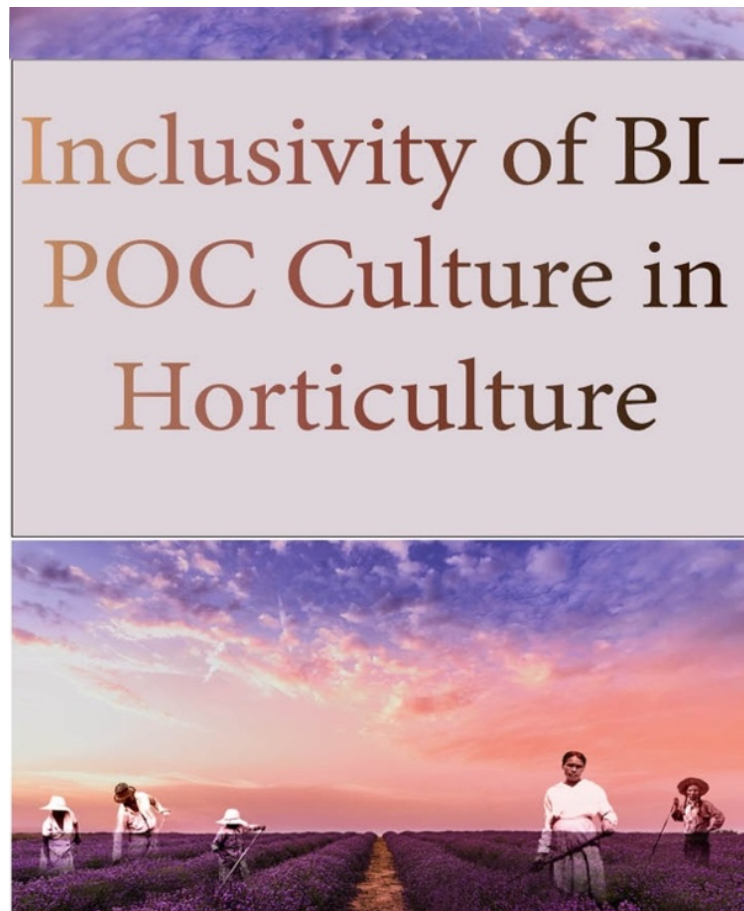


How Can the Field of Horticulture be More Inclusive to BIPOC?



How Can the Field of Horticulture be More Inclusive to BIPOC?



Amiah F. Cain

Faculty Advisor | Professor Stevie Famulari

University of Cincinnati | DAAP | School of Planning | Bachelor of Science | Horticulture

HORT 4092: Horticulture Final Project

April 2024

Table of Contents

Student Information	1
Previous Course Experience	6
Background Summary	8
Abstract	9
Keywords: []	10
How Can Inclusivity of BIPOC Culture Benefit the Infrastructure of Horticulture?	Error! Bookmark not defined.
Justification	12
User Description	13
Major Project Elements	15
Site Inventory & Analysis, Quantitative.....	17
Site Inventory & Analysis, Qualitative	19
Site Analysis	20
Case Studies (#) and Literature Reviews.....	22
Historical Context of Topic	28
Case Study Summary	30
Programmatic Requirements	33
Process Documentation	Error! Bookmark not defined.
Solution	34

References.....	35
Appendix	Error! Bookmark not defined.
Tables	41
Figures	42



Student Information

Previous Course Experience:

|2023-2024|

Spring 2024 | Senior Capstone | HORT 4092

Professor Stevie Famulari

Projects: Horticulture Final Project

Spring 2024 | Afrofuturism | AFST 2023

Professor Cassandra Jones

Projects: Final Fiction Project

Fall 2023 | Urban Landscape I Forestry | HORT 3040

Professor Dave Gamstetter

Project Include: Tikkun Farm 'Trail Restoration'

Fall 2023 | Urban Landscape II Agriculture | HORT 3042

Professor Brian Grubb

Projects Include: Bearcat Pantry Project

|2020-2021|

Spring 2021 | Hort Tech

Amiah Faith Cain

Personal email amiahfc@gmail.com

Student email cainaf@uc.mail.edu

*"Light creates understanding, understanding creates love, love creates patience
and patience creates unity." – Malcolm X*

Background Summary

Capstone | Horticulture Final Project

An individual project which explores the individuality of a Horticulture student and applies their skills, knowledge, and experience. This assignment is based on service to community in which my focus is the BIPOC community.

Afrofuturism | Final Fiction Project

This course examines current issues of race and racism and reexamines the past. It reveals the conflicts, struggles, and circumstances of (B)IPOC involving the past, present, and future. The final project is to create an original science fiction, or fantasy which uses these concepts to explore a black future, not influenced by westernized ideas.

Urban Landscape I | Tikkun Farm

Urban forestry covered accessibility, legality, and community building. Our final project is to collaborate with our peers on ways to use grant money while adhering to Tikkun Farms community focus and suggest improvements as well as develop strategies and site maps. In the course itself we also address redlining, the benefits of planting trees in urban communities, and the benefits of sharing cultural experiences to build community as well as expanding ideas in conservation.

Urban Landscape II | Bearcat Pantry

The Bearcat pantry project is a collaboration between peers to use our joint experiences and knowledge to build an infrastructure for the garden that would benefit the community and create safer, more efficient practices. In preparing for this project, we toured community gardens and urban farms to increase our awareness of what is lacking in current efforts, and what makes community.

Hort Tech 1010

Hort 1010 was an introductory course that covered horticulture as a career set. This class went through interviews of people in the industries and is also where I started to job shadowing. The relevance this course experience has to my credibility as a student is basic framework for career expectations. Through this I was able to see the professional tone set in this unique field and observed an underwhelming amount of successful people of color. This initially started my passion to be the change I want to see, not allowing my identity to hold me back from my passions.

Abstract

The current infrastructure of horticulture in the United States of America, lacks BIPOC representation. The purpose of the review and research is to address the effects of white dominance in horticulture and combat the current system to create a more inclusive and welcoming environment for BIPOC in horticulture. By juxtaposing past, present, and future contributions to horticulture from BIPOC individuals to the current concepts exhibited in horticulture we observe 3 things: The contributions of BIPOC ideas to Horticulture, the current representation of BIPOC individuals in horticulture, and the theorized future with solutions applied. This research is based on existing diversity equity and inclusion research seen in other fields, which theoretically will apply in the same context with horticulture. Under this assumption, it can be understood that horticulture is not the sole perpetrator in non-inclusive work environments for BIPOC but is rather a subcategory of the many organizations and communities within the United States that are systemically oppressive to BIPOC.

Keywords: [BIPOC, horticulture, diversity in horticulture, inclusion in horticulture, colonization, culture, anti-racism, equity, colonialism]

Statement

In the workforce of horticulture, educators and employers question the lack of diversity in the field (Rogers). A common question is “how can we get people of color interested in this field”? Within the historical context of this question, it can be noted that the lack of diversity in horticulture does not fall on people of color, but rather the institutionalized racism they experience which does not welcome them into fields such as horticulture (Kyere). The assumption that BIPOC are not interested in horticulture dismisses the process of evaluating the workforce itself, and if there are any existing barriers making the career field inaccessible or non-welcoming to BIPOC (Kyere). The research explores whether the current infrastructure of horticulture needs to be altered or completely reconstructed to be inclusive to BIPOC culture. While the answer to this question may be taken as radical, this research explores how BIPOC culture be better welcomed into horticulture offering a direction to move into future practice and adds value to the field.

The method is a basis of applying the concepts of theories of diversity. Theories derive from *Structural Racism, Workforce Diversity, and Mental Health Disparities: A Critical Review* and *A Theory of Racialized Organizations*.

Justification

The representation of BIPOC cultures, values, and individuals are essential because it an inclusive environment in the workforce (Minkin, 2023), rather than forcing all workers to adhere to white standards (Kyere, et.al, 2023). Addressing the topic of racism and the inequitable environment that horticulture provides goes against the color-blindness seen in many workplaces (Kyere, et.al, 2023). If BIPOC individuals are not able to express themselves and their cultures in this field, then they cannot effectively contribute to the field without boundaries (Ray, 2019). Creating a safe and welcoming work environment for BIPOC is the purpose of diversity (Marques, 2022). The goal of this research is to shift the focus of diversity from relying on BIPOC to forcibly occupy horticulture spaces to a deeper analysis of how the workforce can be more inclusive. Furthermore, it addresses to benefits and disadvantages for BIPOC in trusting DEI programs compared to creating their own programs within the field of horticulture.

User Description

BIPOC stands for Black, Indigenous, and people of color (Minkin, 2023). This term is specific to the United States which is “intended to center the experiences of Black and Indigenous groups and demonstrate solidarity between communities of color” (Davidson). The usage of this classification throughout the paper is to acknowledge the discriminations and prejudice faced by people of color, for being non-white. The importance of using BIPOC is because “it emphasizes that systemic racism continues to oppress, invalidate, and deeply affect the lives of Black and Indigenous people in ways other people of color may not necessarily experience”(Davidson), as well as acknowledging that Black and Indigenous individuals are still affected by the impact of slavery and genocide.

