

**African American Attendance at the Botanical Garden**

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## **Introduction:**

How could the attendance of individuals inside the Missouri Botanical Garden improve? One way for improvement could be an exhibit made about the history of African Americans and the garden. This would show what the garden came from, what it is today, and how it got to that point. Although there may be some gaps in the knowledge of the Garden, even so, there is still a lot to be displayed about the history. Some things that are unknown are how this will affect the garden's attendance, and if this has been done before. It is thought that nothing like this has been implemented before.

There have been studies made about ideas similar to this one, but they are not exactly the same as our question. Some of them were about horticulture and how it reflects attendees' attitudes. These types of sources are giving insight, and how much of a difference the inclusion of African American history in the gardens could make. Because of this, the idea of putting an exhibit displaying their history became an idea.

To understand the topic, the following terms need to be known: botanical garden, arboretum. A botanical garden is a "space for cultivating, collecting, and studying plants" (Carrus et al.). An arboretum is a garden dedicated directly to only trees.

## **Research Question:**

The hypothesis that was introduced was "An increase in the diverse exhibits at the Missouri Botanical Garden leads to an increase in attendance of African Americans." This specific hypothesis interested the group because there is another class known as CODE 221, which is a research group for the CODE scholars of SIUE. In this group, there are different subgroups. Our group is interested in the history of African Americans at the Missouri Botanical Garden (MOBOT).

It is hypothesized that if there are different ethnic background exhibits at MOBOT, there will be an increase in African American attendees. Learning about the history of African Americans in the research team, and having their history on display, then all of this could lead to an increase in the attendance at MOBOT.

### **Review Papers:**

Dunn, Christopher P. "Biological and cultural diversity in the context of botanic garden conservation strategies." *Plant diversity* 39.6 (2017): 396-401.

The purpose of this review was to describe plant conservation and show how important it is for the planet, as well as other things. It has also led to "Maintain the integrity of plant life, it is not enough for botanic gardens to consider solely the effects of environmental change on plants within the context of major conservation strategies such as the Global Strategy for Plant Conservation and the Convention on Biological Diversity" (Dunn). This loss in the conservation of plants has led to many different outcomes, most of them negative. One of the most notable is the language loss suffered because of the indigenous properties of the plant itself.

The article starts by introducing some history on the topic, just mentioning how gardens have had attractive exhibits, and how these can be negative. There have been accounts of culture and language loss. How there have also been environmental changes with plants going extinct. The paper then talks about how this has also had an effect on plant conservation, and about how conservation needs to be improved. Conservation can be improved through public engagement on the subject, and having their support. If conservation is not upheld, then climate change is a factor.

One of the more notable effects is the loss of cultures and languages. Many cultures and communities are having to move away because of the environmental changes around them. It is said in the paper, "In the most vulnerable parts of the world (e.g., Pacific Island nations and high elevation areas), impacts of environmental changes such as sea level rise threaten to erode biological diversity and thereby cultural and linguistic diversity as a result, in part, of communities being forced to migrate to new and unfamiliar areas" (Dunn).

An idea that was proposed in the paper was making new gardens that have a "conservation strategy" to be followed (Dunn). There are counts of certain gardens that have been created with this thought in mind, and an institute that is a crucial part of implementing the gardens all over the country. There is one garden mentioned, and it is the Royal Botanic Garden of Jordan, and the institution is the Ethiopian Biodiversity Institute (Dunn). There are many more responsibilities that are present with these strategies. One of these being "aware of international protocols, related to indigenous property rights (such as CITES,)" (Dunn). Overall the paper ends with the conclusions made, and how gardens are provided with an opportunity to find where cultural diversity can be implemented into their own strategies. (Dunn) There are also gardens that are going to be made that follow these protocols to keep their garden safe.

The conclusion of this paper is that there is not really much that correlates to our paper, and our research topic. But, there is one part that is beneficial to us. That is the part about having the new gardens with the conservation strategy to be followed, maybe this strategy can be putting their history on display for everybody to see. Also a big part is that indigenous peoples languages are decreasing because of misrepresentation of information. If the history of African Americans is on display in the garden's plant knowledge, then it is assumed that the attendance at the garden would increase.

