening to or recognition of the very events or concerns that launched the DEI initiatives to begin with.



In the case of the Astrophysics community, it is vitally important to remember that there are multiple layers to diversity, equity, and inclusion, and that the community should be aware of what DEI means to them before shifting towards it. For example, as a testament to the data above, it stands to reason why a focus on the Black community would warrant more attention. However, if the focus is actually found to be diversity and inclusion as a whole – all-encompassing of many identities – than the approach and its impetus should reflect that. Therefore, I believe that there needs to be a clear distinction for the Astro field to decide whether their predicate for DEI is grounded in diversity broadly, or whether DEI is grounded in anti-blackness. Understanding this distinction will help set the tone for how the future of the work in the astronomy field manifests.

3. Excellence through Equity

What seems to prevail in these three fields is this ethos of exclusion, couched in a sense of “tradition” that many members of the Astrophysics community largely ascribe. There seems to be a challenge among Astrophysicists around understanding exactly what role DEI plays in the field; this is largely due to the fact that the crux of DEI work is not simply quantifiable. For example, there has been research done on what is called First and Second Order Changes, where First Order Changes speak to the data driven results (surface) and Second Order Changes speak to the intangible results (deep culture). The argument for DEI is that equity is not, by itself, quantifiable, but largely measured by institutional and cultural impact. In such a tradition where the norm has been established for decades upon decades, it is only known for one creates space by *improving* the “norm,” rather than *amending* it; although such measures of equity and inclusion would require, in some cases, radical emendation. For example, over the course of the covid-19 pandemic, even when institutions adjusted their criteria to diversify their recruitment by removing standardized testing and moving towards a partially anonymous application process, studies found that the type of students that gained admittance shared many of the same qualities and, ultimately, identities as those students prior to the implementation of these measures. This suggests, therefore, that the process by itself, is not the issue, but the behaviors (through biases) of the search committees, is as well.

For host institutions, if the culture is such that a particular student profile stands out to the committee (specific GPA, extracurriculars, research topics, past courses...) then whether or not an anonymous process is in place, the committee is still highly likely to gravitate towards that type of student. This is because an anonymous review process does not mean that there is “more space” for recruitment. Thus, it stands to reason that, in the back of the minds of many committee members, reputation and, relatedly, biases are ever present.



For the NHFP to be truly inclusive, the two things I find would be most helpful would be to (1), open up the institutional possibilities of their applicants and (2), untrain the biases of the search committee.

Conclusion

In sum, I offer three pillars that might serve as a message to the Astro community at large. These three pillars should help practitioners and agents of DEI begin instituting the necessary changes to their institutions and organizations in order to shift their cultures of inclusivity.

Institutions

At the institutional level, organizations must remember to never engage recruitment (diversity) without retention (inclusion). This means that whenever an institution sets out to diversify their hiring or recruitment in order to increase representation, they should have measures in place to support the newly hired individuals' time in the office, and to foster their success, as well. One of the greatest challenges we see in multicultural organizational development is the treatment of diversity as a quota rather than an opportunity. Thus, the reason why I connect recruitment to diversity and retention to inclusion is because *diversity* in this case, is external and speaks more to the idea of 'representation' – meaning that diversity is something that may closely resemble a First Order Change. This is because one can actually quantify diversity via collecting information on social identity. Whereas *inclusion* is internal and speaks more to the ideas of value and involvement – which more closely resembles a Second Order Change. This is because significant shifts in inclusion involve intangible victories, such as a positive sense of belonging, investment, and access to opportunities that suggest and foster growth, promotion, and tenure. Some of these opportunities might be found in networking opportunities for communities of color, as well as mentorship opportunities to ensure that guidance and advisement are being instilled in an equitable way.

Community

One message I share with all those with whom I work is that social justice is a commitment to upsetting the established order. This means that, there are people in this world who benefit from the way things are right now – and who would actually find greater issue with social change than without it. This is not to suggest that those who benefit are somehow dangerous or problematic, but to acknowledge that they are inherently, consciously, or unconsciously, receiving social privileges by helping to maintain the status quo. One major way to begin implementing change for DEI is to move away from our “normal” group of Astrophysicists and begin supporting and encouraging engagement from a more diverse



group. Celebrating the diversity that already exists by citing and honoring students’ papers and awarding fellowships to prospective students from smaller schools are two simple ways to break away from the traditions of most folks within the field. Ensure that communities of color, women, and other marginalized identities are afforded the same opportunities to find success in Astrophysics by intentionally recruiting them where they are.

Individuals

Arguably, most importantly, we all must begin to conduct change at the individual level. Sustainable organizational change in terms of DEI requires two elements – design change and behavioral change (see below). Design change involves restructuring the system in a way that allows policies and procedures to be as inclusive and equitable as possible. Behavioral change engages the attitudes and actions of an organization’s people in order to create a more inclusive and equitable culture. At the individual level, behavioral change includes attending training and development workshops as a way to continuously or begin to increase one’s competence in the work of diversity and inclusion. Resources like books, articles, and diverse scholars are a great way to engage the diversity within your field and to promote that throughout. The idea behind the relationship between design and behavior is that institutions and organizations will ultimately create a workplace whose equitable design allows for inclusive behaviors to exist. Reexamining what the needs of the Astro community are (who’s missing, what’s not working, etc...) in terms of DEI would be the most ideal place to begin.

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Organizational Alignment Card

Organizational Design		Organizational Behavior		Sustainable Outcomes
Same Design	+	Same Behavior	=	Same Outcome
Same Design	+	Changed Behavior	=	Same Outcome
Changed Design	+	Same Behavior	=	Same Outcome
Changed Design	+	Changed Behavior	=	Changed Outcome