Indigenous individuals consisting of less than 1% of the horticulture workforce in the U.S. and Black individuals consisting of 4.4% (Horticulturist Demographics, 2021) (figure 1). Since they are a minority impacted by institutionalized racism, efforts made to create a more inclusive structure in horticulture must acknowledge BIPOC cultures, unique experiences, and address solutions (Marques).

The users of this solution are the leaders and employers (Kyere, 2023) of the horticulture workforce along with the BIPOC horticulturists directly impacted by it (BIPOC HORT)(Figure 2). The solution of inclusivity impacts BIPOC individuals in horticulture because it makes their work environments welcoming to them regardless of their cultural backgrounds and race. The result of an inclusive workplace impacts every employee by creating environment that welcomes freedom of expression and cultivation of new ideas (Diversity, Equity, 2023) not typically seen expressed in horticulture presently.

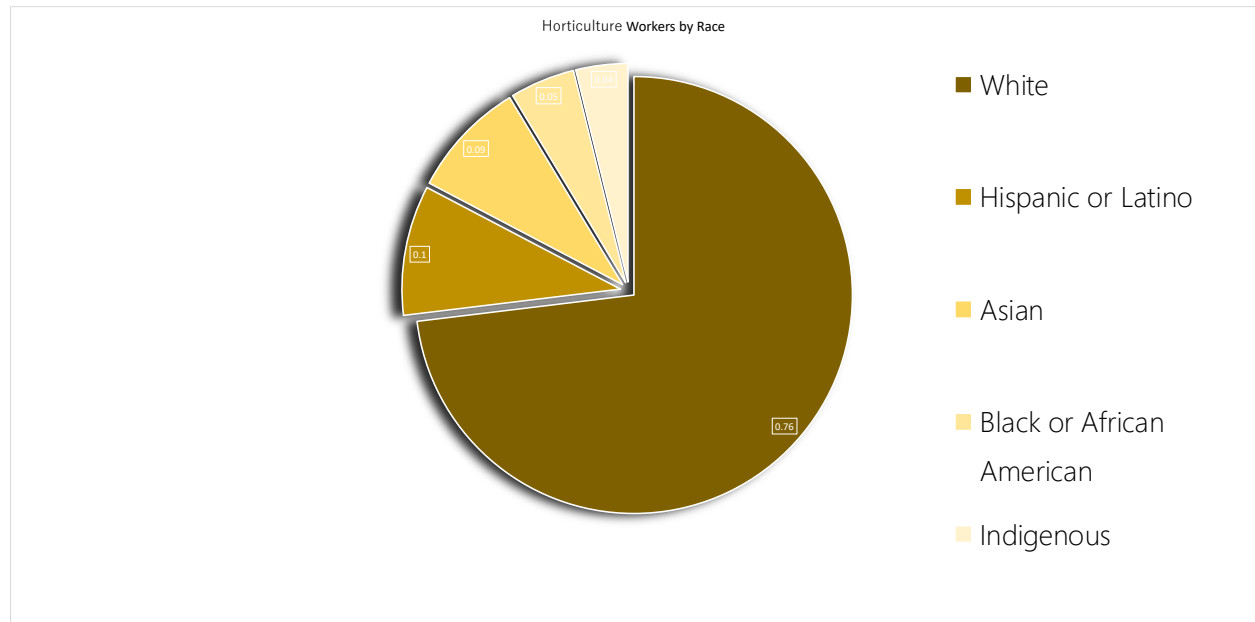


Figure 1. A pie chart showing the races which are registered as horticulturists. (Cain, 2024).

White:73.9%, Hispanic or Latino:9.6%, Asian:9.1%, Black or African American:4.4%,
Indigenous: 0.2% (Horticulturist Demographics, 2021).

“The term POC is only a qualifier and here at BIPOC Hort, we work to make it a unifier. In a communal platform with the single intention of amplifying our voices and stories, we work together to unravel all that has previously separated us and create a new standard that allows integrity for all”

(BIPOC HORT). Figure 2, website wordart demonstrating purpose of BIPOC HORT group.

Major Project Elements

What is the Theory of Racialized Organizations

Organizational routines connect racial ideals to social concepts. Race shapes occupational achievement in the United States. The four tenets described by *A Theory of Racialized Organizations* are “(1) racialized organizations enhance or diminish the agency of racial groups. (2) racialized organizations legitimate the unequal distribution of workforces. (3) Whiteness is a credential; and (4) the decoupling of formal rules from organizational practice is often racialized”(Ray). This theory explores the history and current state of racialized hierarchy’s within U.S workforce. This theory provides a fundamental understanding of why most workforces in the United States are not inclusive to BIPOC community and values. With schemas contributing to the structure of U.S economy, there is an unconscious bias which results in BIPOC occupying lower hierarchies and not fitting the perceived idea of leadership. Viewing BIPOC as manual labor and higher positions with leadership privileges prevents BIPOC workers the ability to initiate ideas and be creative.

Critical review

A critical review evaluates the strengths and weakness of an articles content and ideas (Queens university). By evaluating the strengths and weakness of an organizations inclusivity, the lack of racial awareness contributes to the negative race-based experiences for BIPOC workers (Kyere). By comparing the analysis of overall inclusivity in U.S. workforce to the Horticultural workforce standards there is an opportunity to identify shortcomings and present solutions that would make horticulture more inclusive.

Interviews

Based on the context of this research being the topic of critical review and forming a theoretical solution to make Horticulture in the United States more inclusive to BIPOC ideas, values, and communities, it makes the data collection more so qualitative. Interviews are the most effective forms of data collection in qualitative research (Library of Virginia Tech). Interviews are open ended questions providing for in-depth information that otherwise might not be obtained through methods such as surveys with direct pathways of response. This research explores the experiences of various members of the BIPOC community working in horticulture and gives them the opportunity to express changes they would like to see. Since the Racialized Organizational Theory (Ray) explains that the current workforce structure in the U.S. prevents BIPOC individuals from having a voice, this form of data collection gives various members of the BIPOC community a platform to express their ideas and concerns that otherwise would have an unlikely chance to be expressed in their workplace.

Site Inventory & Analysis, Quantitative

The present ethnicity demographics of horticulturists show that white individuals make up 73.9%, Hispanic or Latino 9.6%, Asian 9.1%, Black 4.4% and Indigenous less than 1%.(Figure 1) In the last 3 years with a significant decline of white horticulturist in 2020 at 84% to 73% in 2021, there is notably an increase for Hispanic or Latino, Asian, and Black workers by a minimum of 30% increase (Table 1)

DEI is valued at different rates in workforces that apply it. The numbers vary based on race, gender, sexuality, and political party alignment. Black workers at 28% are most likely to say that their company pays little attention to increasing DEI compared to smaller amounts of white, (11%), Asian (17%), and Hispanic (19%), who agree (Minkin). As for political parties, it is seen that Democrats commonly view that employers pay little attention to DEI while Republicans “are more likely than Democrats to say their employer pays *too much* attention to DEI (24% vs. 6%)”(Minkin) (Table 1).

Table 1. Employed Adults who participated in DEI training in 2023 say (%) they have been:

	Unhelpful	Helpful	Indifferent
All Participants	13	53	34
Men	16	46	38
Women	10	60	31
Republican	19	36	46
Democratic	9	66	25
Rep. Men	22	28	50
Rep. Women	14	47	39
Dem. Men	10	63	26

Dem. Women	7	68	25
------------	---	----	----

Note: Based on individuals who work at a company or organization with 10 or more people

(Minkin).

Site Inventory & Analysis, Qualitative

This is acquired through interviews from various members of the BIPOC community in horticulture concerning their experience in horticulture, what they feel they contribute as a BIPOC to the field, and what a BIPOC welcoming infrastructure would look like. Their answers give multiple ideas of the present and past experiences as BIPOC, and help construct a theoretical solution for the future of BIPOC in horticulture.

Site Analysis

The research covers horticulture in the United States of America. There are over 7,193 horticulturists employed in the United States (Horticulturist Demographics). Currently the statistics on ethnicity include White (73.9%), Hispanic (9.6%), Asian (9.1%), Black (4.4%), and Indigenous at under (1%) (see Figure 1), (Horticulturist Demographics). The size of companies where horticulturist work (see figure #) and the varying industries (see figure #). In the overall scale of workforces that introduce DEI to their organizations, “47% of organizations with 500 or more employees had dedicated DEI teams”(Nelson, 2024). Additionally, industries with stricter regulations and or government affiliated such as the FDA (Diversity, Equity, 2024), ODA, USDA, make more initiatives to integrate DEI in comparison to smaller, private businesses (Minkin).

Figure 2. A bar graph comparing the sizes of companies horticulturist work for (%) in the United States (Zippia).