Jennings, Gretchen, and Joanne Jones-Rizzi. "Museums, white privilege, and diversity: A systemic perspective." *Dimensions* 18.5 (2017): 63-74.

"Museums, White Privilege, and Diversity: A Systemic Perspective" by Gretchen Jennings and Joanne Jones-Rizzi is a review article providing a critique of museums for perpetuating white privilege, and the challenges of the museums to become inclusive spaces for marginalized communities. The authors focus on failure by the museums usually to go beyond aesthetic diversity programming in an equitable and inclusive manner that would counter the deeper structural inequalities that their institutional practices have supported. They claim that, while promoting diversity through their exhibitions and programming, museums have never confronted the very foundation of racism that serves as the basis for their leadership, collections, and overall institutional practices. By taking a critical perspective, an article outlines the need to approach inequality in museum spaces using a deeper, virtually systemic approach.

The authors take a qualitative approach, drawing from theories and case studies of museums that have attempted diversity initiatives. They explain the history of museums, which have been shaped by dominant social and racial power dynamics and present-day practices that continue to marginalize people of color. The article contrasts the largely white leadership in museums with how exhibits are created and curated, often with little input from the underrepresented communities. This imbalance creates a barrier to real representation while denying a sense of full ownership by the marginalized groups.

Such a story cannot be reduced to token programs or exhibitions. Structural changes within museums must consider, as the authors argue, genuine representation of diverse communities. In their view, dealing with underrepresented groups must occur genuinely and collaboratively, not just in exhibit curation but also in decision-making roles in the institution. Confronting the system of white privilege is a means for art institutions to dismantle these barriers to authentic inclusion.

The author proposes that future advances should focus on shifting power dynamics and ensuring that underrepresented voices not only are represented but also drive the construction and interpretation of displays. This article is relevant because it examines how to boost the number of African Americans visiting the garden by organizing diverse exhibitions. MOBOT should pursue realistic, representative, and collaborative exhibits that highlight African Americans' significant contributions to botany. Addressing structural imbalances within the institution would enable MOBOT to establish an environment in which African American visitors would feel more welcome and engaged.

## **Research Papers:**

Janine R. Conklin, Patricia R. Drackett; A Survey Method to Gauge Public Interest in Programs, Activities, and Events at Arboreta and Botanic Gardens. *Journal of Environmental Horticulture* 1 March 2011; 29 (1): 1–8. doi: <https://doi.org/10.24266/0738-2898-29.1.1>

The authors conducted research to help arboreta and botanic gardens gauge public interest in their programming. This is essential for these institutions, especially under budget constraints, to help design programs that attract visitors without too much spending. The study provides a framework that can be adapted by similar institutions to better align their programming with public interests, ultimately supporting financial security and visitor engagement (Conklin and Drackett).

The purpose of the study was to identify community and visitor preferences for different activities at the Crosby Arboretum. The authors guessed that understanding demographic preferences could help arboreta in designing events and activities that increase repeat visits and increase public support (Conklin and Drackett).

The study used intercept surveys to collect demographic data and interest in arboretum activities from two groups: local community members and arboretum visitors. Surveys were given at two events, the Picayune Street Fair and Piney Woods Heritage Festival. Questions over demographics, communication methods, and general interest came up. Statistical analyses were performed to measure differences in preferences between these groups, employing X squared, and Kruskal-Wallis tests for demographic factors, and the Mann-Whitney test for comparing specific interests (Conklin and Drackett)

The study found differences in demographic profiles and preferences between community members and visitors. Community members were generally younger and had a stronger preference for activities like craft exercises, fitness walks, and continuing education classes, while arboretum visitors, who were on average older, showed more interest in music performances and specific educational topics. Interestingly, both groups expressed little interest in activities such as book clubs, dance classes, and preschool programs (Conklin and Drackett)

The authors conclude that aligning arboretum programming with identified public preferences can improve attendance and community support. They propose that future directions for the research include expanding the survey approach to other arboreta and conducting follow-up studies to evaluate program satisfaction and potential refinements. The findings underscore the importance of flexible, data-driven program planning that considers demographic-specific preferences (Conklin and Drackett).

