

UCLA

Reports

Title

Engaging the Public on Shade Equity Through Art, Roots of Cool: A Celebration of Trees and Shade in a Warming World

Permalink

<https://escholarship.org/uc/item/2022x522>

Authors

de Guzman, Edith B.

Blythe, Scarlett

Faulkner, Stella

et al.

Publication Date

2026-08-12

Engaging the Public on Shade Equity Through Art

ROOTS OF COOL: A CELEBRATION OF TREES AND SHADE
IN A WARMING WORLD



BY EDITH B. DE GUZMAN, SCARLETT BLYTHE, STELLA FAULKNER,
CATE GREGORY, AND LEONARD HOLLER

AUGUST 2026
REPORT

The Luskin Center for Innovation conducts actionable research that unites UCLA scholars with civic leaders to solve environmental challenges and improve lives. Our research priorities include the [human right to water](#), [community-driven climate action](#), [heat equity](#), [clean energy](#), and [zero-emission, transportation](#). We envision a future where everyone has healthy, affordable, and resilient places to live, work, learn, and play.

AUTHORSHIP

This report was produced by the UCLA Luskin Center for Innovation and authored by the following researchers:

- Edith B. de Guzman, Water Equity and Adaptation Policy Cooperative Extension Specialist, eb3@ucla.edu
- Scarlett Blythe, Undergraduate Research Scholar, UCLA Sustainable LA Grand Challenge
- Stella Faulkner, Undergraduate Research Scholar, UCLA Sustainable LA Grand Challenge
- Cate Gregory, Undergraduate Research Scholar, UCLA Sustainable LA Grand Challenge
- Leonard Holler, Data Analysis Intern and Graduate Student, Columbia University

ACKNOWLEDGMENTS

This report was funded by UC Agriculture and Natural Resources. The exhibition and its related engagement programs were generously funded, in part, by Perenchio Foundation; Accelerate Resilience L.A., a sponsored project of Rockefeller Philanthropy Advisors; TreePeople; and an endowment from Heather Sturt Haaga and Paul G. Haaga, Jr.

This exhibition and its programs, presented at Descanso Gardens July 12–October 12, 2025, were curated in partnership with the UCLA Luskin Center for Innovation, University of California Agriculture and Natural Resources, Los Angeles Center for Urban Natural Resources Sustainability, TreePeople, Arroyo Arts Collective, The Nature of Cities, Avenue 50 Studio, USC Public Exchange, ShadeLA, Dashboard Earth, and Accelerate Resilience L.A.

Roots of Cool is dedicated to Pam Gibson and Jim Hardie and their decades of commitment to greening and cooling Los Angeles' most forgotten neighborhoods.

The analysis, views, recommendations, and conclusions expressed herein are those of the authors and not necessarily those of any of the project supporters, advisors, interviewees, or reviewers, nor do they represent the University of California, Los Angeles as a whole. Reference to individuals or their affiliations in this report does not necessarily represent their endorsement of the recommendations or conclusions of this report. The author is responsible for the content of this report.

To cite this report: de Guzman, E., Blythe, S., Faulkner, S., Gregory, C., and Holler, L, 2026. "Engaging the Public on Shade Equity Through Art" UCLA Luskin Center for Innovation. escholarship.org/uc/item/2022x522

© August 2026 by the Regents of the University of California, Los Angeles. All rights reserved.

Cover photo: Roots of Cool visitors pose for a thermal photo under Chantée Benefield's umbrella installation, revealing cooler temperatures in the shade. Cover Photo Credit: Shanley Kellis

CONTENTS

Executive Summary	iii
1. Introduction	1
2. Shade Equity: Past, Present, and Future	4
2.1. The Past Still Influences the Present	
2.2. Overcoming Urban Realities Is Complex	
2.3. A More Verdant, Shaded Future	
3. Visitor Engagement	21
3.1. Interactive Exhibition Elements	
3.1.1. Poster-Based Survey	
3.1.2. Postcard Activity	
3.1.3. Discussion of Survey and Postcard Activities	
3.2. A Celebration of Cool: A Day of Family-Friendly Activities on the Importance of Shade	
3.3. Visitor Engagement Discussion	
4. Artists and Artworks	38
4.1. Participating Artists	
4.2. Complete List of Artworks	
5. References	44

EXECUTIVE SUMMARY

Roots of Cool: A Celebration of Trees and Shade in a Warming World is an exhibition and series of related programming presented in participation with the UCLA Luskin Center for Innovation and University of California Agriculture and Natural Resources at Descanso Gardens—a nonprofit, public botanical garden, living museum, and urban oasis in Los Angeles County visited by more than one million people annually. On view from July 12 to October 12, 2025, and curated by Edith and Jolly de Guzman, *Roots of Cool* invited visitors to connect with and cultivate appreciation for the life-giving role trees and shade play in making urban neighborhoods livable. Artworks and activities were featured in indoor galleries at the Sturt Haaga Gallery and Boddy House, as well as through outdoor installations throughout the gardens. Thirteen women artists and a diverse art collective explored the past, present, and future role of trees and shade in the city, with visual and musical works to take visitors through the journey and inspire a cooler, greener future. Interactive components of the exhibit—ranging from a listening station with insights on shade equity from international contributors, to a day of family-friendly activities including a panel discussion and a free shade tree giveaway—sought to spur visitors to action beyond their visit. Additional engagement components included poster-based surveys inviting visitors to convey their opinions about shade in their neighborhood or city, and responding to thematically relevant prompts through drawing and writing. Analyses of the engagement data, using both quantitative and qualitative methods, show that visitors reflected an overwhelmingly positive, hope-centered outlook toward climate adaptation, with themes such as care, kindness, shade, and relief appearing more frequently than fear or despair, demonstrating the potential of arts-based engagement to foster constructive dialogue around climate resilience. The findings also show that interactive art exhibitions can serve as valuable participatory research tools, providing actionable insights into community perceptions and preferred shade solutions that can inform more equitable and locally responsive climate adaptation strategies.

1. INTRODUCTION

Climate change is one of the defining challenges of the twenty-first century, yet it remains difficult to communicate in ways that inspire public engagement and action. While scientific evidence is essential, research suggests that fact-based communication alone is often insufficient to motivate behavioral change or build support for climate adaptation (Moser, 2014; Morris et al., 2019). Climate change is frequently presented as a distant or overwhelming crisis, making it difficult for people to connect the issue to their daily lives. Effective climate communication thus requires approaches that not only inform but also foster emotional connection, personal relevance, and hope.

Narrative- and emotion-based communication has emerged as a promising strategy for increasing public engagement with climate issues. Compared with informational messaging alone, stories that evoke emotional responses have been shown to increase pro-environmental behaviors, including recycling and participation in environmental organizations (Morris et al., 2019). By making abstract environmental risks more tangible and personally meaningful, narrative approaches encourage audiences to reflect on their own role in climate solutions.

The arts provide a particularly powerful medium for this type of engagement. Through visual expression, storytelling, and participatory experiences, arts-based approaches can translate complex scientific concepts into accessible and emotionally resonant experiences. Artistic engagement helps overcome the psychological distance that often surrounds climate change by connecting global environmental challenges to local experiences and community identities (Moser, 2014). Rather than emphasizing fear alone, arts-based communication can promote hope, creativity, and collective action while encouraging audiences to envision climate adaptation solutions.

Researchers have proposed several ways that art contributes to climate engagement. Bentz (2020) describes three levels of artistic engagement: using art to communicate information, engaging audiences with art through participation, and empowering communities through collaborative artistic processes that inspire transformative change. Across these approaches, the arts provide opportunities not only to communicate scientific knowledge but also to stimulate dialogue, reflection, and community participation.

Numerous examples demonstrate the effectiveness of integrating art into climate communication and adaptation. At the 2015 United Nations Climate Conference in Paris, climate-focused art installations generated strong emotional responses among visitors and increased support for climate mitigation policies (Klöckner & Sommer, 2021). Public art has also become part of climate adaptation efforts themselves. In Phoenix, Arizona, artist-designed bus stops incorporating landscaping improved visitors' perceptions of thermal comfort, with aesthetically appealing stops being perceived as cooler than conventional designs (Dzyuban et al., 2022). Similarly, Boston's "High Tide" installation visualized future sea level rise by marking projected flood elevations throughout the city, helping residents better understand local climate risks (Aragon et al., 2019). These projects demonstrate how artistic interventions can make climate impacts more visible while fostering public dialogue and engagement.

Museums, botanical gardens, and other cultural institutions are particularly well positioned to support this work. As trusted community institutions, they provide opportunities to communicate complex scientific topics through shared cultural experiences. Unlike many forms of science communication, exhibitions invite visitors to engage emotionally, intellectually, and socially, making environmental challenges feel more immediate and personally relevant. Participatory exhibitions further strengthen this engagement by encouraging visitors to contribute their own perspectives, creating opportunities for dialogue between researchers, artists, and community members (Burke et al., 2018).

UCLA Luskin Center for Innovation and UC Agriculture and Natural Resources have increasingly adopted this collaborative model. A prior example is the exhibition [*What's On Tap: LA's Water Story...Source to Spigot*](#). The exhibition combined science-informed artwork with interactive visitor participation to communicate challenges related to water quality, affordability, trust, and equity in Los Angeles while simultaneously collecting public feedback on local water issues (de Guzman & Holler, 2025). The project demonstrated how art exhibitions can function not only as educational tools but also as platforms for participatory research.

Building on this model, the exhibition *Roots of Cool: A Celebration of Trees and Shade in a Warming World* explored the growing challenge of shade equity in the Los Angeles region. The exhibition and related programming brought together artists whose work examined the relationship between urban trees, heat, environmental justice, and neighborhood well-being. Interactive components invited visitors to imagine shade solutions for their own communities and reflect on their personal experiences with heat and access to shade.

Shade equity represents an increasingly important climate adaptation challenge in Los Angeles. Approximately 84% of Los Angeles County residents live in neighborhoods with less than 15% tree canopy coverage, and only 23% of survey respondents believe their local bus stops provide sufficient shade (Thomas & Kim, 2025). Unequal access to shade contributes to higher heat exposure, particularly in historically underserved neighborhoods, making shade expansion an important strategy for improving public health and climate resilience as the region experiences a trajectory of longer, more frequent, and more intense heat waves.

Many of the artworks in *Roots of Cool* addressed these inequities by connecting scientific information with personal experience (Magaña, 2025). For example, the exhibition included paintings by Diana Kohne depicting everyday experiences of navigating Los Angeles with inadequate shade while incorporating information about tree canopy distribution, redlining, and neighborhood disparities. By combining artistic expression with historical and scientific context, the exhibition encouraged visitors to consider both the structural causes of shade inequity and opportunities for community action. This approach aligns with recommendations that climate communication emphasize local relevance, long-term environmental change, and place-based identity to strengthen public engagement (Moser, 2014).

Although growing evidence demonstrates that arts-based approaches can improve climate communication, relatively little research has examined how visitors interpret and respond to climate adaptation messages immediately after experiencing an exhibition. Fewer studies still have used participatory exhibitions to better understand public perceptions of a specific adaptation issue such as shade equity and the potential to spur visitors to action.