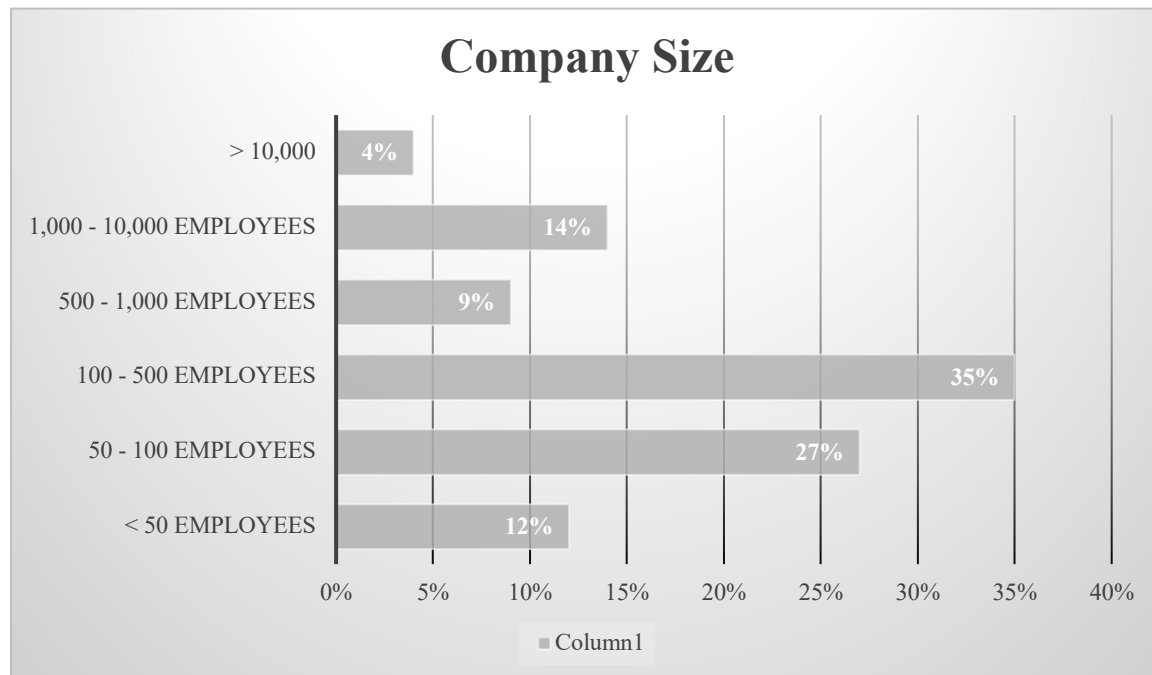
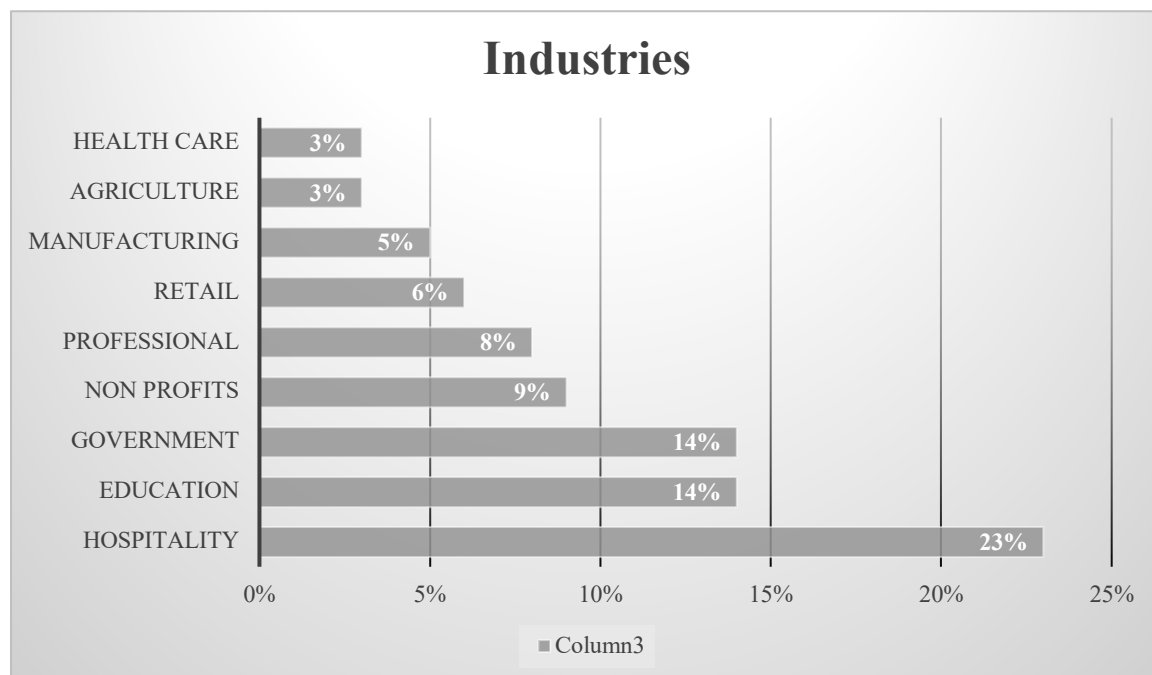


Figure 3. A bar graph comparing industries horticulturist work for (%) in the United States (Zippia).

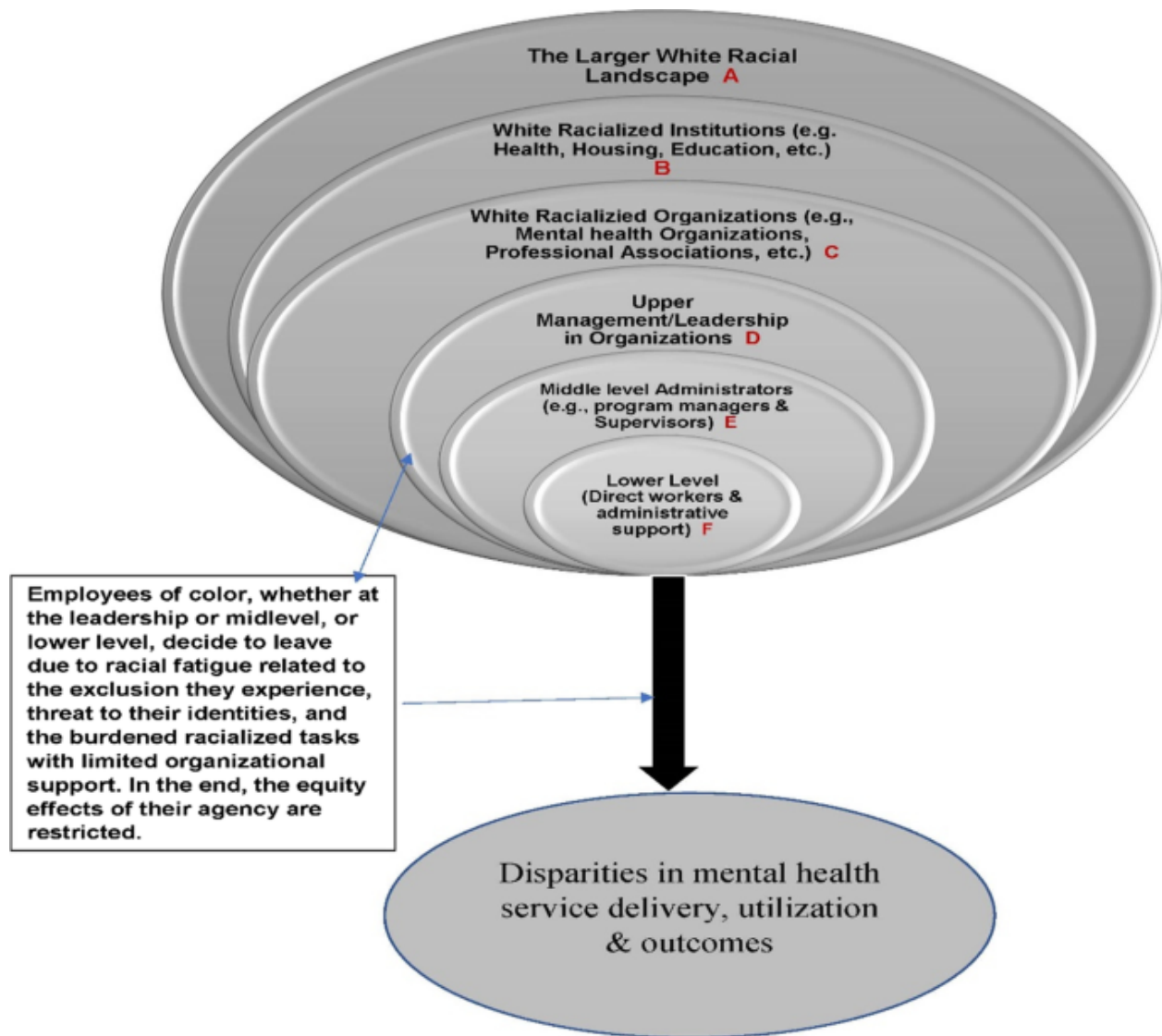


Case Studies and Literature Reviews

Structural Racism, Workforce Diversity, and Mental Health Disparities: A Critical Review