The paper's methods could be adapted to explore whether an African American history exhibit might increase attendance at a botanical garden. The study shows that understanding visitor interests and demographics helps tailor programs that align with public values, suggesting that a targeted survey could provide insights into the appeal of such a display.

Steinhauer, Melissa, M.A. Brennan, Dennis McConnell, Carrie Reinhardt-Adams, and David Sandrock. "Visitor Responses to an Ethnic Garden Display in a Botanical Garden". *HortTechnology* hortte 17.4 (2007): 537-543. < <https://doi.org/10.21273/HORTTECH.17.4.537>> . Web. 16 Sep. 2024.

The research by Steinhauer et al. explores the impact an ethnic-themed garden display. In this case, it is African American visitors' interest at botanical gardens. The study hopes to understand whether such a display could foster greater inclusivity and engagement from underrepresented groups, particularly African American visitors. The hypothesis that grounds the research is that the use of cultural heritage in garden exhibits would make them more attractive for diversified audiences and could further lead to increased visitation due to the welcoming environment created (Steinhauer et al. 537).

This research used a cross-sectional survey method at Harry P. Leu Gardens, Orlando, FL, subsequent to the establishment of an African American horticulture exhibit. This exhibit included plants important to African American history, like those utilized by George Washington Carver, and plants of African origin or of medicinal value. The instrument The authors utilized availability sampling to make self-completion questionnaires available to adult visitors when they exited the exhibit area. The questionnaire also contained Likert-scale items that measured the overall attitude of visitors towards the garden, specific attitudes towards the African American display, and interest in ethnic-themed displays in general, as discussed by Steinhauer. Data analysis was done using bivariate and multivariate techniques, which included linear regression models that identified how visitor demographics and visitation frequency affected responses (Steinhauer et al. 538-540).

The results indicated that attitudes towards the African American display varied by race. African American visitors expressed a stronger appreciation for the display compared to visitors from other racial backgrounds, suggesting that such exhibits resonate more with people who share a cultural heritage. The researchers also noted that visitors with higher education levels were more interested in ethnic displays. Interestingly, the weekend visitors and those who had a history of previous visits showed a more positive attitude toward the garden in general. The findings indicate that the gardens would benefit from programs and services that take into consideration visitors' diverse preferences and backgrounds (Steinhauer et al. 540-542).

Besides, it was established that the demographic factors, such as age and income, influenced visitor attitudes. Younger visitors and middle-income visitors are more enthusiastic about the garden and the African American display. It confirms that age and ethnic groups are what gardens must keep in mind if they have to develop programs for attracting a broad audience. According to the researchers, the incorporation of educational messages on plant history and cultural significance would heighten the experience of visitors, as well as make it rather informative, especially for 'learners' (Steinhauer et al. 541-542).

The authors conclude that ethnic-themed displays, such as the African American horticulture exhibit, are indeed an effective means of appealing to underrepresented groups and engendering inclusivity within botanical gardens. The gardens should incorporate various culturally relevant displays in order to gain wider appeal and encourage more diversity among visitors. Future research can be conducted into other ethnic-themed displays in order to better understand the

impacts on various demographics and further investigate how ethnic exhibits affect visitor engagement and satisfaction. (Steinhauer et al. 543).

This article directly helps answer the question of whether showing African American history in a garden could increase attendance. The results indicate that exhibits that reflect African American heritage may well attract more visitors from that population, which suggests that cultural representation is one way to make public gardens more inclusive. This research provides a concrete framework for assessing how an African American history display could impact attendance and visitor diversity at the garden.

Carrus, Giuseppe, et al. "A different way to stay in touch with 'urban nature': the perceived restorative qualities of botanical gardens." *Frontiers in Psychology* 8 (2017): 914.