This report addresses that gap by examining visitor responses to *Roots of Cool*. Through qualitative and quantitative data collected during the exhibition, researchers investigate how visitors perceive shade equity, how they relate the issue to their own communities, and how artistic engagement shapes public understanding of climate adaptation. By analyzing these responses, this project expands understanding of how art exhibitions and collaborations with public institutions such as botanical gardens can serve not only as tools for science communication but also as participatory research platforms that generate valuable insights into community perspectives on local climate challenges.

2. SHADE EQUITY: PAST, PRESENT, AND FUTURE

Curated by Edith and Jolly de Guzman, *Roots of Cool: A Celebration of Trees and Shade in a Warming World* was designed to take visitors on a journey to understand the past, present, and future of shade equity. Following that visual and narrative journey, visitors were invited into a portion of the exhibition designed to inspire action. This included interactive activities meant to engage visitors to reflect on the themes of the exhibit and move them toward adopting solutions in their homes and neighborhoods. Artworks were organized around four questions, each relating to either the past, present, future, or to taking action to advance shade equity. In each corresponding gallery space, wall didactics presented a prompt followed by a few sentences unpacking the main themes further explored by the artwork. Following, the researchers share the prompts and didactic content, as well as select artworks from each of the four sections.

2.1. The Past Still Influences the Present

How do decisions of the past affect how much shade neighborhoods have today?

In Los Angeles and beyond, many neighborhoods are veritable concrete jungles with scarce tree and shade cover offering respite on a hot day. This isn't accidental. Decades of discriminatory planning and disinvestment have left lower-income areas with fewer trees and hotter streets—on average 3°F warmer and with 15% less canopy than wealthier neighborhoods. For transit riders, outdoor workers, older adults, and the unhoused, California's once-idyllic sun is becoming a life-threatening concern. As the climate shifts, so must our mindset: Shade is no longer a luxury, but a shared civic resource that we can grow, protect, and steward together.



Exhibit visitors in the gallery room representing past influences on urban planning explore redlining maps of the past alongside current neighborhood shade cover. Photo Credit: Shanley Kellis



Photo Credit: Shanley Kellis

Kim Abeles
Looking for Paradise
(Downtown Los Angeles),
2004

Archival ultrachrome
print and model trees
33" x 72" x 43"

In *Looking for Paradise (Downtown Los Angeles)*, Kim Abeles presents a canopy of artificial trees with exaggerated, elongated trunks made of piano wire that pierce through an aerial map of Downtown Los Angeles. Each marks the location of an actual tree, which the artist mapped out on foot over several days of walking. Collectively, they present an attractive and whimsical canopy, but upon closer inspection, it is obvious that they are planted in clusters, leaving entire blocks unshaded and calling into question the politics of shade and tree cover in the city.

[Listen](#) to the artist talk about this artwork.



Photo Credit: Descanso Gardens

Diana Kohne

Lake, 2025

Acrylic gouache on wood

11" x 18.5"

Diana Kohne depicts stark urban landscapes that draws attention to the fact that cities were largely built with efficiency in mind, with all the things a society needs available, but lacking the comfort and intimacy humans need to be nurtured and connected to nature. Kohne approaches her work with play and humor, but calls on viewers to contemplate what it would feel like to experience the urban form, including heat, inside one of her paintings. Kohne captures scenes she witnesses on her bus commutes and names her paintings for streets and locations they represent. In *Lake*, the only shade in the composition is produced by the commuter waiting for the bus and the paltry shadow of the bus stop pole next to her.

While the compositions show the present day, they represent artifacts of policy and planning decisions of the past that have created inequitable conditions, particularly for low-income communities and communities of color. In a region internationally known for its dependence on cars, Kohne uses public transit to get around, and she questions the conventional wisdom that has put cars before people. "Cars have only been here about a hundred years," she explains. "That's not really so long, so maybe [city] planning is not really so unchangeable."

[Listen](#) to the artist talk about this artwork.

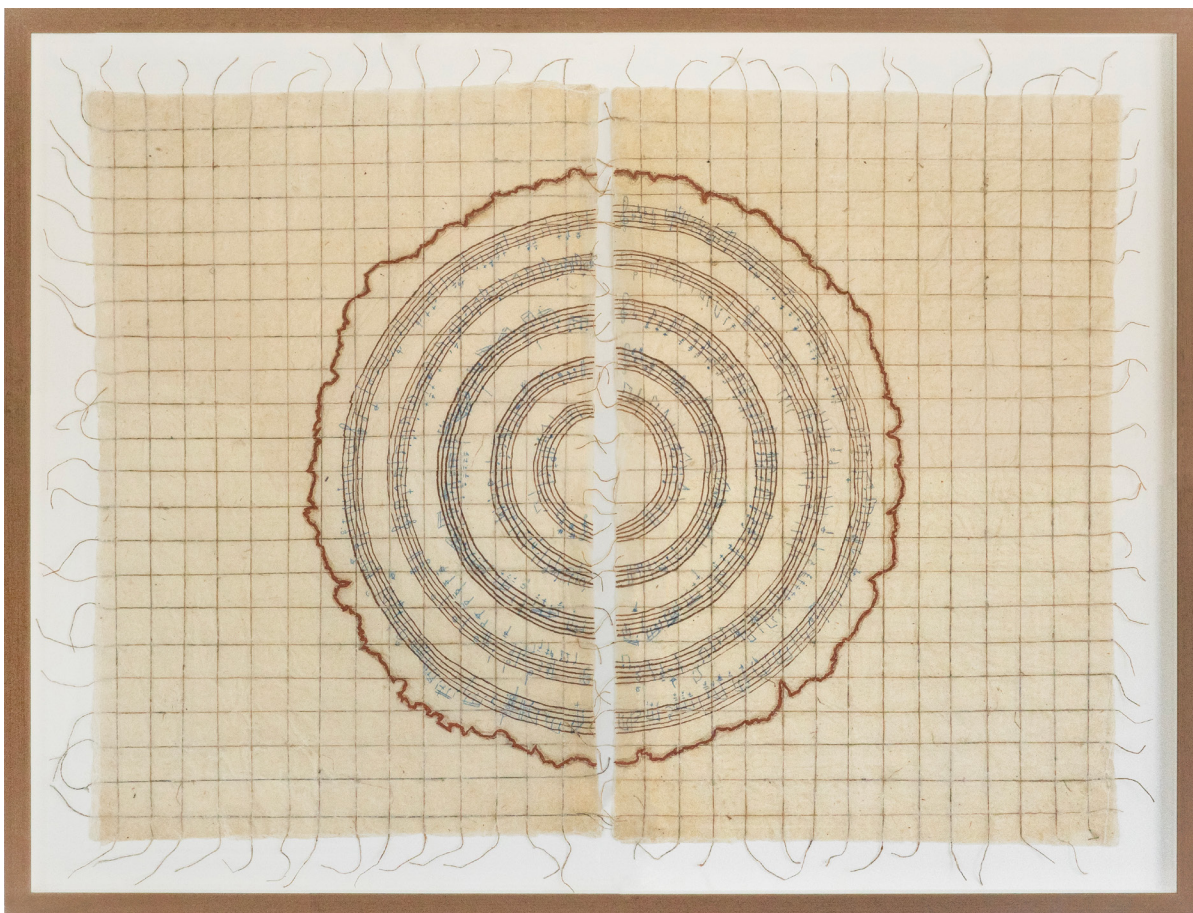


Photo Credit: Descanso Gardens

Shoshana Ben-Horin

Music for Roots of Cool: A Celebration of Trees and Shade in a Warming World, 2025

Multimedia work of music and accompanying visual artwork

Original compositions in three movements written and performed
by the artist / 36 minutes

Nepalese oil paper, oil marker, oil pencil

40" x 30" unframed

Shoshana Ben-Horin's original piano compositions in three parts explore the past, present, and future of the relationship between urban spaces and nature. The first movement pays homage to the original and ongoing indigenous caretakers of the land, as well as the abrupt shifts that colonization brought to the land. The second movement examines the current climate crisis and the collective response it demands. The final movement evokes awe and respect for trees in an imagined urban future that is in harmony with nature.

[Listen](#) to the original compositions.

[Listen](#) to the artist talk about this artwork.

2.2. Overcoming Urban Realities Is Complex

What are some present-day challenges to increasing shade and tree cover equitably?

As the planet heats up, shade is no longer a luxury—it's a necessity. It shapes where we go, how long we stay, and what's possible in a day. In Los Angeles's semi-arid climate, creating shade through trees is vital but challenging. Young trees need water and care, yet limited resources mean many go without. In some neighborhoods, community volunteers step in; in others, the support isn't there. The result? A divide between communities rich in canopy and those left in the sun. Shade, like so much else, is unevenly shared.



Exhibit visitors read text and view artwork related to present-day shade equity challenges.

Photo Credit: Shanley Kellis



Photo Credit: Descanso Gardens

Lisa Tomczeszyn

Every Bench Deserves a Tree, 2025

Installation of upcycled paper, cardboard, wire, and wood

132" x 90" x 48"

Every Bench Deserves a Tree strives to re-create the opposing sensory experiences of heat and cool that urban dwellers encounter in the city. Visitors are invited to feel the contrast between a sense of calm—sitting under the graceful branches of a tree built from recycled paper and paper leaves cut from photographs of the oak grove at Descanso Gardens—and a sense of unprotected exposure under unfiltered light sitting on a bench marked “Asphalt Avenue.” The juxtaposition of the shaded and unshaded urban experiences continues to be explored in Tomczeszyn’s paintings, on exhibit near the installation.



Photo Credit: Shanley Kellis

Lois Keller

The Stakes We Leave Behind, 2025

Mixed media installation using digital photographs on archival paper, wooden tree stakes, tree ties, nails, brick, cardboard, found street well soil, and garbage
Dimensions variable

The installation presents photographic portraits of trees alongside physical materials the artist collected as a volunteer providing stewardship care for public trees in Los Angeles. The collection of objects—including an empty tree well re-created using actual soil and garbage fragments collected from street tree locations—documents how good intentions of urban tree plantings over time can devolve into neglected artifacts of a forgotten past. For Keller, each tree represents a crossroads at the interventions that people bring to urban areas—which can be helpful, or can be harmful. The artist invites visitors to see themselves as positive change agents in their own communities who can provide the continued care required to help trees thrive in their own communities.

[Listen](#) to the artist talk about this artwork.



Photo Credit: Jolly de Guzman

Leslie K. Gray

Getting There: A Journey to Equitable Shade—Bus Stop of the Present, 2025

Acrylic, papier-mâché, fabric, PVC, metal

36" x 108" x 72"

Gray's three-part installation of "bus stops" explores the past, present, and future of access to shade in the urban context and invites visitors to consider what kind of future they want to travel toward and help manifest. Located in three different parts of Descanso Gardens, each installation presents a combination of comfort and sun exposure and is accompanied by facts about heat risk to riders and other relevant information designed to pique visitors' curiosity and raise awareness. *The Bus Stop of the Present*, located near the Camellia Forest, is more inviting than the *Past* installation located at the curb in front of the main entrance—it is still not quite comfortable. It offers limited shade and serves as a reminder that the urban planning decisions of the twentieth century prioritized cars over people. Combined, the works explore what a lack of access to shade feels like in the urban context, showing the stylized absence of trees and shade, prompting viewers to consider the reality experienced daily by people who rely on public transportation. The *Future* installation, located outside of the Sturt Haaga Gallery, inspires viewers to imagine what access to shade in the urban context could feel like if the human experience was centered in a whimsical and celebratory way.