While racial workforce diversity has been suggested to address inequities for people of color, structural racism “diminishes such workforce diversity efforts” (Kyere, E., & Fukui, S.). Researchers use theories of racialized organizations to analyze workplace structures which uphold white privilege. The results suggest institutionalized white dominance (Figure #) and that workers of color experience race-based cultural exclusion, and while they are perceived as access to attract other people of color to workforces, they are invalidated in their concerns of disparities because of the whiteness of leadership. The critical review shows that through the normalized false notion that silence on race can prevent discrimination, it in fact shows that it is only beneficial to white individuals. While this may seem attractive to BIPOC under the veil of race neutrality, the reality of the work environment for workers of color involves the maintenance of white dominance (see A,B, and C in figure) The process of identity threat towards BIPOC and violations of perceived safety under the false notion of neutrality advertised by the workplace results in emotional distress and disappointment. The nature of this event being “neutrality” neglect race based identities forcing workers of colors to suppress their frustrations with racial exclusion and any perceived identity threat to make the workplace environment emotionally safe for white colleagues (see D, E, and F in Figure !) Workers of color are then left to be burdened with their own racial stress management while supporting a safe space which allows their white coworkers to thrive (see E and F in Figure !) They conclude that there is a need for drastic shift in traditional organization structure to a more race-conscious framework (see figure !).

Figure.4 “Conceptual model displaying mechanism by which white dominance sustains occupational segregation through diversity to persist disparities”(Kyere).



Urban Agriculture as a Tool for Horticultural Education and Youth Development

This literature review aims to bring awareness to the gap of familiarity with gardening between urban schools and rural communities. The results show that agriculture and horticulture programs are targeted towards communities with lower rates of diversity and higher funding.

Overcoming Racism in the Twin Spheres of Conservation Sciences and Practice

The deep seeded systemic racism that has and continues to marginalize BIPOC communities in conservations sciences is traced, analyzed, and described in this paper. Understanding how current models of conservation disproportionately harm BIPOC communities builds an analysis of how accepting BIPOC culture in environmental sciences is beneficial. This study builds on the existing conservation strategies of the indigenous people prior to colonization, the removal of this ideas, and revisitation of these ideas without the inclusion of the indigenous. The analysis of current colonized beliefs in conservation science and its impact on BIPOC students and workers translates to the impact of colonized beliefs in horticulture as conservation can be seen in many horticultural practices as a goal or focus. Their solution (figure #) provides a guideline on how to create inclusive conservation that welcomes BIPOC individuals which is like the solution in this research that proposes reshaping the infrastructure of horticulture to be safe and welcoming to the BIPOC community.

Illustration by Barkha Lohia.

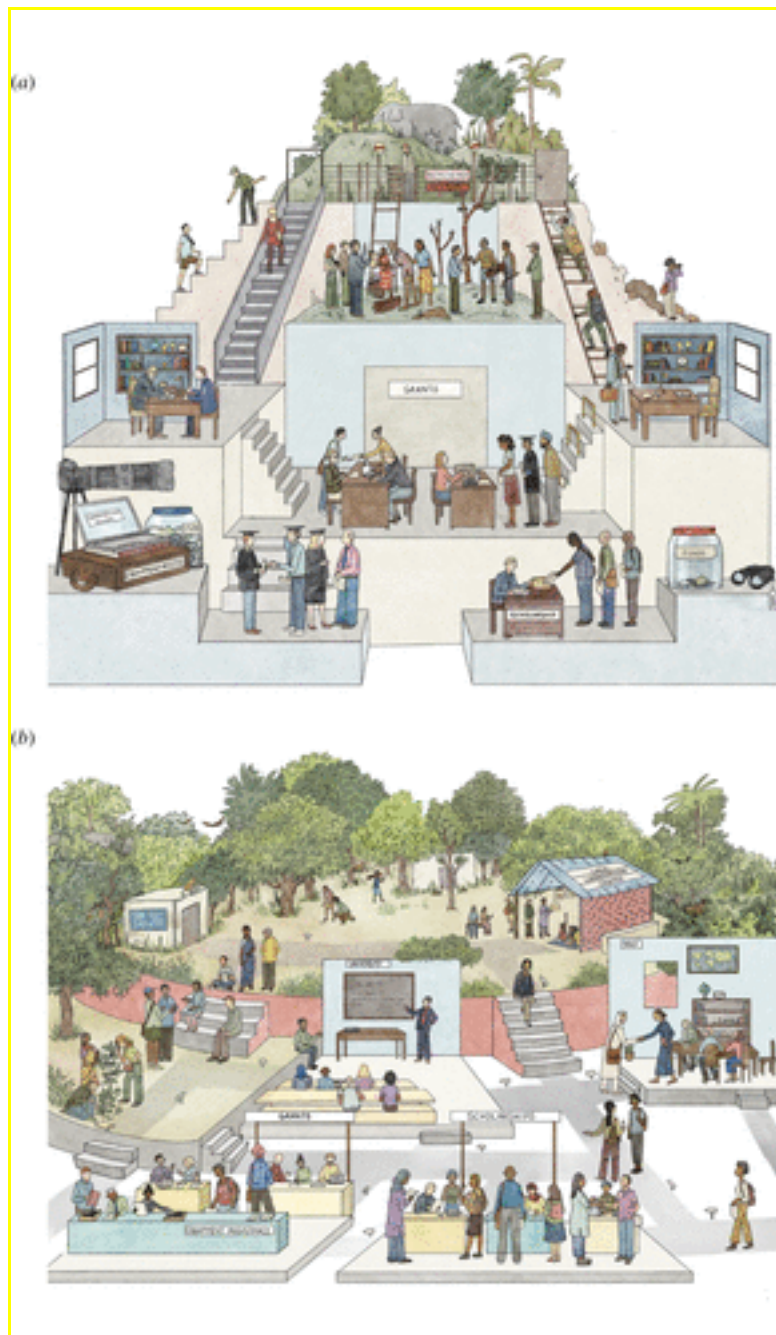


Figure 5. This image compares and contrast the conservation currently had (see a) with the conservation wanted (b). In the current scenario (a), pathways to success systemically favor select groups over theirs. Consequently, conservation practice is designed and communicated to local people by outsiders who may fail to understand local context or have a connection with

predominant western approaches to conservation. They want to bring about a system that is more attractive and accessible to BIPOC individuals.

The academic system should only represent one valid entry point to conservation. By sharing experience and knowledge from local conservationists and increasing career mobility between “field conservation, academia and the non-profit sector, multiple stakeholder viewpoints can be prioritized in the process of moving towards more holistic, novel models of conservation.”

Why is There a Higher Rate of Imposter Syndrome among BIPOC?

Using a survey as a testing method, the FINXERUNT Social Science Research Committee was not able to find a holistic conclusion due to their sample size which guides my testing method away from using the survey method. Their findings did reveal a strong correlation in black and indigenous groups with imposter syndrome which supports the focus on black and indigenous culture on this paper. The literature review explains that “. One undeniable effect of such underrepresentation of BIPOC in professional environments is reluctance to join a minimally diverse environment or workplace” (Afran Ahmed, et al.). As described in the justification and inventory analysis, Horticulture lacks BIPOC diversity, and understanding that a contributing factor is the lack of representation explains one of the side effects of Horticultures current infrastructure. While the hypothesis of this research was not supported with enough data to make a certain conclusion, it does provide relative information and offers opportunities for deeper research within the basis it sets.

Advancing Workplace Diversity

This chapter focuses on how to bring visibility to career experiences of BIPOC through “a critical examination of the literature on organizational culture, leadership, and organizational behavior in the context of Diversity, Equity, and Inclusion (DEI)” (Marques, 2022). Marques

explains that by developing this outlook, it allows the background information to then create and sustain an inclusive workplace system.

Diversity, Equity, and Inclusion in CT Agriculture

The Connecticut Department of Agriculture recently created workgroups with a DEI focus. The report covers background in BIPOC disadvantages in agriculture, creates goals for learning, sets initiatives that would improve their overall DEI, and aims “to engage and support current and future farmers and those in the agriculture industry who are Black, Indigenous, and People of Color (BIPOC) in the state” (Connecticut Department of Agriculture).

Historical Context of Topic

The term BIPOC acknowledges that people of color face discrimination and prejudice. It puts an emphasis that systemic racism continues to “oppress, invalidate, and deeply affect the lives of Black and Indigenous people in ways other people of color may not experience...Black and Indigenous individuals and communities still bear the impact of slavery and genocide”(See figure #, 1607-1776) (Davidson).

DEI has been put in place because following centuries of amendments and rights being established, groups such as the Ku Klux Klan, and other white superiority groups have fought back on BIPOC equity (Asare).