The research by Carrus et al. is based on environmental psychology. The authors are perceiving the psychological and physical benefits that gardens have as a "restorative environment" (Carrus et al.). It is also stated that there are certain gardens in urban areas that are there to present a form of connection to nature. The hypothesis of this paper is that "As such, botanical gardens could be considered as a very special type of 'restorative environment' (see Hartig, 2004), and represent interesting arenas in which to conduct research on environment-behavior relations and, in particular, for research on the interplay between environmental psychology and urban forestry" (Carrus et al.) This is essentially saying that there are gardens that give off a "restorative" feeling to them, where one is interconnected with nature, and is able to be calm and improve their relationship with nature itself.

The methods that were implemented in this research was looking at visitors to four different botanical gardens. The gardens were Rome, Bari, Padua, and Florence botanical gardens. of these gardens there were "28 subjects for the Rome site, 25 subjects for the Bari site, 24 subjects for the Padua site, and 50 subjects for the Florence site" (Carrus et al.). The results were that the restorative benefits of gardens were generally high. These methods worked because of the different environments that different people were in.

The paper begins by talking about botanical gardens and how in urban areas, there are gardens that are beneficial. These gardens are a place where people can interact with nature and "take refuge" from the outer urban stressors (Carrus et al.). Restorative elements in this case are defined as "settings capable to 'promote (rather than merely permit) the recovery of those mental resources used by the individual to face daily life tasks..."(Carrus et al.). Then, it is mentioned that restorative properties show a positive response in the attention span, and a stress reducing effect. The attention aspect is referred to as ACT (Attention Restoration Theory) and the stress reduction is SRT (Stress Reduction Theory) (Carrus et al.). These theories were used for measurements and data collection.

It is stated that botanical gardens are a restorative environment. People can find opportunities for “staying away from everyday routines” (Carrus et al.). The study evaluated relationships between restorative properties, and the well-being of the visitors that they reported. To measure this, there was a questionnaire given, consisting of “Open-ended, multiple-choice, and Likert-type questions on different aspects of the visit” (Carrus et al.).

The results of the research is that the restorative effects of the gardens were high. There were figures included, showing much of their results and their methods of data collection. Some of these figures include a “meditating model”, a model of the “moderation of the effect of restorativeness, and one more figure showing means and standard deviations of independent variables, meditators and outcome” (Carrus et al.).

The overall conclusion is that botanical gardens are restorative in nature, and have restorative properties with them. It is suggested by the authors to compare botanical gardens with other areas that are considered restorative in nature. It is also mentioned that botanical gardens should be referenced and promoted in urban areas and environments because it can be a source of “positive outcomes and well-being for urban residents” (Carrus et al.).

The information that this article presents is that gardens are a restorative space. They help reduce stress and other factors, which means that there would be little to no issue putting in a new exhibit. This means that we can put a new exhibit into the garden without many issues.

Wassenberg, Christopher L., Marni A. Goldenberg, and Katherine E. Soule. "Benefits of botanical garden visitation: A means-end study." *Urban Forestry & Urban Greening* 14.1 (2015): 148-155.

In this research, the authors are looking into the reasons why people visit botanical gardens and what they gain from their experiences. Their methodology intends to investigate how these experiences contribute to individual and community well-being, with an emphasis on botanical gardens providing spaces for education, relaxation, and a connection to nature. The authors are seeking an understanding of the behavior of patrons by using the means-end theory, looking at how botanical gardens react to their visitors. This enables them to investigate multiple benefits these institutions offer beyond solely their environmental or aesthetic value.

According to the hypothesis underlying this study, visitation to botanical gardens yields psychological, educational, and emotional benefits that coincide with individuals' larger life goals and values. Understanding these benefits, the authors propose, serves to inform the management and programming of what can be, thus enabling botanical gardens to be more useful and relevant to a wider audience. Through exploration of visitor motivations and perceived outcomes, this study tests the theory that the benefits of visits to botanical gardens transcend leisure-kind perspectives in enhancing the general quality of life.