[Listen](#) to the artist talk about this artwork.

2.3. A More Verdant, Shaded Future

What could a cooler, greener city look and feel like in the future?

In the city of the future, nature thrives alongside innovation, and urban residents feel connected with the resources that sustain them. Tree-lined streets weave through neighborhoods, parks bloom atop rooftops, and waterways thread through urban centers, cooling the city and welcoming encounters with nature. The air is cooler, and birdsong softens the city's hum while shaded walkways invite people outdoors. Resilient communities are strengthened by their connection to nature's seasons. Here, humans and nature coexist, nurturing a future that is sustainable and inviting.



Visitors walk past Pascaline Doucin-Dahlke's hanging botanical installation in the gallery room representing visions for a greener and cooler urban future. Photo Credit: Shanley Kellis



Photo Credit: Shanley Kellis

Pascaline Doucin-Dahlke

Suspended Garden, 2025

Umbrella, leaves, pods,
acrylic paint, thread,
rope, wire
60" x 36" x 60"

Doucine-Dahlke's sculptural work evokes the abundance that the California climate offers—one which shimmers with sunshine, warmth, blue skies, and bright light. In a changing climate, humans increasingly realize that this lifestyle comes with a cost—but her work helps to simultaneously remind viewers that nature can provide respite and sorely needed shade, especially in working-class neighborhoods. To Doucin-Dahlke, the use of repurposed plant material is a way to tap into collective creativity and ability to find solutions to climate change and other challenges of this era.



Photo Credit: Descanso Gardens

Cidne Hart

Traversing the Warming Forest, 2025

Eco printing, rust printing, indigo printing, cyanotype,
and natural dyes on varied fabrics

72" x 84" x 72"

Hart's *Traversing the Warming Forest* incorporates varied dyeing methods, including cyanotype, a photographic process discovered in the nineteenth century that enables exposure under a film negative or objects such as vegetation to produce an image onto fabric. Hart also uses multiple natural dyeing methods, including indigo, shibori, and eco-printing, which utilizes leaves to print an image onto fabric through contact, bundling, and heat via steaming or boiling. Hart invites visitors to surround themselves with the beauty of the forest while contemplating the uncertain future of the warming world. The resulting installation has spatial passages to experience the individual details from inside as well as from outside.

[Listen](#) to the artist talk about this artwork.



Photo Credit: Descanso Gardens

Sarita Zaleha

Sycamore Leaves from the Arroyo Seco, 2025

Artist book installation with risograph printing

216" x 108"

Zaleha's installation explores the visual perception of shade with its dappled light and layered density, evoking the feeling of being immersed in the protective canopy of a large sycamore tree. For the creation of this work, dozens of broken leaves were collected from the Arroyo Seco—a seasonal body of water that meanders downward from the San Gabriel Mountains, through La Cañada Flintridge and Altadena, before joining the Los Angeles River near Downtown Los Angeles. The leaves were then copied and printed in layers with the use of a risograph duplicator machine. The prints are bound into accordion books that are hung vertically *en masse* along the gallery wall. The artist invites visitors to ask themselves: What do you notice in the shade?



Photo Credit: Descanso Gardens

Victoria Arriola
Long Shadows Fall, 2025
Metal globes, tree branches,
organic ground cover,
mirrors, projected light
216" x 96" x 60"

Long Shadows Fall presents multiple sculptural assemblages featuring reflective metallic globes paired with single tree branches—some suspended vertically from above, others standing upright below—creating a dialogue between grounded and elevated forms. The assemblages are surrounded by additional branches, positioned to reflect the evolving natural and projected light, evoking the feeling of an interior forest. As the light shifts throughout the day, the installation produces a dynamic interplay of shadows and reflections—suggesting the quiet presence of the sun and the illusion of shade. As visitors approach from the garden entrance and arrive at the gallery, Arriola's work aims to create a sense of transition—inviting them into a space that feels simultaneously magical and hyper-real, yet grounded in natural, familiar elements.



Photo Credit: Descanso Gardens

Robin Lasser

Postcards to a Cooler Future, 2025

7 archival metal photographs

45" x 30"

Postcards to a Cooler Future is an installation composed of seven large-scale postcards that serve as a form of poetic wayfinding, offered as love letters in the time of climate change. On one side, the postcards feature tableaux imagery inspired by urban trees of Los Angeles, Descanso Gardens' trees, and shades of cool in a warming world. Written messages on the other side contemplate nature's role and her resilience in a changing climate. This large-scale installation is accompanied by meditative video art that can be viewed at www.robinlasser.com.



Photo Credit: Descanso Gardens

Chantée Benefield

Cool Canopy, 2025

Umbrellas, spray paint, acrylic paint, wire

Dimensions variable

Cool Canopy uses umbrellas as a metaphor for the life-giving benefits of trees, inviting visitors to notice and appreciate through symbolism the simple grandeur that urban trees provide. The installation re-creates the feeling of being underneath a canopy of leafy trees, enjoying the vibrancy of green, cool shade—but in a manner that calls for attention outside of the daily doldrums. Benefield was working on this installation when the Eaton Fire devastated her community of Altadena in January 2025, burning her family home and artwork. Re-creating this lost work had added significance for Benefield, as the umbrellas serve as a reminder of the trees lost in her home and neighborhood.

[Listen](#) to the artist talk about this artwork.



Photo Credit: Valerie Daval

Valerie Daval
***Angele Heart*, 2024**
Acrylic on fabric on canvas
30" x 60"

In *Angele Heart*, Daval builds upon a continuing body of work inspired by a photograph of her grandmother as a young adult, sitting in nature and crafting garments from chestnut leaves. Angele takes refuge in the shade of trees, seeking protection from the heat and the passage of time—without it, she risks disappearing. Shade is more than a physical space; it is a place of preservation, a threshold between presence and absence. Trees, with their deep roots and vast canopies, become silent guardians of her existence. For Daval, this painting is a tribute to women across generations, embracing both fragility and strength, presence and absence.

Elsewhere in the series, she pays tribute to indigenous women, exploring the vestiges of their intimate link to the natural world and the concepts of family and connection across generations. The women in Daval's work are connected to prints of leaves, symbolizing the body and protection. The leaves offer shelter and natural shade, resembling lungs and blood vessels—representing a life force—while the women's bodies symbolize the essence of trees. Beyond the narrative, these works embody sisterhood and profound kinship with the natural world.

[Listen](#) to the artist talk about this artwork.



Photo Credit: Descanso Gardens

Yarn Bombing Los Angeles

Forest for the Trees, 2011–2025

Mixed media including yarn, collage, knit material, and paint

Dimensions variable

Core members for art installation: David Orozco and Darlyn Susan Yee

Old-growth forests exhibit distinctive ecological features and are often home to rare, threatened, and endangered species of plants and animals, making them ecologically significant. Unfortunately, many old-growth forest stands are threatened by habitat destruction at the invasive hands of man. *Forest for the Trees* is a fiber-based installation of works by dozens of contributing artists. Presented with the hope to address the wonders and perils of the forest, the installation creates an environment that is at once unique and fantastic, dangerous and bizarre, and acknowledges that one day, the built environment may be all that's left.

Forest for the Trees was initiated in 2011 by the Arroyo Arts Collective in Northeast Los Angeles. Its co-producer, Yarn Bombing Los Angeles, invited artists from all over the world to contribute work. Artists use standard, recycled, and unusual materials to create all of the elements one might see in a forest. From its debut at Avenue 50 Studio, *Forest for the Trees* has evolved into installations at Craft and Folk Art Museum, Los Angeles Municipal Art Gallery, Angels Gate Cultural Center, Skirball Cultural Center, Manhattan Beach Creative Art Center, Brand Library, and Tom Bradley International Terminal at LAX.

[Listen](#) to the artist talk about this artwork.

3. VISITOR ENGAGEMENT

Roots of Cool was designed with various ways for visitors to interact, learn more about the themes raised in the exhibit, and contribute their own thoughts and opinions. Throughout the exhibit, visitors were able to access digital content complementing the exhibit via the Bloomberg Connects app—an app used to augment exhibitions at over 1,500 museums and other cultural organizations around the world. The app hosted audio interviews with artists discussing their works and their connection to shade equity. A touchscreen installed in the gallery exploring the theme of how past planning decisions affect neighborhood shade availability today included links for visitors to learn about redlining, tree equity, and shade deserts, as well as the opportunity to use the UCLA and American Forests' [National Shade Map](#) to learn how much shade their neighborhood has and whether the source is buildings or trees. The gallery containing works examining pathways to a cooler, greener future included a listening station with short audio responses collected by The Nature of Cities and their worldwide network of urbanists, scientists, and artists. Over two dozen contributors from six continents responded to the question: As the world warms up, how are you thinking about the role that trees and shade can play in making your city or region livable? Contributed responses can be heard at www.thenatureofcities.com/TNOC/roots-of-cool/.

Additionally, the exhibit included an “Activity Room” with poster survey and postcard writing and drawing activities.

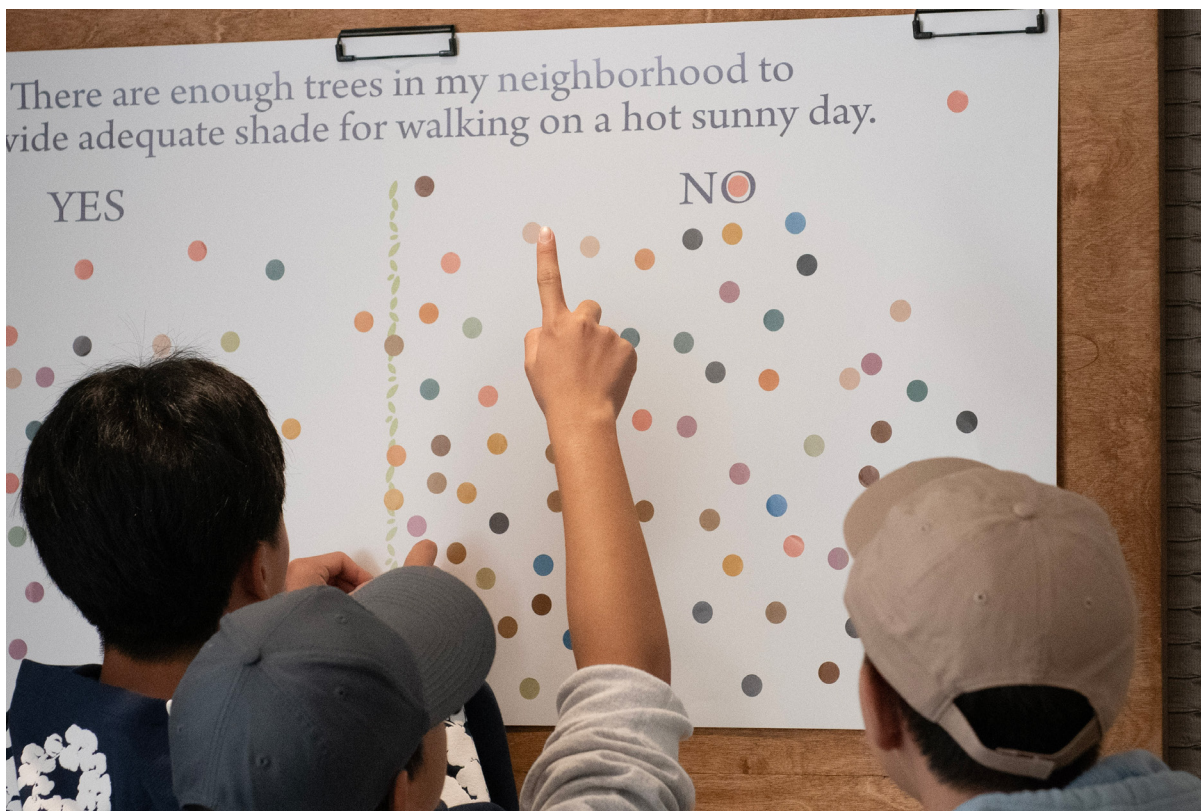


Photo Credit: TreePeople

3.1. Interactive Exhibition Elements

3.1.1. Poster-Based Survey

3.1.1.1. Methods

The exhibition included survey questions on two large-scale posters. Visitors were invited to place a sticker to indicate the response that most closely matched their opinion. Poster boards were replaced every one to two weeks, depending on how saturated with stickers they were. Twelve posters were gathered over the course of the exhibit's three-month run.