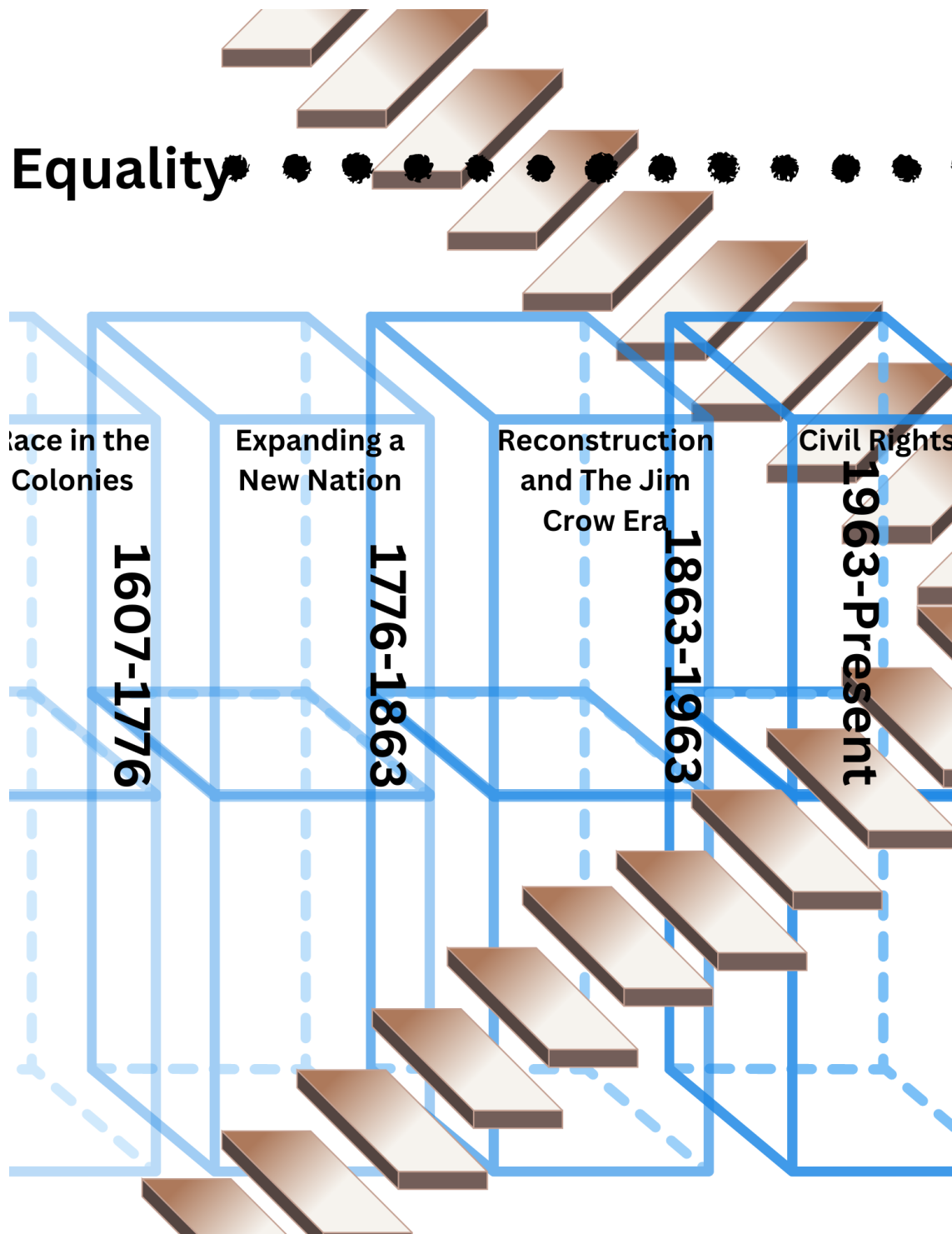


Figure 6. A figure visualizing the steps to equity that have been taken so far and where various events place BIPOC in the actuality of equality.

Case Study / Literature Review Summary

Structural Racism, Workforce Diversity, and Mental Health Disparities: A Critical Review

In relations to this research, the concept of workplace diversity is being covered within the Horticultural sphere rather than mental health organizations. The critical review contributes because while addressing the flaws in DEI, since racism and workplace is not well explored, they must start with the holistic issue which impacts all workplaces in North America. This broad study provides insights and findings which contribute to the problem statement in outlining that a workplace inequity does exist. It also highlights why the current system of diversity and inclusion is not practical and does very little to allow people of color to contribute to the institutions in a way in which their culture is valued and seen (see figure !). By addressing that the current infrastructure of professionalism forces people of color to adhere to white standards, and prevents them from making changes or expressing themselves, it can be concluded that there is a need to address racial disparities and change the current system. The difference in their conclusion and that of this research is that this shows why allowing black and indigenous people of color to express themselves specifically in horticulture will benefit the career as a “why” for reconstructing or destroying the current infrastructure of workplace standards to encourage an inclusive work culture.

Urban Agriculture as a Tool for Horticultural Education and Youth Development

This research is not analyzing education, but the results of this review highlight that within plant science there is a disproportionate rate of accessibility for BIPOC communities. These findings contribute to my historical context in explaining how the effects of redlining, genocide, reservation, and other race related clauses from the past continue to impact people of color today.

In the historical context I also include the major agricultural contributions of BIPOC, this research fills in the gap of why there is a need for inclusive practices. The fact that agriculture and horticulture is aimed towards a demographic of white Americans is similar economic standings shows that there is low diversity in cultural thoughts and practices being applied in this career. My findings highlight what BIPOC culture brings to the field and why it should be observed professionally rather than altered to fit existing white ideas of what horticulture looks like.

Overcoming Racism in the Twin Spheres of Conservation Sciences and Practice

Researchers define conservation science and conservation practice as a viscous cycle between characteristics created, and those inherited. It does not acknowledge the conservation wanted. “take stock of the manner in which much of what we do in conservation science and practice perpetuates, reinforces and deepens racial divisions, and reflect honestly on how we can change our behaviors and institutions for the better. We are morally obliged to demolish racist structures, reform our individual and collective actions, and construct a more equal, inclusive and socially just field. We owe this to the people whom conservation has harmed and continues to harm, the communities on whose land we are privileged to work, the students we mentor and the broader societies we serve”(Rudd LF et

al).

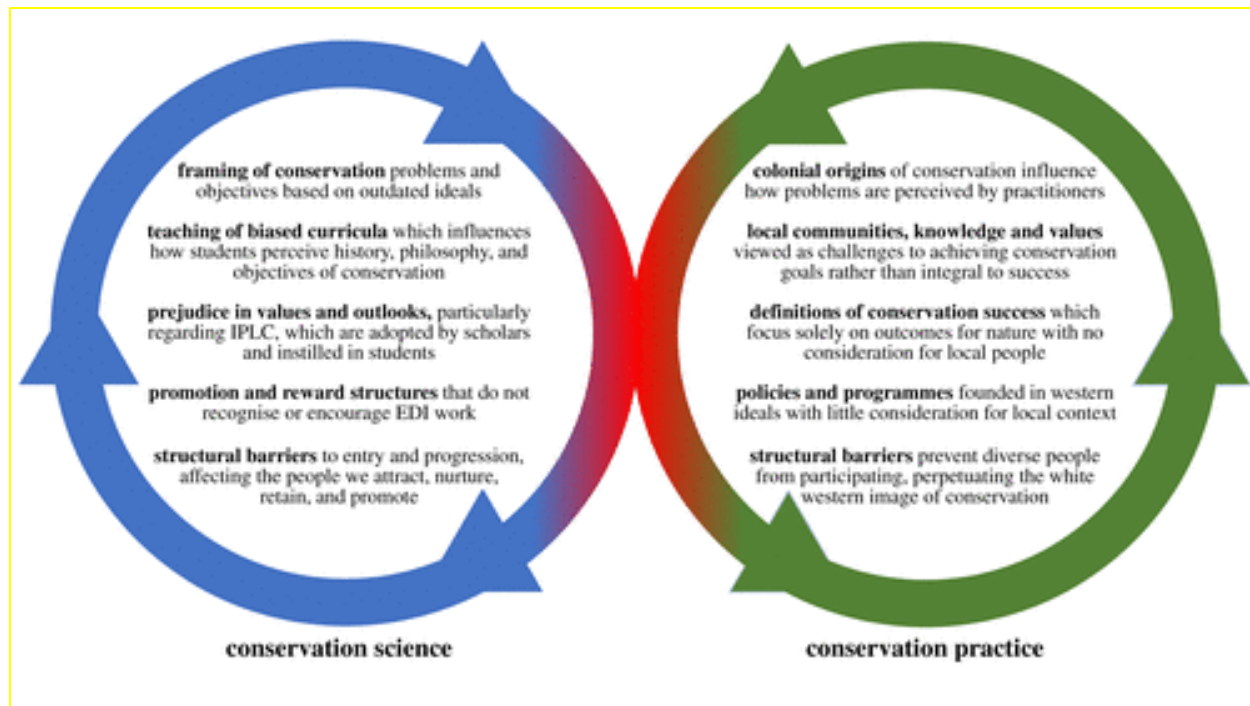


Figure 7. The mutually reinforcing twin spheres of conservation science and conservation practice. Although each sphere can operate largely independently of the other, they each perpetuate neo-colonial and racist ideologies that reinforce the other in subtle but important ways.