To test these ideas, the authors drew upon qualitative research methods based on means-end theory to carry out in-depth interviews with botanical garden visitors. Patrons then were asked to explain why they visited and what did they gain from it. These were later analyzed through



a hierarchical value map (HVM). This setup permitted the researchers to draw connections between specific attributes of the garden: stress relief, connection to nature, educational benefits, aesthetic/natural beauty, and overall value. When establishing these connections, the authors were able to tease through their hypothesis referring to the complex interplay between personal means and perceived gains from visiting gardens.

The study found the patrons feel overall botanical gardens can provide beautiful scenery, relief from stress, and a better connection to nature. Botanical gardens are typically viewed from only an educational lens to understand botany on a deeper level while they could also provide leisure. These results showcase how botanical gardens have both educational and recreational benefits. The authors suggest that botanical gardens can enhance their societal impact by prioritizing programs that address visitors' emotional and educational needs while also supporting environmental sustainability. Recommending that future research examine the long-term effects of visiting gardens on individual well-being and investigate how different communities engage with these spaces. The study provides important insights into the reasons behind garden visits and their benefits, indicating that culturally relevant programming and exhibits could draw a wider audience by aligning with their values and experiences. By utilizing these findings, MOBOT can develop inclusive and meaningful experiences that strengthen connections with African American visitors.

Crane, Susan A. "The conundrum of ephemerality: Time, memory, and museums." *A companion to museum studies* (2006): 98-110.

This article showcases how museums inhabit the space between time, memory, and the preservation of culture. Crane's study focuses on the contrast between how fleeting our memory can be and the museum's act of preserving history and culture in a moment. Museums are permanent collections that attempt to shape cultural memory within the transient experiences of visitors. Crane studies how individual museums create narrative structures that outlive the single moment of display even while acknowledging the fleeting terrain of personal interactions. By studying case studies and concepts emerging from cultural studies, she shows how despite the short lifespan of exhibitions, they can still manage to leave a lasting memory to the patron. This applies especially in the case of exhibitions addressing specific cultural or historical motifs, which would interact deeply with audiences. Crane posits museums as memory-creators themselves, forging narratives that link the ephemeral nature of individual experiences with wider, long-lasting cultural narratives.

A prominent theme in Crane's analysis is the subjectivity of memory. She indicates that museum visitors enter the museum with their own histories and meaning-making, creating a dynamic between the institution and the public. The interaction between personal memory and constructed narratives highlights the challenges that museums face in realizing meaningful engagement. Crane insists that museums must be flexible and lively in their practices: temporary,

expressive, and interactive exhibits may be powerful tools to counter the permanent and the ephemeral.

The emphasis on the adaptive but captivating exhibits makes a great example of MOBOT's potential methods, such as hosting temporary events or displays celebrating African American botanical knowledge. Creating exciting and diverse exhibits can encourage a deeper connection between MOBOT and the local community. Crane highlights that the ephemeral character of such shows can make them more compelling, drawing attention to current themes and highlighting the importance of diversity for attendance. This is consistent with the idea that MOBOT might use temporary installations or events, such as exhibits about African Americans contributed to botany, garden tours relating to Black garden knowledge, or cultural festivals—to attract African American audiences who may feel underrepresented at the garden.

He, He, and Jin Chen. "Educational and enjoyment benefits of visitor education centers at botanical gardens." *Biological Conservation* 149.1 (2012): 103-112.

In this research, the authors reveal how botanical gardens could serve as both places for learning and having fun. The authors dealing with the purposes of the visitor education center, approached the research from the perspective of enhancing the knowledge about plant conservation and biodiversity while at the same time making the experiences more enjoyable for the guests. The goal of the work is to check if visitor education centers can harmonize the educational process with visitor engagement and the fun of the experience. They're attempting to emphasize the significance of these centers by explaining how they can be used to raise awareness and appreciation of nature among community members.

The hypothesis of the study is that visitor education centers are a primary factor in the process of botanical garden visitors' education as well as the nature of their leisure. The authors claim that these centers that are providing interactive exhibits that educate visitors on conservation still have a very high satisfaction rate. Botanical gardens must ensure that they stay in tune with the needs of the swiftly evolving society that surrounds them and remain accessible to as diverse an audience as possible. Encouraging deeper connections with the environment and biodiversity conservation are established.