The first poster asked visitors to respond “Yes” or “No” to the prompt: “There are enough trees in my neighborhood to provide adequate shade for walking on a hot sunny day.” This survey question comes from the University of Southern California LABarometer survey, an annual survey of approximately 2,000 adults randomly selected from households throughout Los Angeles County, conducted by the USC Dornsife Center for Economic and Social Research with the aim of informing academic research, public discourse, and policy. The [LABarometer survey](#) covers core topics on community well-being topics, and additional related products are created depending on relevant topics (i.e., COVID-19, wildfire, or in this case, shade).

The second poster asked visitors to select the shade-related fact that most surprised them. Response options included:

- In most U.S. cities, trees provide 99% of urban shade at 12 p.m.
- School playground surfaces often get hot enough to cause second-degree burns.
- Shade has the biggest impact on how comfortable people feel outside—not temperature or humidity.
- Low-income neighborhoods in the U.S. have 41% less tree cover than the wealthiest ones.
- Although banned in 1968, redlining* still has legacy impacts on how much shade neighborhoods have today (*The 20th-century federal practice of race-based ranking of neighborhoods, which determined access to home loans and insurance).

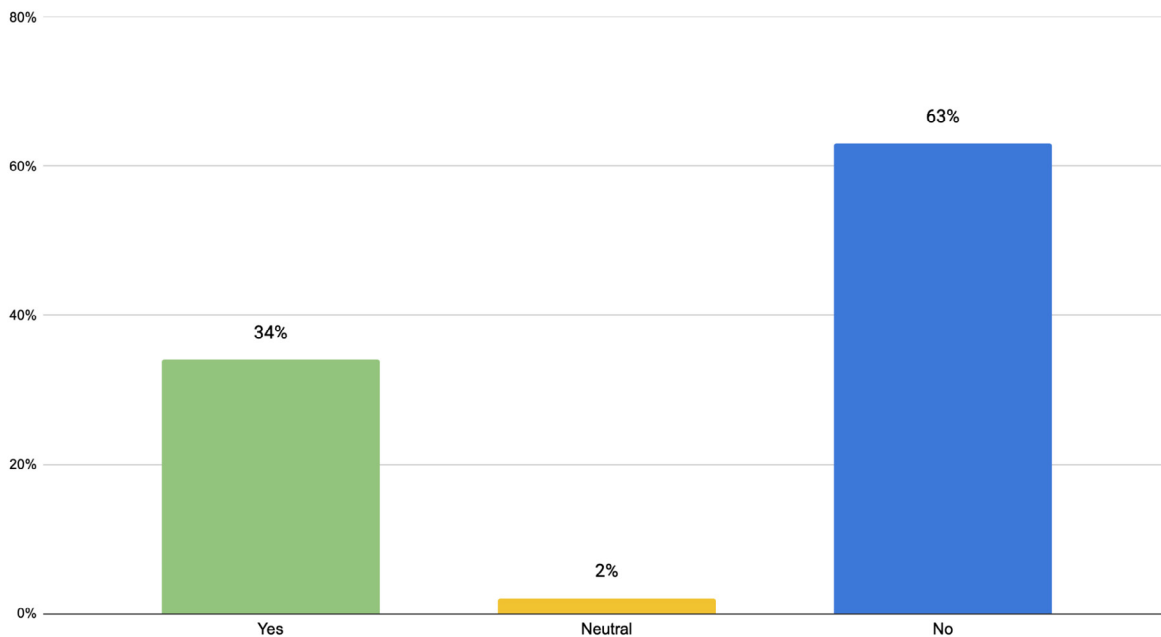
A team from the UCLA Undergraduate Research Scholars Program digitized the boards and then tabulated responses. Two researchers tallied each poster. For any data with more than 1% difference in tally number, the researcher recounted the data.

3.1.1.2. Findings

A total of 3,530 votes were tallied in response to the prompt “There are enough trees in my neighborhood to provide adequate shade for walking on a hot sunny day” (Figure 1). Most respondents (63.6%) indicated “No,” while 34.3% indicated “Yes,” and 2.1% placed their sticker on the dividing line between “Yes” and “No,” which was recorded as a “Neutral” vote.

FIGURE 1

Visitor Opinions on the Adequacy of Shade Availability in Their Neighborhood



Graph representing over 3,500 tallied responses to the prompt “There are enough trees in my neighborhood to provide adequate shade for walking on a hot sunny day.”

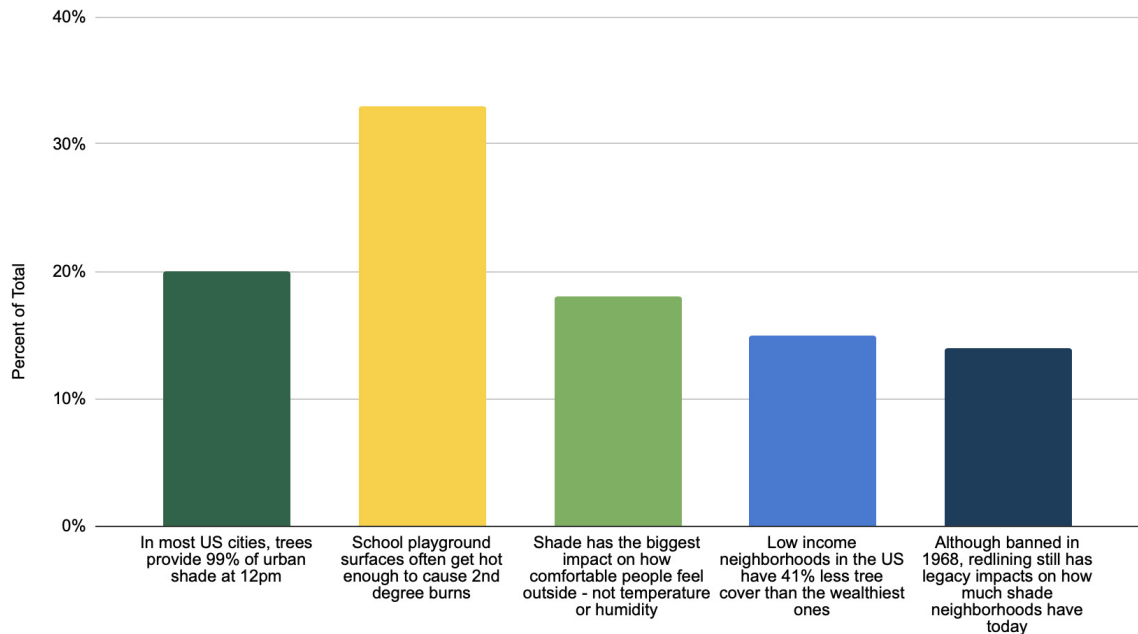
In the LABarometer 2025 *Shade Report*, which presented supplemental analyses to the 2025 LABarometer survey, nearly half of respondents (48%) agreed that there are enough trees in their neighborhood to provide adequate shade for walking (Thomas & Kim, 2025). In contrast, the 2020 LABarometer survey found that only about one-third of respondents agreed with this statement, and that two-thirds did not feel there was adequate shade in their neighborhood (USC, 2020). The 2020 responses are more aligned with the opinions expressed by Descanso Gardens visitors during *Roots of Cool* (Figure 1).

LABarometer’s 2020 responses were collected during the COVID-19 pandemic and during a year that was historically hot. Most Los Angeles County residents were staying close to home and discovering nature nearby through walks, hikes, and other outdoor activities. They were thus likely more attuned to how suitable—or not—their neighborhood amenities were. The responses from Descanso Gardens visitors may have been influenced by the fact that the survey came at the end of the exhibition, when respondents were primed to compare the availability of shade in their neighborhood in contrast to the well-shaded Descanso grounds.

Researchers note that the two audiences differ—the LABarometer effort surveyed Los Angeles County residents exclusively, whereas more than 40% of visitors to Descanso Gardens live outside of Los Angeles County (Descanso Gardens, 2024). It is nevertheless useful to consider the differences in opinion, and to note that in both cases, the majority of respondents do not believe shade in their neighborhoods to be adequate.

FIGURE 2

Visitor Responses Indicating the Most Surprising Shade Fact



Over 3,500 visitors selected one of five provided shade facts to indicate which was the most surprising to them.

Responses from the poster survey pertaining to shade facts showed that the shade fact most often selected as the most surprising was “School playgrounds often get hot enough to cause second-degree burns” (Figure 2). Out of a total of 3,709 responses, this fact was selected by 33% of respondents. Among the other four facts, each was selected as the most surprising by between 14% and 20% of respondents. Respondents found that school playground surfaces causing second-degree burns was the most surprising fact by a significant margin. This likely reflects the direct harm that a lack of shade can cause to children, a population more vulnerable to heat-related illness. This finding also stands out from the other presented facts, which largely concern shade equity or distribution rather than the direct harm caused by a lack of shade.