Programmatic Requirements

Interviews

Interviews were not completed so this are of the research is omitted. Rather in conclusive terms, the topic of creating inclusive workforces is a conversation to be had that can enlighten people of all demographics. The existing feedback in this are is seen as positive and neutral (Minkin).

Solution

The solution to creating inclusive spaces is not limited to one answer, but there are several paths that can be taken as an individual. When analyzing the data from other research done, it can be noted that the feedback to creating inclusive environments is appreciated by individuals of varying ethnicities, genders, and political standings (Minkin). It can also be noted that reputable organizations such as government and corporate related industries are already working towards creating inclusive workplaces (Diversity, Equity, and Inclusion in CT Agriculture). Education and true inclusivity that does not incorporate color blindness (Keyre), does result in more inclusive workspaces in which BIPOC can feel safer.

Noted, with reform also comes backlash (Asare), and there is a specific group, conservative white men (Asare), that trend on not being accepting nor receptive to DEI practices. The racism and prejudice prevalent in the workforce are systemic, and not a simple infrastructure to rework. This introduces another option which is for BIPOC and allies to avoid these spaces and create their own where color blindness and white dominance have not been established.

The big take away in this research is that there are resources, and with change comes positive and negative reactions of others. Currently BIPOC are still experiencing the impact of oppression and not given the option to address prejudice, therefore protecting the white privilege and fostering a safe environment for them at the expense of their own mental health. Regardless of the solution taken, whether that be increasing DEI efforts in a workforce, or completely scraping the workforce clean and building anew, it is important that leaders, workers in horticulture, government officials, and professors take the time to acknowledge that unequitable environment their BIPOC counterparts experience, and actively work to accept them for who they are and feel safe.

References

- Afran Ahmed, Aarushi Kaushal, Tatyana Cruz, Yusuke Kobuse, & Kristen Wang. (2020). Why is there a higher rate of impostor syndrome among BIPOC?. <https://doi.org/10.5281/zenodo.4310477>
- Asare, Janice. "The History Of DEI Resistance In America." *Forbes*, 13 July 2023, www.forbes.com/sites/janicegassam/2023/07/13/the-history-of-dei-resistance-in-america/?sh=6d205bd24518. Accessed 10 Apr. 2024.
- BIPOC Hort Logo. *BIPOC Hort*, images.squarespace-cdn.com/content/v1/5fc542fdd49dd12447510217/1612369198437-6VAINQBKPC65FB7UV5MO/image%2Btext.jpg. Accessed 11 Apr. 2024.
- CBM NEWSWIRE. "10 Quotes: Malcolm X Talks Justice, Equity and Inclusion." *The Observer*, 19 May 2023, [sacobserver.com/2023/05/10-quotes-malcolm-x-talks-justice-equity-and-inclusion/](https://www.sacobserver.com/2023/05/10-quotes-malcolm-x-talks-justice-equity-and-inclusion/). Accessed 10 Apr. 2024.
- Davidson, Kizha. "WHY WE USE BIPOC." *YWCA*, 12 Mar. 2024, www.ywcaworks.org/blogs/ywca/tue-03122024-1000/why-we-use-bipoc. Accessed 11 Apr. 2024.

"Diversity, Equity, and Inclusion in CT Agriculture." *Connecticut Government*,
portal.ct.gov/-/media/
doag/boards_commissions_councils/diversity-working-group/doag-dei-report-english-
final-print.pdf.

Accessed 10 Apr. 2024.

"Horticulturalist Demographics and Statistics in the US." *Zipppier*, 5 Apr. 2024,
www.zipppia.com/

horticulturist-jobs/demographics/. Accessed 11 Apr. 2024.

Kyere, E., & Fukui, S. (2023). Structural Racism, Workforce Diversity, and Mental
Health

Disparities: A Critical Review. *Journal of racial and ethnic health disparities*, 10(4),
1985–1996. <https://doi.org/10.1007/s40615-022-01380-w>

Kyere, Eric. Structural Racism. *Springer Link*, [media.springernature.com/full/springer-
static/image/
art%3A10.1007%2Fs40615-022-01380-
w/MediaObjects/40615_2022_1380_Fig1_HTML.png?as=webp](https://media.springernature.com/full/springer-static/image/art%3A10.1007%2Fs40615-022-01380-w/MediaObjects/40615_2022_1380_Fig1_HTML.png?as=webp). Accessed
11 Apr. 2024.

"Landscape and Horticultural Services." *Occupational Safety and Health Administration*,
www.osha.gov/
landscaping/standards. Accessed 11 Apr. 2024.

Lohia, Barkha. *Conservation We Have V. Conservation We Want*. *The Royal Society*, 3
Nov. 2021,

royalsocietypublishing.org/cms/asset/8ed34770-0b17-4466-aae6-11956066d26d/rspb20211871f02.jpg.

Accessed 11 Apr. 2024.

Marques, Joan. *Business with a Conscience: A Research Companion*. E-book ed., New York ; London,

Routledge, 2022.

Minkin, Rachel. "Diversity, Equity and Inclusion in the Workplace." *PEW Research*, edited by Pew

Research Center, 17 May 2023, www.pewresearch.org/social-trends/2023/05/17/diversity-equity-and-inclusion-in-the-workplace/. Accessed 10 Apr. 2024.

Ray, V. (2019). A Theory of Racialized Organizations. *American Sociological Review*, 84(1), 26-53.

<https://doi.org/10.1177/0003122418822335>

Rogers, M.A. (2018). Urban Agriculture as a Tool for Horticultural Education and Youth Development.

In: Nandwani, D. (eds) *Urban Horticulture. Sustainable Development and Biodiversity*, vol 18.

Springer, Cham. https://doi.org/10.1007/978-3-319-67017-1_9

Rudd LF et al. 2021 Overcoming racism in the twin spheres of conservation science and practice.

Proc. R. Soc. B 288: 20211871. <https://doi.org/10.1098/rspb.2021.1871>

Twin Spheres of Conservation Science and Practice. *The Royal Society*, royalsocietypublishing.org/cms/

asset/a68bdc89-4bed-4d5d-bbca-50bf43a02421/rspb20211871f01.jpg. Accessed 11 Apr. 2024.

"Who We Are." *BIPOC Hort*, www.bipochort.org. Accessed 11 Apr. 2024.



Inclusivity of BI- POC Culture in Horticulture



Tables

Table 1. Employed Adults who participated in DEI training in 2023 say (%) they have been:

	Unhelpful	Helpful	Indifferent
All Participants	13	53	34
Men	16	46	38
Women	10	60	31
Republican	19	36	46
Democratic	9	66	25
Rep. Men	22	28	50
Rep. Women	14	47	39
Dem. Men	10	63	26
Dem. Women	7	68	25

Figures

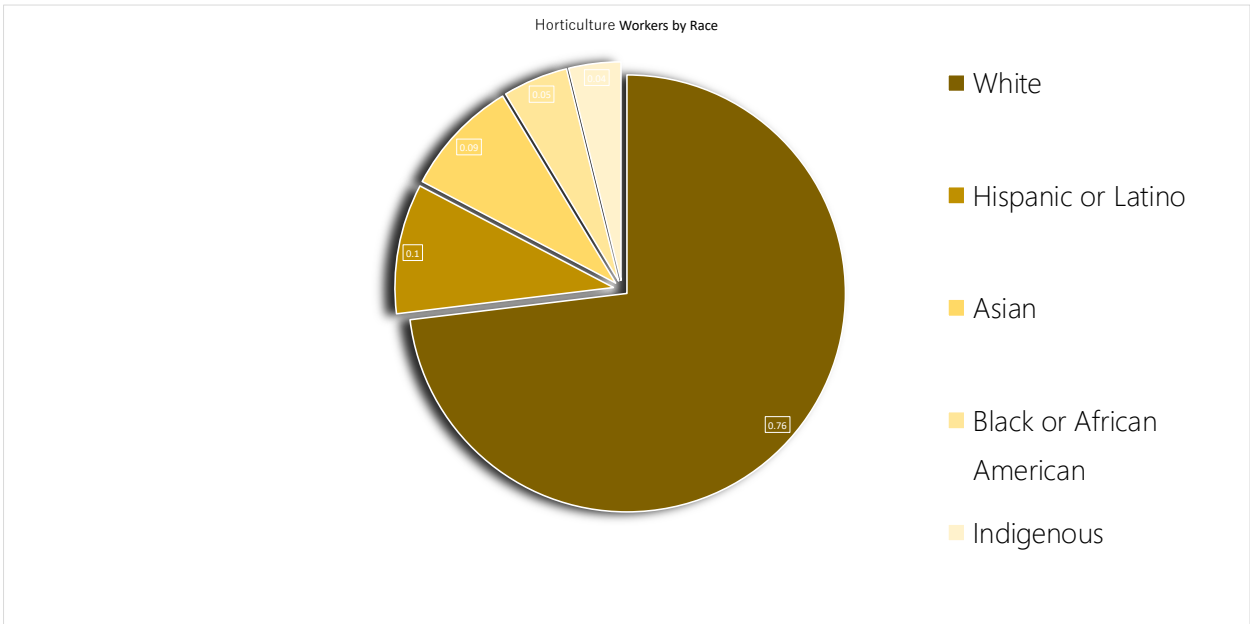


Figure 1. A pie chart showing the races which are registered as horticulturists. (Cain, 2024).
White:73.9%, Hispanic or Latino:9.6%, Asian:9.1%, Black or African American:4.4%,
Indigenous: 0.2% (Horticulturist Demographics, 2021).