To investigate their hypothesis, the authors utilized quantitative and qualitative methods, mainly utilizing visitor surveys and direct observations. Through these, they were able to gather data on the visitor demography, motive, and the way the surveyor perceived the (possible) visitor education centers. The surveys that tested participants' cognitive/affective understanding of biodiversity/conservation, were given before and after each visit. The additional data collected from the observers on patrons' interaction with the exhibits and programs, and the patterns of engagement and enjoyment revealed were also used to offer explanations and conclusions regarding the hypothesis. The study design is successful in confirming the hypothesis because the

interactive educational exhibit and strategies used are related to the measurable visitor outcomes in terms of awareness and satisfaction.

The authors find that educational exhibits are necessary for the botanical garden, where the function of educating is carried out within the framework of leisure activities. They propose that the study should focus on the development of such customized pieces that will resonate with them, while with time the undergone change will stay in the audience's lifestyle. This article is a very important one for the strategy of increasing the attendance of Black patrons at the Missouri Botanical Garden. The outcomes demonstrate that forming culturally inclusive exhibits that can create resonant educational areas and exhibits can not only improve educational experiences for the affected groups but also result in their being happier there. Also, by developing programs that include information about the botany produced by African Americans and their contributions to them, MOBOT could establish a strong relationship with this ethnic group and further engage them in the garden.

### **Science Communication:**

Kern, J. D. (2023, May 15). Gardens for all. Arnold Arboretum.  
<https://arboretum.harvard.edu/stories/gardens-for-all/>

The purpose of the article is to shine a light on the bias and barriers within the industry. Some information that is presented is that of a woman named MaryLynn Mack, who has been in the garden space for years, and is now talking out about the bias and other implications in the garden workspace. The audience is intended for the general public and garden workers, looking into finding ways to confront their bias. This article is educational and informative about the different ways to implement ways to confront the bias in a garden. The article is written by someone who has worked in public gardens, so a science communicator.

The article starts with an introduction of the author, MaryLynn Mack. She begins by talking about her experience in other gardens, referring to herself as an "only" meaning she was the only African American in the room (Mack). She was asked to be the representative of people of color during discussion about the set of issues known as IDEA. The issues are: "inclusion, diversity, equity, and access" (Mack). Her end goal was to engage within as many communities as possible, having to be the representative and all. She then continues, talking about how she was not the only person looking for change in communities. The APGA, also known as the American Public Gardens Association, was having conversations with its workers and had the idea of having more in-depth conversations about the "bias, barriers, and baggage in our industry" (Mack). In the APGA, there

are over ten thousand individuals, all spanning over six hundred institutions. These institutions' goal was to offer education, and advocate for members (Mack).

After this, Mack then begins to talk about a group of “truth-seekers”, meeting to talk about diversity and inclusion (Mack). The work that they had to go through was tough because there was no real way that people thought to go about this. They did not have a guideline. It is then said that “It is important to note that regardless of where gardens and their staff stand in their work towards inclusion and diversity, everyone must start by addressing what they do not know” (Mack). With this, we will be able to talk about the history of African Americans in the garden, and if the attendance will increase. It was mentioned that the garden owners need to bring up what the land was before (Mack).

Mack continues to talk about her experiences in the little group of truth-seekers. How they were working for one year, then there were plans to involve a membership within Hamilton, Ontario (Mack). There was a decision made to have an informal meeting about including diversity inside of the gardens. There were so many people attending that within five minutes before they started, they needed more chairs (Mack). There was a question brought up where a worker was afraid to start this because it was not known what was going to be said. However, Mack just told them to “step in it [bias]”.

This paper does not have bias, it has facts that have been experienced over time and Mack has had hands-on experience. This new information has shown us that there is definitely implicit bias that many of us are not facing. As Mack said, we need to just “step in it”, do not be afraid to accept the bias you have.