3.1.2. Postcard Activity

3.1.2.1. Methods

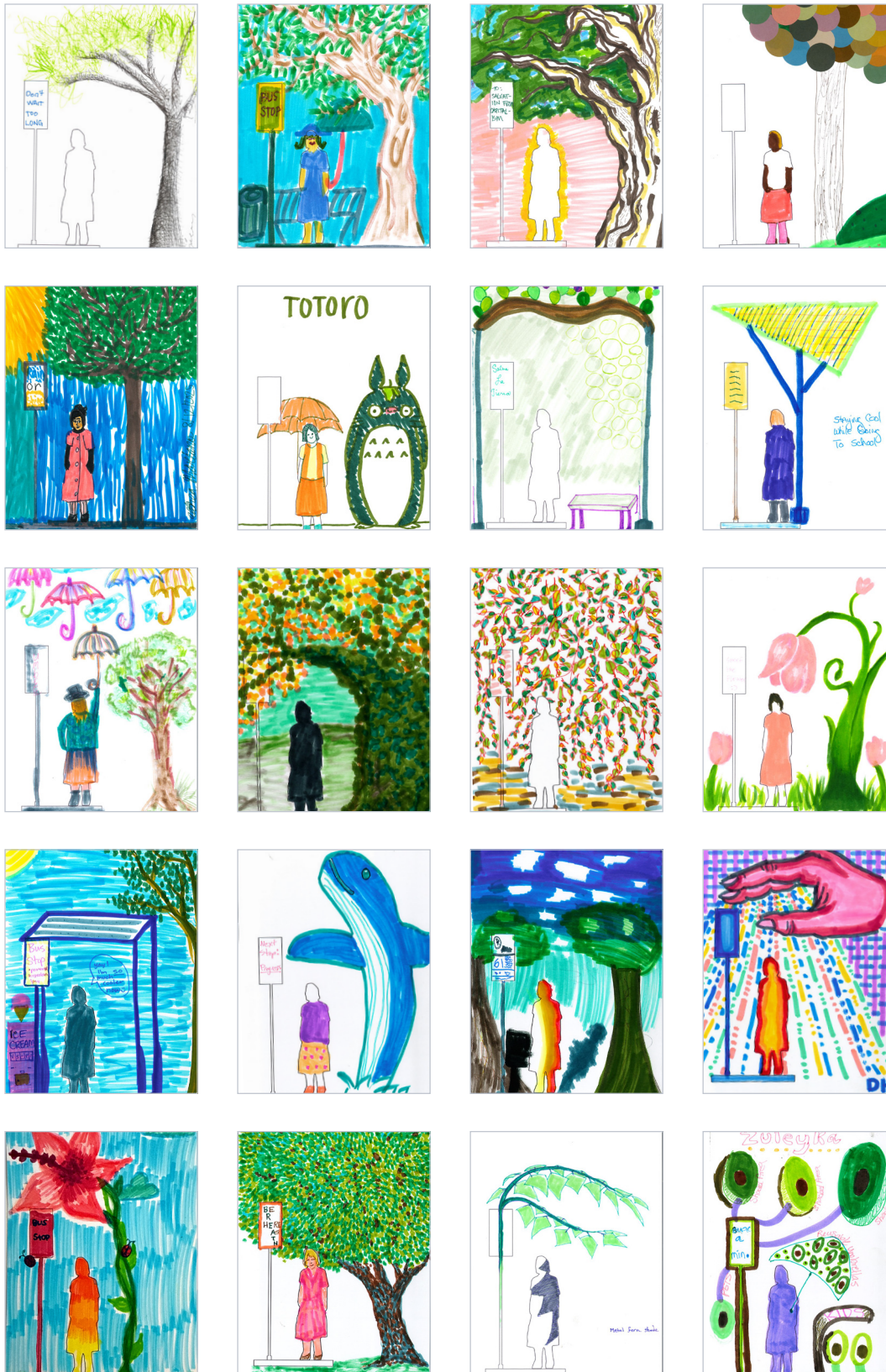
Roots of Cool also included a postcard activity in which visitors of all ages were invited to convey their visions, sentiments, and concerns related to a hotter climate by responding to related prompts by both drawing and writing. The UCLA Undergraduate Research Scholars Program team digitally documented a selection of these postcards and conducted thematic and sentiment analyses to identify their prominence among visitors.

At a large table in the middle of the Activity Room, postcards were set up at a writing and drawing station with multicolored markers. The postcards depicted a simple line drawing of a woman standing next to a bus stop sign—mirroring Leslie K. Gray’s three-part installation in various parts of the garden exploring the past, present, and future of shade equity through bus stops. Signs placed on the table invited visitor participation through the drawing of possible shade solutions to help the bus rider wait in the shade. On the backside of the postcard, participants were invited to write a postcard and to choose a prompt to the past, present, or future:

- Imagine it’s the year 1985: What advice would you give to the future to make sure the climate doesn’t get too hot?
- It’s 2025: How is a hotter climate affecting you or activities you like to do?
- Imagine it’s the year 2065: Did we solve climate change? How did we do it?

Of approximately 6,000 postcards created during the run of the exhibition, about half went home with their creators and half were left at the exhibit. The research team sorted the remaining 3,000 postcards into categories: drawings representing trees/nature, drawings representing built shade, and postcards with written responses. The majority of visitors drew on the front side of the postcard but did not write a message on the back. Some postcards were excluded in the final analysis, as they did not respond to the prompt given at the exhibit relating to drawing a shade solution for the bus rider. A total of 1,913 postcards were compiled and analyzed.

Researchers entered descriptive data about each of the postcards, including rich descriptions of each drawing. Written responses were typed verbatim and translated into English where relevant. Words were then matched against a sentiment lexicon, which is a natural language processing tool that uses a list of words or phrases (lexicons) that are linked to different emotions associated with those words to detect sentiment. The team then applied a sentiment analysis using multiple established lexicons in RStudio for both written and drawing postcard responses. To prepare the dataset after data entry, researchers imported it, standardized it, and cleaned it by converting all text to lowercase and removing punctuation. The team specifically preserved apostrophes so words such as “don’t” would be preserved for later sentiment analysis scoring. Words containing no meaningful context (e.g., “none”) were removed using a filter function to ensure they did not skew the results. Next, the team collected the distribution of shade types drawn by visitors (natural shade, built shade, or both natural and built), finding the total count and percentage for each category.



A selection of postcards drawn by visitors shows imaginative solutions for providing shade at bus stops.

The team used three different sentiment lexicons to complete the analysis, applying the Bing sentiment lexicon, a standard dictionary that categorizes words into positive or negative sentiment, to analyze sentiment on a broad scale. The researchers tokenized text data and mapped specific words to sentiment categories. Prior to analysis, filler words (e.g., “like”) and negating words were filtered out to avoid confusion when categorizing sentiment. The team also uniquely had to filter the word “hot” to be categorized as a negative sentiment. Then, researchers counted the frequencies of all remaining positive and negative words, ranked them, and displayed the top 12 positive and negative sentiment words.

This process was applied to the written responses on the backs of the postcards as well.

To achieve a more in-depth analysis, the AFINN lexicon was used to assign a numeric weight to measure the intensity of the sentiment. Words were scored on a scale from -5 (very negative) to +5 (very positive). AFINN includes 2,476 words in total that already have a preassigned score. However, because of this, the team found that AFINN struggled with context. For instance, it would normally score a phrase like “not good” as positive, because the phrase contains the word “good.” To alleviate this, researchers split the text into two-word components, called bigrams, which allowed the sentiment score to be flipped mathematically if a word had a negating word right before it. A single postcard’s total AFINN score was calculated by grouping the data and taking the mathematical sum of all its adjusted sentiment words. This was completed only for written postcards, since many responses included descriptive words for objects that the AFINN lexicon classified as “neutral,” which artificially lowered the overall sentiment scores.

To get a better idea of the specific positive and negative sentiments being drawn from Bing and AFINN, the NRC lexicon was also applied, which tags words with nine specific emotions: positive, joy, trust, anticipation, negative, anger, sadness, fear, and disgust. The tokens were joined with the NRC dictionary, containing thousands of words. The team then calculated the overall emotion breakdown across all postcards before splitting these emotions up by shade type. Researchers also isolated the single dominant emotion for each individual postcard based on which category had the highest count. This was completed for both written and drawn postcard responses individually and in combination.

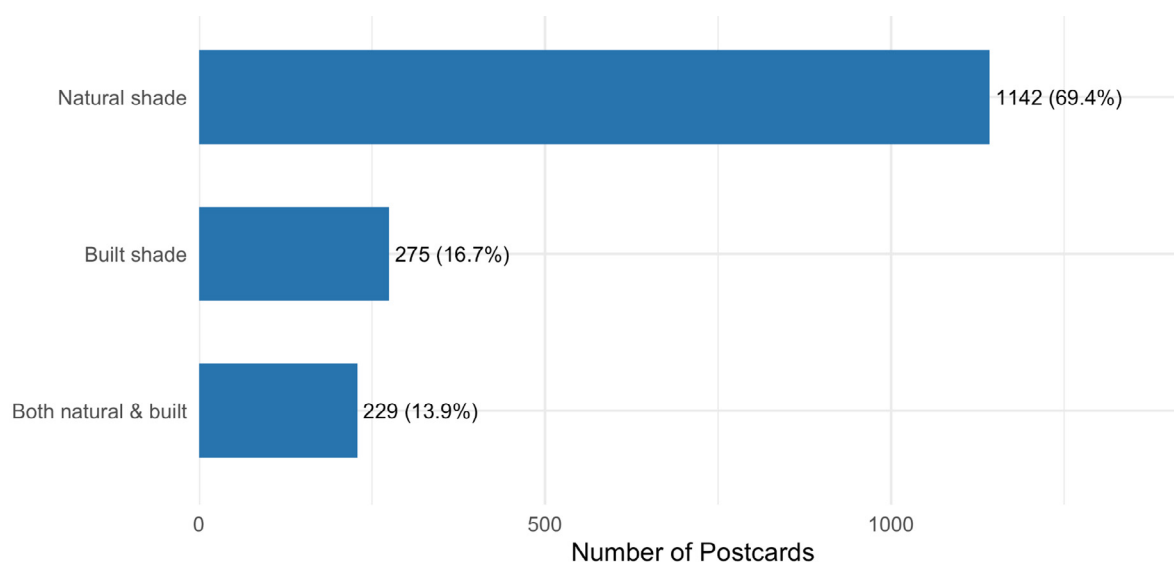
The last form of analysis was generated through a qualitative review of a sample of the postcard responses to see what common topics recurred. Based on that review, the team observed several patterns across responses that were relevant to the discussion of shade equity, and seven custom themes were defined: Climate & Heat, Trees & Nature, Letters to Future, Care & Kindness, Civic Action, Shade & Relief, and Walkability. For each theme, researchers created a custom list of related keywords. Then, postcards containing those specific words were flagged and the percentage of all written postcards that mention each theme was calculated.

3.1.2.2. Findings

More than two-thirds (69%) of postcards were categorized as “natural shade,” meaning that respondents drew a natural shade-providing image, such as a tree, on their postcard (Figure 3). Built shade, which includes structures such as awnings or bus shelters, accounted for 17% of postcards in a shade category. About 14% of postcards featured both natural and built shade together, such as a structure with trellised walls covered in vines. These results suggest that Angelenos often imagine natural shade when thinking of shade solutions.