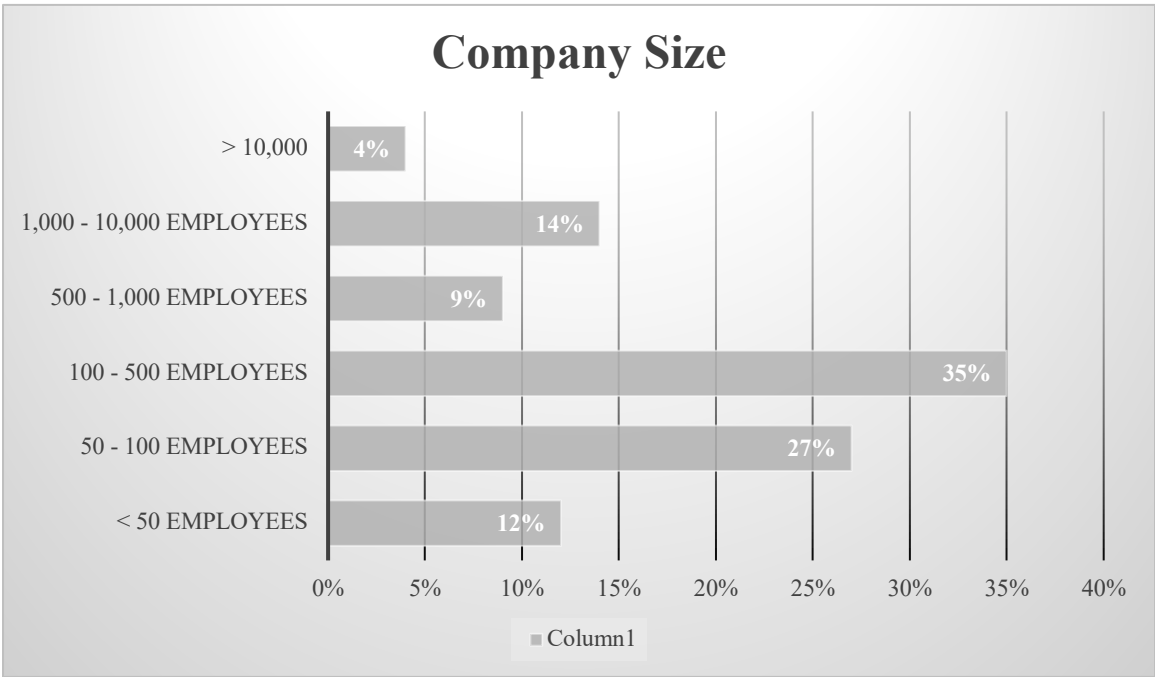


Figure 2 A bar graph comparing the sizes of companies horticulturist work for (%) in the United States (Zippia).

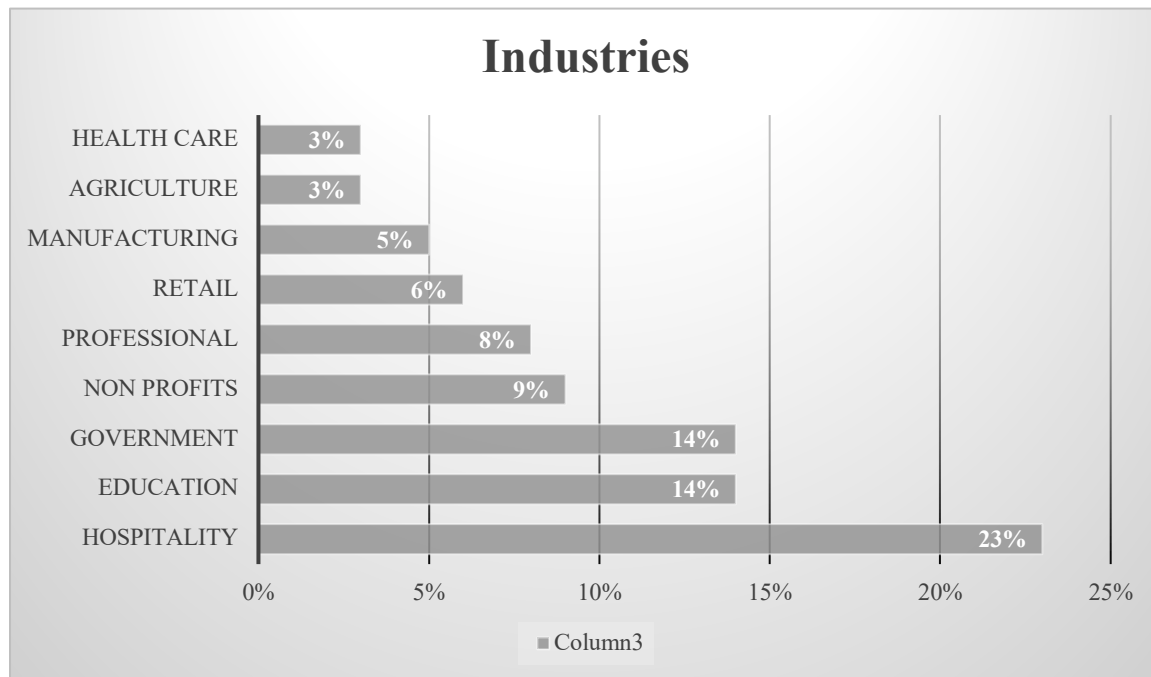


Figure 3. A bar graph comparing industries horticulturist work for (%) in the United States (Zippia).