Bronx Times. “Botanical Garden Explores the Enduring Botanical Legacy of the African Diaspora.”  
Bronx Times, 4 Feb. 2023

This article focuses on the New York Botanical Garden initiative to honor the contributions of the African diaspora in horticulture and botany. Aiming to educate patrons about African American culture and botanical knowledge which is often pushed aside due to the Westernized view of science. Addressing this gap allows for a greater appreciation for diversity within botanical sciences and is part of the NYBG's central mission to engage new audiences meaningfully.

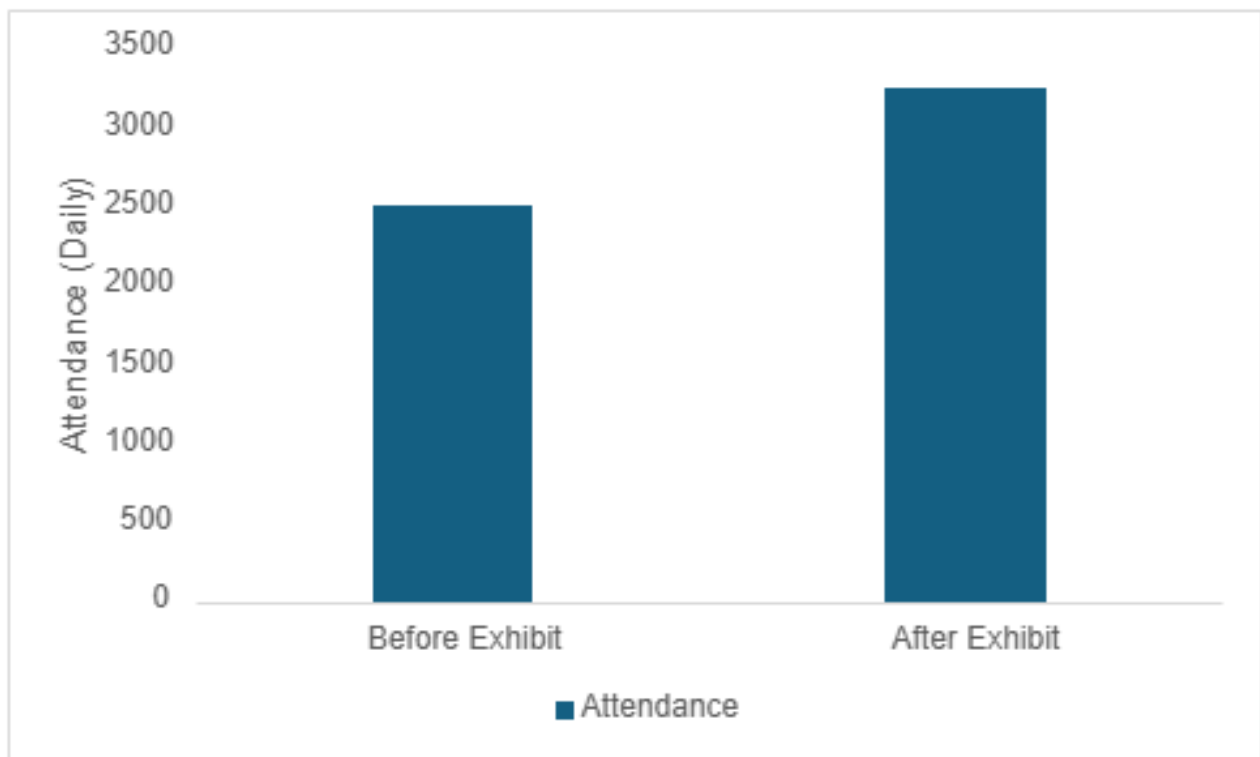
Weaving through the exhibits, workshops, and interactive programming is the story of human connections to plants and the environment: the African diaspora narrative is told through stories, art, and cultural analysis alongside botanical displays. This framing technique will ensure that the program speaks to a much wider audience. NYBG demonstrates that, when taken within their historical context and articulated in an attractive and engaging manner, narratives help make public institutions connect scientific education with cultural heritage to realize an inclusive environment.