FIGURE 3

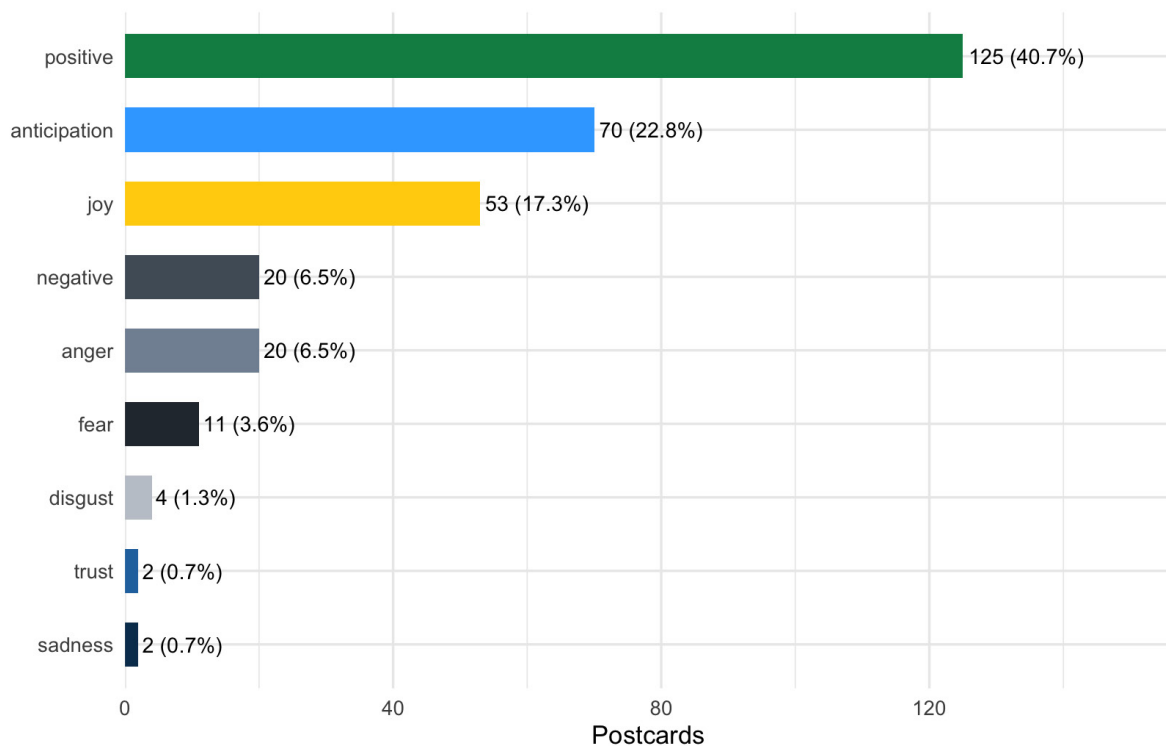
Distribution of Shade Types in Postcard Drawings



Bar graph showing the distribution of the types of shade depicted among 1,646 postcard drawings analyzed.

FIGURE 4

Dominant Emotions Reflected in Postcard Written Responses Using NRC Lexicon

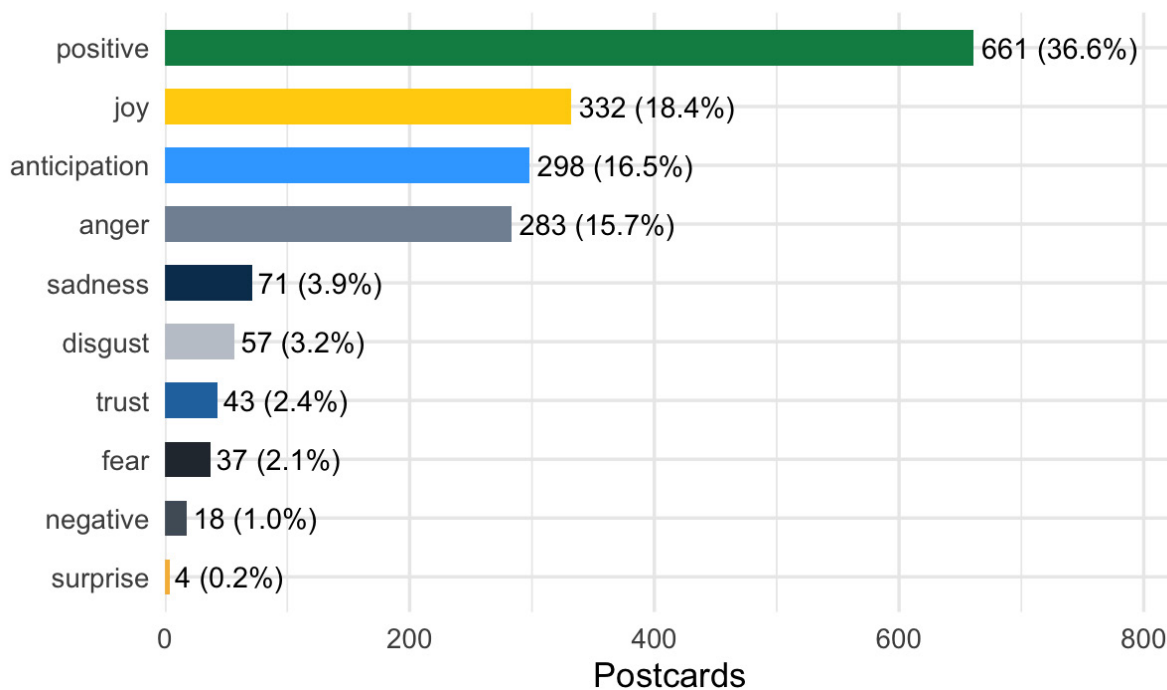


The bar graph shows the dominant emotion in the written component of each postcard (N = 307) categorized as one of nine emotions.

Each individual postcard's written response was assigned one of nine dominant emotional themes based on the most popular theme of its emotion-tagged words. Analysis of the postcards and their respective assigned dominant emotion (Figure 4) showed that "positive" was by far the most prevalent, with more than 40% of the responses indicating a positive emotion. "Anticipation" and "joy" were also common themes, while more negative emotions were much less common. Combined, responses tagged with "anger," "fear," and "disgust" emotions made up a smaller percentage than "joy" responses. "Sadness" was the dominant emotion in less than 1% of the responses. This indicates that people who wrote or drew a postcard after viewing the exhibit had an overwhelmingly positive view of the issue of shade equity in Los Angeles. This finding positively supports the idea that learning about a local environmental issue, such as shade equity, through art creates an optimistic view of the issue for visitors.

FIGURE 5

Dominant Emotions Reflected in Postcard Drawings Using NRC Lexicon

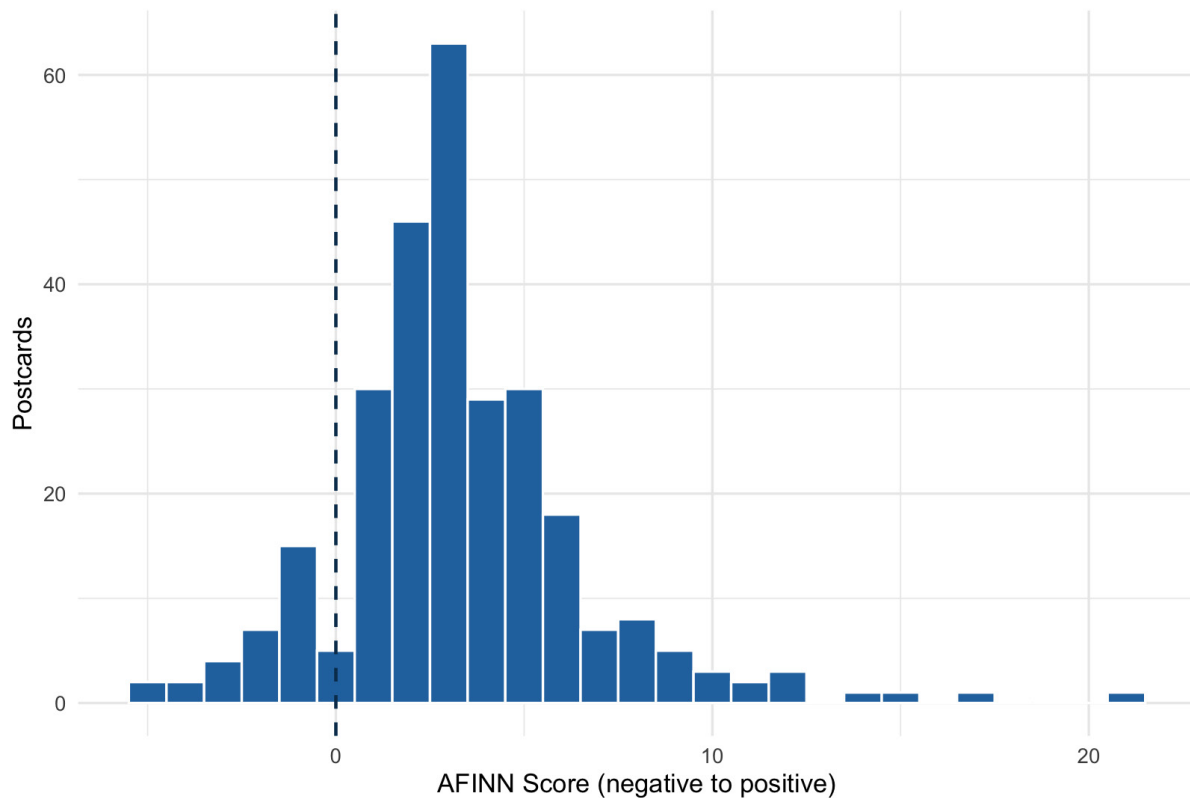


The bar graph shows the dominant emotion in the drawing component of each postcard (N = 1,804) categorized as one of 10 emotions.

The dominant emotion analysis of the drawings on the postcards (Figure 5) yielded similar results to the dominant emotion analysis of the written component. The main difference is that “anger” was much more common in the drawings. The analysis supports the previous finding that visitor responses to the exhibit and thoughts about shade equity after viewing it were overwhelmingly positive. Over one-third (36.6%) of the postcard drawings were categorized as “positive,” with the top three emotions being “positive,” “joy,” and “anticipation.” The minor differences between the dominant emotions in the written responses and the drawing responses indicate that the drawing responses were more negative.