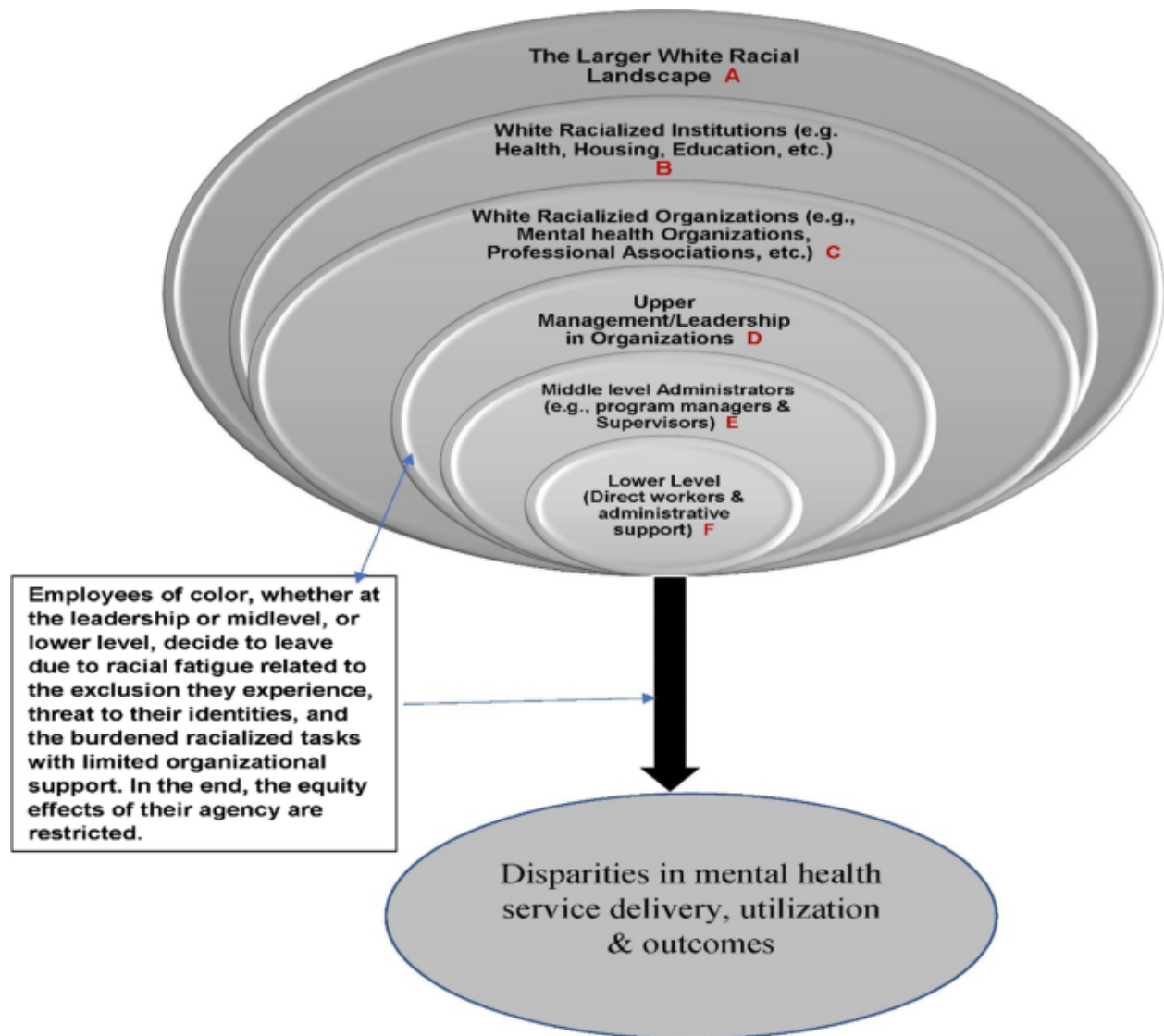


Figure.4 “Conceptual model displaying mechanism by which white dominance sustains occupational segregation through diversity to persist disparities”(Kyere).



Figure 5. This image compares and contrast the conservation currently had (see a) with the conservation wanted (b). In the current scenario (a), pathways to success systemically favor select groups over theirs. Consequently, conservation practice is designed and communicated to local people by outsiders who may fail to understand local context or have a connection with

predominant western approaches to conservation. They want to bring about a system that is more attractive and accessible to BIPOC individuals.

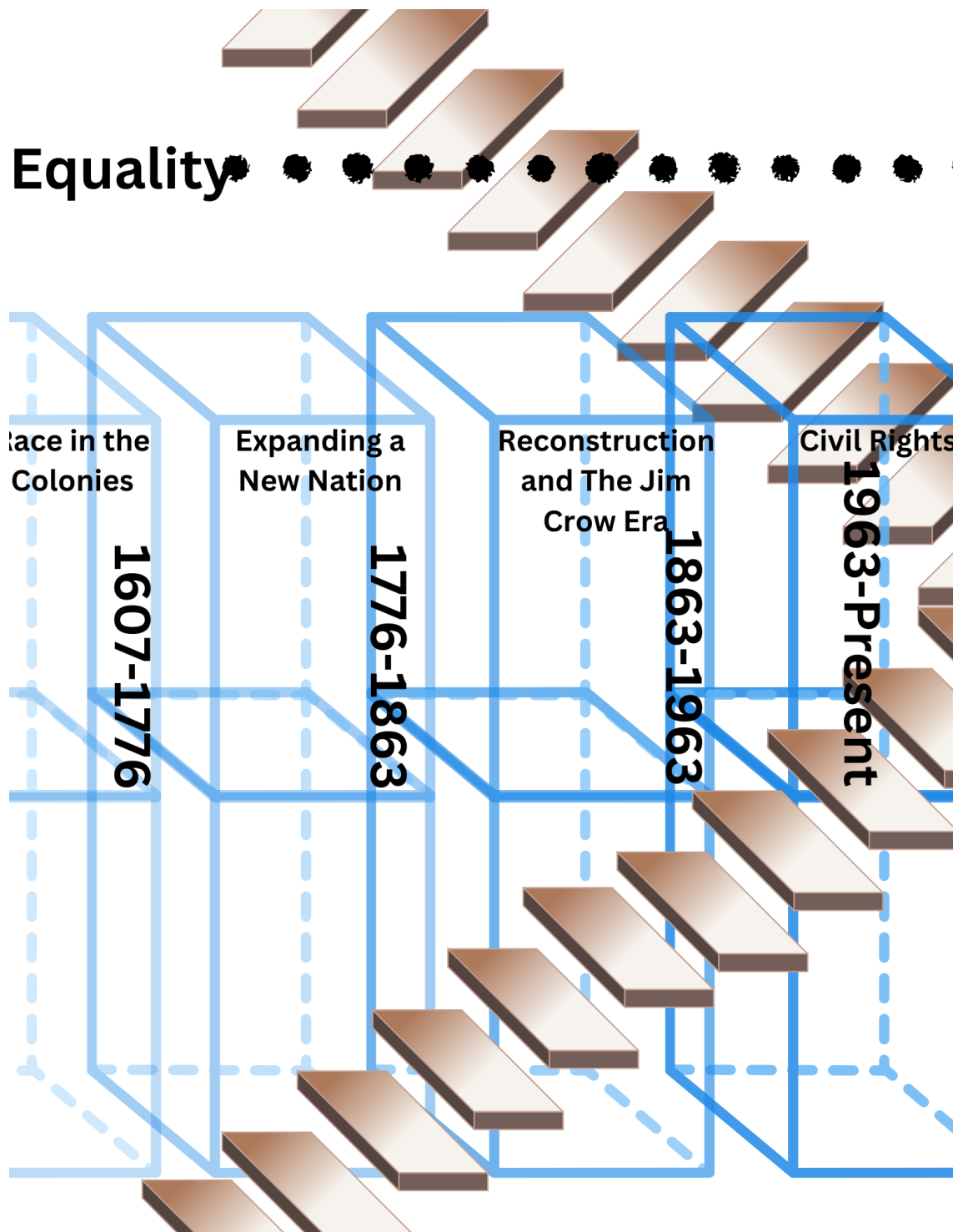


Figure 6. A figure visualizing the steps to equity that have been taken so far and where various events place BIPOC in the actuality of equality.

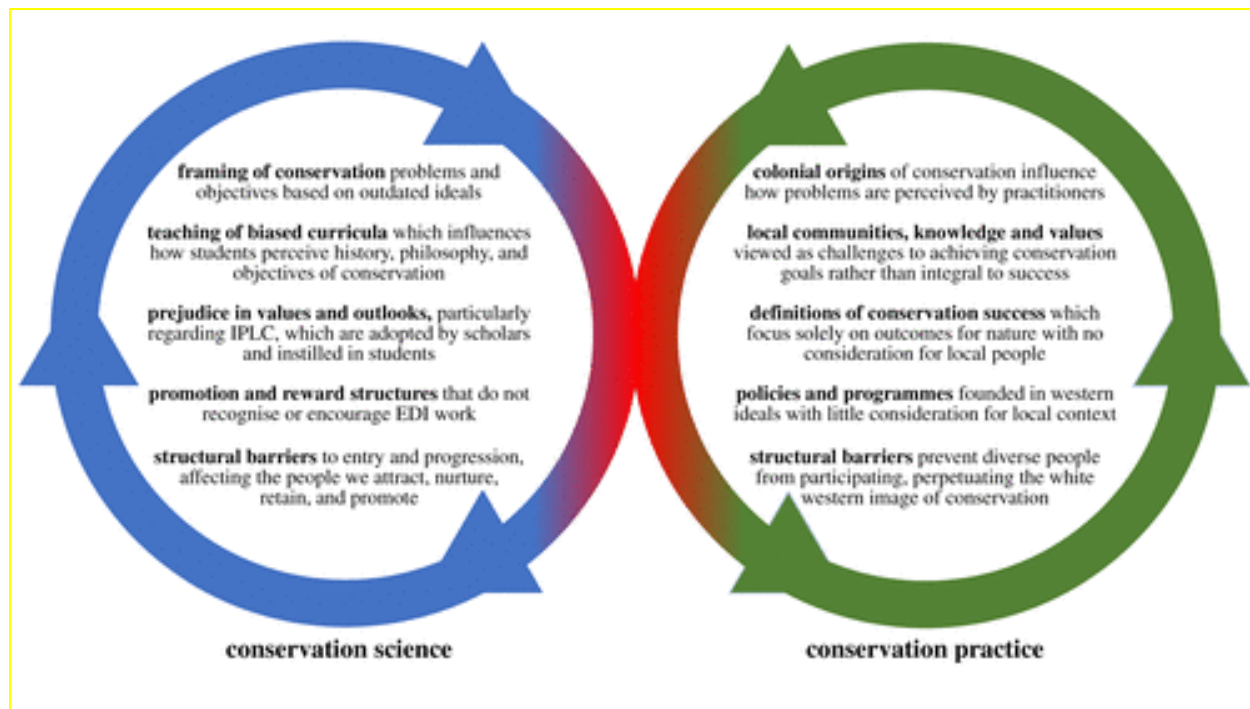


Figure 7. The mutually reinforcing twin spheres of conservation science and conservation practice. Although each sphere can operate largely independently of the other, they each perpetuate neo-colonial and racist ideologies that reinforce the other in subtle but important ways.