Some of the objectives include the ability to attract and engage diverse audiences while countering the assumptions often found in many botanical spaces. These exhibits tell the stories of how African diaspora communities made contributions to agriculture, herbal medicine, and environmental stewardship, and help put forward another perspective on the story of botany by including marginalized voices. The program's continuing community engagement provides a forum for discussions and workshops led by experts, educators, and artists from the African diaspora. This method strengthens the connection between the institution and its audience, reinstating the relevance of such narratives in contemporary discourse.

This initiative offers a significant framework from which the Missouri Botanical Garden would want to draw ideas on increasing African American attendance. Possibly by displaying African diaspora contributions to botany and incorporating interactive and community-oriented programming, the MOBOT could attract more African American audiences. The botanical gardens could overall benefit by adding more exhibits that are open to a wider audience. The NYBG example touts that exhibits and events of cultural resonance can reacquaint botanical gardens with inclusive space that not only educates but also empowers underrepresented communities.

## Proposed Experiment

The hypothesis is that an increase in the diverse exhibits at the Missouri Botanical Garden leads to an increase in attendance of African Americans. The independent variable is the exhibits at the garden that will be implemented in the future. Something that might get in the way is when we are putting the exhibits in. Due to different exhibits being made at the same time, or depending on where we put the exhibit, there will be different measurements then. The dependent variable is the attendance at the garden, and how much it will change, depending on the exhibits. The control variable in this situation is the attendance at the garden before any of the exhibits are implemented.



- Figure 1: A representation of what the attendance is expected to do when the exhibit including the African American history at the garden is made and implemented.

### **Summary:**

The findings that were found in this report were very supportive of the idea of a historic exhibit inside of the garden. Because of this exhibit, it is assumed that the attendance would increase, validating our hypothesis. With the supporting factors of the other research, science, and review articles, I feel that there would be little to no issue with putting in a new exhibit to the garden, and I believe that attendance would increase as well.

Some major conclusions that I can make about the data is that there is definitely supportive materials found in this paper that can help implementation. There were many things that were supportive of it, even if it was only little parts that added together. The next step to address our question is to see how much African American knowledge there is inside the garden. Another step is to figure out the current attendance rate of the garden and get the exhibit relating to African American knowledge ready. After implementation, the attendance should be recorded again, taking note if the attendance either increased or decreased. Figure 1 is what we predict will happen when it is implemented.

### **Reflections:**

The most interesting thing that I learned over this paper is the restorative properties that gardens have. Another interesting thing is the reaction to an ethnic garden display will appeal to "underrepresented individuals" (Steinhauer et al. 543). And over time, reading these papers helped me to realize the different types of people that do science. It also helped me to realize how much of an impact science has everywhere, and that there are very specific problems that need to be addressed. In just the botanical garden scene, there were already many reports done on botanical garden research with different hypotheses etc.

Some of these reports were beneficial to us in the project itself, but there are still others that can be used to work on another hypothesis made by someone else. All of these papers could be used one day by someone working on a project.

The public knowledge about science papers and science topics should be introduced more openly. I feel that the public needs to know more about these terms to understand the experiments more. If there was someone who asked me to conduct a survey for their research, then I would be happy to. There were some skills developed over the time of the project as well. Some of them minor, while some of them more notable. One of these skills that could come in later on in our academic careers is the process of evaluating and reading a paper. Although this is a basic skill that some would say is trivial, there is actually a deeper meaning to evaluating a paper. There is much more to it than just reading it, and this paper really showed us how to do it well. This will help us create more accurate and relevant research questions, but also give us valuable information that we can create newer research questions out of.

Some things that we wonder is if this will ever be implemented. The idea and groundwork is laid out, there just needs to be someone who is willing to get this whole thing implemented and take the idea away. This could be us or someone else, but we just hope that this project is implemented. Another thing that we wonder is where all of this research and information will go

after a while? Are we just going to hold onto this research or give it to somebody to use for a future implementation of our project?



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