FIGURE 6

Distribution of Written Sentiment Scores Using AFINN Lexicon

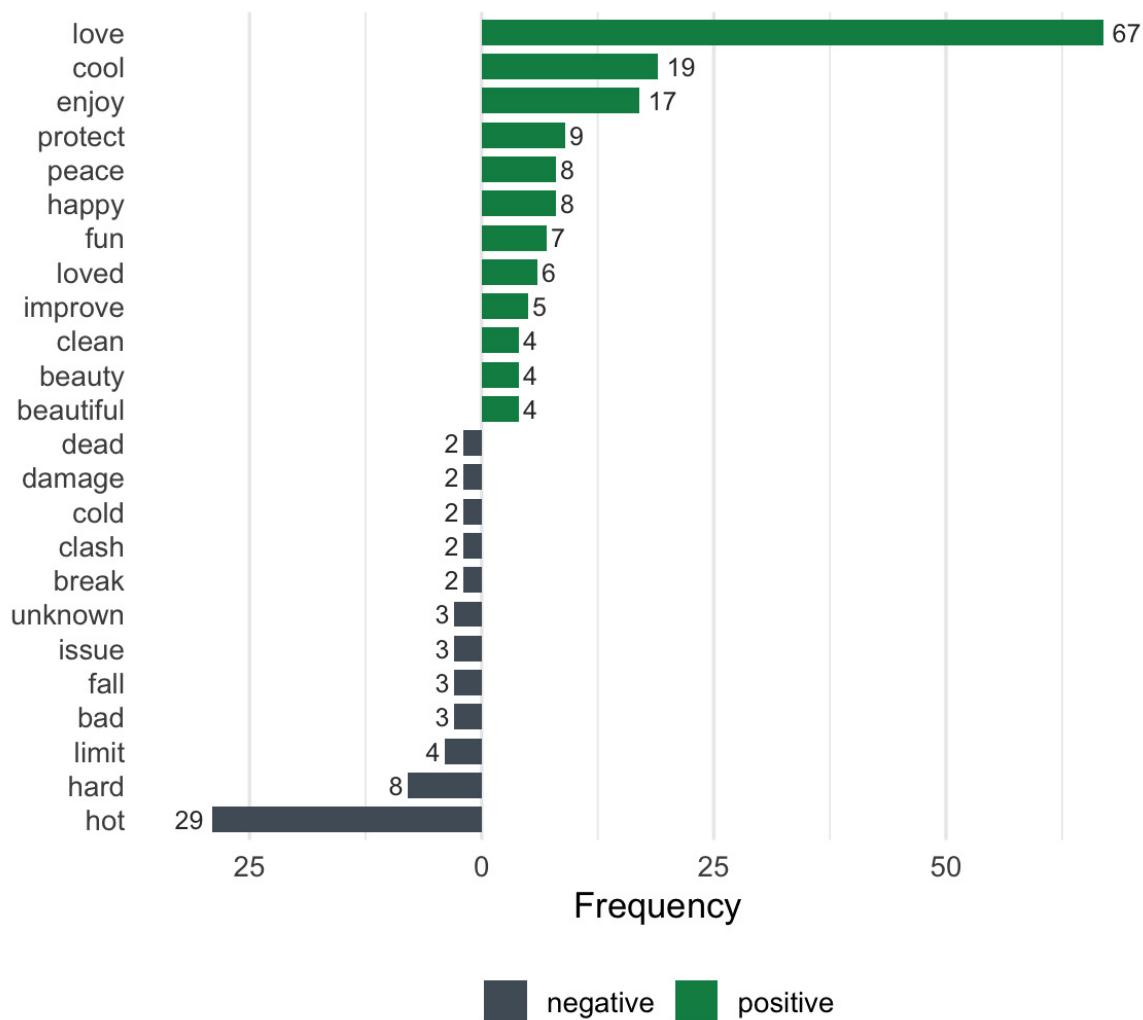


Bar graph depicting this distribution of the sentiment scores calculated using the AFINN lexicon to assign a numerical score to the written component of each postcard based on whether it expressed a positive or negative sentiment and how strongly.

In the written sentiment analysis, researchers used a sentiment lexicon called AFINN to numerically score words based on positive and negative sentiment. Each word was assigned a score from -5 to +5 based on how positive or negative it is. The AFINN score was then calculated for the written component of each postcard by calculating the sum of the scores for each emotionally tagged word on the postcard. The distribution of sentiment scores follows a roughly normal distribution with a mean of 3.3 (Figure 6). Very few of the postcards were tagged a negative AFINN score, aligning with the dominant emotion analysis where negative emotions were much less common in the postcards than positive ones.

FIGURE 7

Top 12 Words Driving Sentiment in Written Responses, Using Bing Sentiment Lexicon

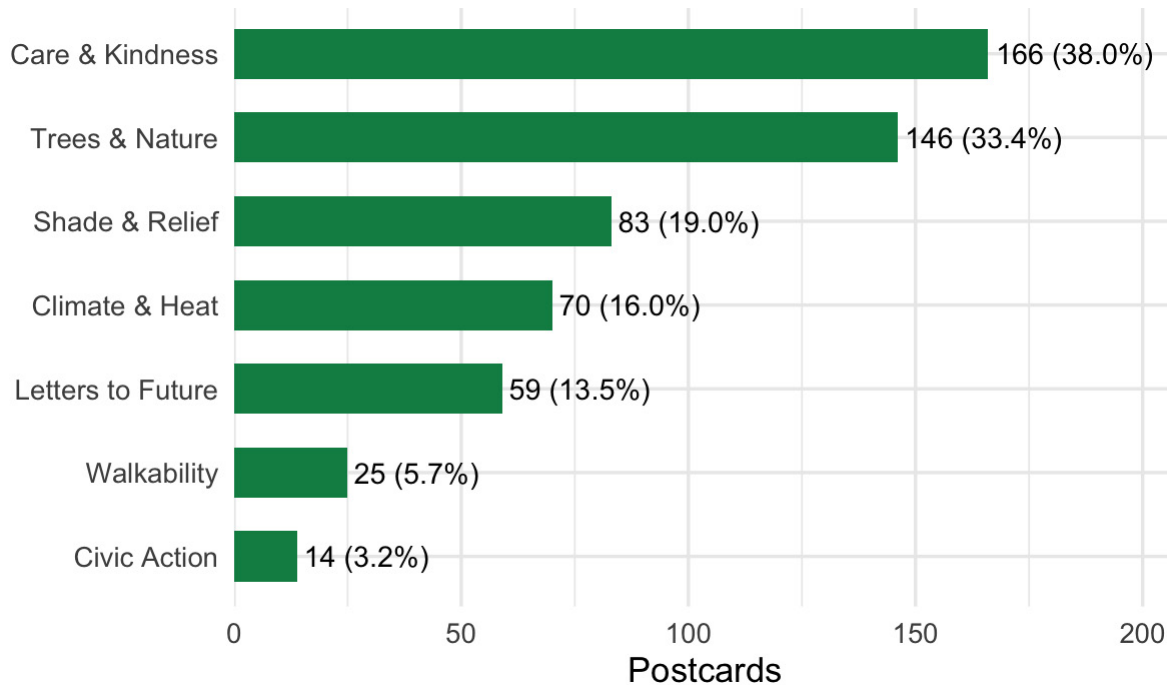


A graph showing the top 12 words that drove positive sentiment categorization and the top 12 words that drove negative sentiment categorization in the written responses along with how many times they appeared.

In an analysis of the top 12 words driving sentiment, the top words categorized as positive were “love” and “cool” (Figure 7). In this activity’s context, “love” was sometimes used as a parting salutation, and “cool” was sometimes used to describe thermal comfort. Other words driving positive sentiment included “enjoy,” “protect,” “peace,” and “happy.” The most common words driving negative sentiment were “hot” and “hard.” Top words with negative connotations appeared much less frequently than positive ones. While it is possible some words with multiple meanings were not used with the expected connotation, an overall positive sentiment nevertheless emerged.

FIGURE 8

Thematic Prevalence in Written Responses



Graph showing the number and percentage of postcards (N = 437) that expressed one of seven key themes. Only postcards that clearly expressed a key theme were included in the analysis.

In analyzing the postcard responses for seven key themes, the team found the most common themes were “Care & Kindness” (38%) and “Trees & Nature” (33.4%) (Figure 8). The least common themes were “Walkability” (5.7%) and “Civic Action” (3.2%). Themes that focused on the present directly related to shade seemed to be more common than themes that focused on more abstract future action like “Letters to Future” and “Civic Action.”

3.1.3. Discussion of Survey and Postcard Activities

Overall, responses showed a positive attitude toward creating climate-resilient futures, demonstrated through 37% of postcard drawings and 41% of postcard written responses containing positive responses (Figures 4 and 5). Researchers also noted that the largest category in the thematic prevalence in written responses was “care & kindness” (Figure 8). This finding is significant because it stands in contrast to the idea that climate education is overwhelmingly negative (Moser, 2014). Instead of themes like guilt, fear, and despair, the most frequently detected emotion was one of positivity. This demonstrates that climate communication can occur in a way that is informative but not disheartening. Hope-based communication is essential for encouraging action over passivity: If people feel that there is no hope for the future, they will not put effort into preserving their present environment.

Hope-based communication avoids pessimistic messaging by centering solution-making and encouraging community members to take part in protecting their environment, emphasizing that small change matters (Burke et al., 2018). Positive, arts-based communication can also assist in introducing communities to climate mitigation strategies. Ensuring that residents are informed on local climate issues can promote the integration of climate mitigation strategies into communities. For instance, a community member informed on shade equity will be more willing to advocate for having a shaded bus stop built in their community than a member who is less informed. An understanding of local community sentiment is essential for creating local climate solutions; one must first know how the community relates to and think about a particular topic, before deciding on climate mitigation strategies. One’s beliefs and values affect how they interact with their environment and thus, community sentiment analysis can help to adjust climate communication and mitigation strategies to fit the communities they serve.

This research addresses this need by demonstrating that visitor engagement data can be used not only to teach local communities, but as a tool for analyzing general community sentiment on local climate issues. Researchers found that respondents had an overall positive attitude on climate mitigation efforts, with sentiment analysis finding largely positive themes such as “care & kindness” and “shade & relief” (Figure 8). Forward-looking sentiments were also detected, with “anticipation” being a frequently conveyed emotion (Figures 4 and 5).

Going beyond community sentiment, this research also provides insight into how local community members imagine shade solutions, which shows how one’s environment can affect their ideas and vice versa. Respondents overwhelmingly imagined natural shade solutions as opposed to built shade solutions, likely reflecting their own shade experiences.

3.2. A Celebration of Cool: A Day of Family-Friendly Activities on the Importance of Shade

An event planned in conjunction with the exhibit offering multiple pathways to deepen visitor engagement with the topics of tree and shade equity was held on August 2, 2025.

The day opened with a panel discussion, moderated by urbanist Alissa Walker of Torched. LA, raising questions about why shade is unevenly distributed in Los Angeles and elsewhere, and how learning from other cultures and applying lessons through policy and activism can transform neighborhoods. Panelists included:

- Sam Bloch, author of *Shade: The Promise of a Forgotten Natural Resource*
- Andy Lipkis, founder of TreePeople and Accelerate Resilience L.A.
- Rita Kampalath, Chief Sustainability Officer, Los Angeles County
- Rachel O'Leary, Partnership and Equity Supervisor, California Department of Forestry and Fire Protection



Descanso Gardens visitors listening to panelists discussing uneven shade distribution and what Southern California can do to make neighborhoods more resilient to heat. Photo Credit: Shanley Kellis



Descanso visitors adopt a free coast live oak during A Celebration of Cool event.

Photo Credit: Shanley Kellis

Other event activities included:

- A heat scavenger hunt, using a science-based curriculum, where kids and adults borrowed infrared thermometers to record the surface temperature of different materials.
- Thermal image photo portraits of visitors to commemorate their visit. By converting infrared light into electric signals and creating an image, the thermogram offered a digital representation of the scene and a measure of the thermal radiation emitted by the pictured objects. Visitors saw how thermal signatures of different objects differ—buildings, pavement, trees, and of course, the visitors themselves.
- Free fruit tree and shade tree adoption, hosted by TreePeople, where 100 trees and dozens of native plants were given away to visitors.
- An art-making workshop presented by Arroyo Arts Collective.
- A parade of giant papier-mâché puppets of trees and forest animals, accompanied by a New Orleans jazz band, organized by One Grain of Sand Puppet Theater.
- Tabling by groups including City Plants, Climate Resolve, Los Angeles County Youth Climate Commissioners, and ShadeLA.

3.3. Visitor Engagement Discussion

Combined, the multiple interactive engagement pathways used in *Roots of Cool* demonstrate the value of arts-based engagement as both a climate communication strategy and a participatory research tool. Consistent with prior research showing that emotional and narrative-based approaches are more effective than fact-based messaging alone, visitor responses to *Roots of Cool* suggest that art can foster hopeful, solution-oriented conversations about climate adaptation. Rather than expressing fear or despair, participants in the poster-based survey and postcard activities most frequently communicated positive sentiments, indicating that visitors viewed shade equity as a challenge that communities can collectively address rather than as an insurmountable problem. Anecdotally, the interactions that staff, volunteers, and partnering organizations had with hundreds of visitors during A Celebration of Cool event also suggested that participation engendered feelings of optimism and an orientation toward civic action.

The exhibition and related programming and engagement activities also highlight the importance of understanding community perspectives when designing climate adaptation strategies. Participants overwhelmingly imagined natural shade solutions, suggesting that lived experience and local environments shape how people envision resilient futures. These insights can help planners, policymakers, and community organizations develop adaptation strategies that align with public values while strengthening support for investments in urban greening and shade infrastructure.

Beyond evaluating an exhibition, this collaboration illustrates how museums, botanical gardens, and other cultural institutions can work with academic and research extension entities to function as spaces for dialogue, learning, community-centered research, and civic participation. Interactive exhibitions not only communicate scientific knowledge but also generate valuable data about public perceptions, priorities, and aspirations. As climate and other environmental impacts become increasingly tangible, integrating art, science, policy, and public participation offers a promising approach for building informed, engaged, and hopeful communities. By transforming visitors from passive audiences into active participants, science-based, interactive art exhibitions can help shape both public understanding and more equitable, locally grounded climate adaptation efforts.



Revelers at a giant puppet parade featuring nature-inspired creatures. Photo Credit: Edith de Guzman

4. ARTISTS AND ARTWORKS

4.1. Participating Artists

Kim Abeles is a Los Angeles-based artist whose work addresses societal issues, science literacy, and civic engagement. In 1987, she innovated a method to create images from smog in the air, and Smog Collectors brought her work to international attention. Her work is in public collections including the Museum of Contemporary Art, Los Angeles County Museum of Art, California African American Museum, Berkeley Art Museum, and National Geospatial-Intelligence Agency.

Victoria Arriola is a Los Angeles-based mixed-media interdisciplinary artist who draws inspiration from her Latin roots, her homes in Denmark and Iceland, and her travels. She has taught art and design at the University of California, Berkeley, and the University of Southern California. She is a Fulbright Specialist and guest lecturer at the Danish School of Media and Journalism in Copenhagen.

Chantée Benefield is a Los Angeles-based mixed-media artist and designer whose work expresses the often-ignored realities of the Black experience. Her work spans from representational portraiture to abstract expressionism. She received her training in painting at Howard University in Washington, D.C.

Shoshana Ben-Horin is a Los Angeles-based classical pianist, recording artist, poet, and visual artist who enjoys exploring what different expressive mediums have to offer. She trained at the Giuseppe Verdi Conservatory in Milan, Italy.

Valerie Daval is an artist, teacher, and art therapist based in Los Angeles. She draws, paints, sews, and otherwise creates works exploring the concepts of memory and belonging, focusing on the relationship between humanity and nature. She studied art and architecture at the École Supérieure des Beaux-Arts du Mans in France. Her artwork has been exhibited in France, Germany, the U.K., and the U.S.

Pascaline Doucin-Dahlke is a Los Angeles-based artist whose work consists of conceptual, semi-abstract acrylic paintings, digital art, art installations, and mixed-media drawings based on local landscapes, nature, architecture, and still life. Her body of work largely consists of reinterpreting landscape space through personal observation, with a hidden message behind it.

Leslie K. Gray is a Los Angeles-based visual artist, writer, and director specializing in puppetry and other theatrical presentations. Her work has been seen locally and internationally at such places as The Music Center on Tour; the Skirball Cultural Center; The Getty Museum; Highways Performance Space; Ma Chère Artspace in Chiang Mai, Thailand; and El Museo Nacional in Montevideo, Uruguay. She teaches puppetry and art workshops for numerous community organizations and museums, and is a credentialed K–12 Special Education and Deaf Education Specialist teacher.

Cidne Hart is a Los Angeles-based artist whose creative and teaching work includes drawing, photography, bookbinding, and a wide variety of printing methods such as letterpress, image transfer, and cyanotype. Her work has been exhibited both locally and internationally.

Lois Keller is a Los Angeles-based multidisciplinary artist working in drawing, installation, and performance. Her annual *plein air* Matilija poppy series documents seasonal change, while her participatory works explore memory, presence, and environment. She has exhibited nationally and completed residencies at Château d'Orquevaux in France and the Residency Project in Pasadena.

Diana Kohne is a Los Angeles-based painter, printmaker, designer, and writer who uses English and American Sign Language. Her paintings and printmaking depict urban reality, while her three-dimensional works focus on the environment and social issues. She studied at the University of North Texas.

Robin Lasser is a professor of art at San José State University who produces photographs, video, site-specific installations, and public art dealing with public health, environmental issues, social justice, and the promotion of public dialogue. Lasser has exhibited her work nationally and internationally, including the de Young Museum in San Francisco; the National Gallery of Modern Art in Bangalore, India; and the Recoleta Cultural Center in Buenos Aires, Argentina.

Lisa Tomczeszyn is a Los Angeles-based artist whose work is in reaction to the wild and the tame in the natural world, and the histories of humankind's relationships with the planet and themselves. Her art practice is in constant response to current events and the wayward actions of humankind. She attended Parsons School of Design NYC for fashion and textile design, received a BFA at Southampton College for painting and lithography, and earned an MFA in theatrical design from the Yale School of Drama.

Yarn Bombing Los Angeles is a group of fiber artists collaborating since 2010 to stage public installations that expand the definition of public art, blending street art, fiber art, social practice, craft, and high art. Led by core members Darlyn Susan Yee and David Orozco, the eclectic group encompasses all ages, genders, and backgrounds. YBLA encourages professional artists and novice crafters to use materials ranging from yarn to garbage bags to create collaborative installations using traditional fiber techniques—resulting in works that may be whimsical, humorous, conceptual, or political. The common thread is the creation of work that pushes the knit/crochet envelope and presentation of the work in the public realm.

Sarita Zaleha is a Los Angeles-based artist and educator whose work explores how human perception of the environment—natural and mediated—affects how the public understands climate change, the degradation of the environment, and also its restorative potential. Zaleha's work allows space for viewer-participants to recognize unexpected emotions related to the natural world, and to create connections and take action with these emotions.

4.2. Complete List of Artworks

OUTDOOR INSTALLATIONS

Chantée Benefield

Cool Canopy, 2025

Umbrellas, spray paint, acrylic paint, wire
Dimensions variable

Beautiful Altadena:

An Ode to the Trees, 2025

Canvas, acrylic, paper, cardboard
Dimensions variable

Leslie K. Gray

*Getting There: A Journey
to Equitable Shade—*

Bus Stop of the Past, 2025

Acrylic, papier-mâché, fabric, PVC, metal
24" x 84" x 48"

*Getting There: A Journey
to Equitable Shade—*

Bus Stop of the Present, 2025

Acrylic, papier-mâché, fabric, PVC, metal
36" x 108" x 72"

*Getting There: A Journey
to Equitable Shade—*

Bus Stop of the Future, 2025

Acrylic, papier-mâché, fabric, PVC, metal
36" x 108" x 72"

Robin Lasser

Postcards to a Cooler Future, 2025

7 archival metal photographs
45" x 30" each

STURT HAAGA GALLERY

Kim Abeles

Breathing Trees, 2018

Digital print on silk of tree trunks
16" x 150"

Dodger Stadium, 2007

Edition #6/8

Archival ultrachrome print and model trees
10" x 8" x 3.5"

Enchanted Forest and Palms, 2009

Archival ultrachrome print on pipe holder
12" x 36" x 5"

Signs of Life Diptych, 2006

Archival ultrachrome print and model trees
12" x 12" each

Enchanted Forest (and golf course) II, 2009

Archival ultrachrome print and model trees
10" x 16-5/16" x 18-3/8"

Enchanted Forest, Infrared, 2012

Archival ultrachrome
print and model trees
12" x 73" x 12"

Terracotta Palms, 2007

Archival ultrachrome print and model trees
12" x 12" x 12"

*Looking for Paradise (Downtown Los
Angeles)*, 2004

Archival ultrachrome print and model trees
33" x 43" x 72"

Victoria Arriola

Long Shadows Fall, 2025

Metal globes, tree branches, organic ground
cover, mirrors, projected light
216" x 96" x 60"

Shoshana Ben-Horin

*Music for Roots of Cool: A Celebration of
Trees and Shade in a Warming World*, 2025

Multi-media work of 36-minute composition
and accompanying visual artwork
Nepalese oil paper, oil marker, oil pencil
40" x 30" unframed

Pascaline Doucin-Dahlke

Suspended Garden, 2025

Umbrellas, leaves, pods, acrylic paint,
thread, rope, wire
60" x 36" x 60"

Cidne Hart

Descanso Depths: Leaves and Spaces for Us All, 2025

Eco-printed leaves from Descanso Gardens on BFK Rives paper, cyanotype on onion skin paper. bound into accordion book
135" x 11"

Who Has the Trees in L.A.?, 2025

Eco printed leaves on U.S. Geological Survey topographic maps of Los Angeles area
76.5" x 68.5"

With the Low Winter Sun, the Olive Tree Casts Quite a Shadow on our Back Porch / Guavas, Liquid Amber, Oak, Sycamore, and Pecan Leaves Fall into my Pot, 2023

Two-sided quilt of cyanotypes and eco prints on antique saris and vintage fabrics
72" x 41"

Lois Keller

The Stakes We Leave Behind, 2025

Mixed media installation using digital photographs on archival paper, wooden tree stakes, tree ties, nails, brick, cardboard, found street well soil, and garbage
Dimensions variable

Roots of Cool, 2025

Acrylic on canvas
80" x 62"

Human Stakes, 2025

Tree stakes and bindings
24" x 84"

Diana Kohne

Hyperion, 2024

Acrylic gouache on wood
16" x 13"

Western, 2025

Acrylic gouache on wood
19.5" x 12.5"

Lake, 2025

Acrylic gouache on wood
11" x 18.5"

San Fernando — Sun Valley, 2025

Acrylic gouache on wood
11" x 14"

Magnolia, 2025

Acrylic gouache on wood
9.5" x 13"

La Brea, 2025

Acrylic gouache on wood
18.5" x 13.25"

San Fernando —

Cypress Park, 2025

Acrylic gouache on wood
9" x 12"

San Gabriel, 2025

Acrylic gouache on wood
15" x 15.5"

Figueroa, 2025

Acrylic gouache on wood
17" x 20.5"

Lisa Tomczeszyn

Every Bench Deserves a Tree, 2025

Installation of upcycled paper, cardboard, wire, and wood
132" x 90" x 48"

No Relief at the Dollar Tree, 2025

Oil on board
16" x 20"

Shade 56 & York, 2025

Oil on board
36" x 24"

Shade Idell & Cypress, 2025

Oil on board
16" x 20"

On Fire Town Pizza, 2025

Oil on board
36" x 24"

Sun in the City, 2025

Oil on board

12" x 14"

Shade on York, 2025

Oil on board

12" x 14"

Sarita Zaleha

Sycamore Leaves from the Arroyo Seco, 2025

Artist book installation with risograph printing

216" x 108"

Treeminders, 2025

Risograph prints

5.5" x 8"

BODDY HOUSE

Valerie Daval

The Song of Lola Kiepja, 2024

Acrylic on paper and fabric on canvas

30" x 30"

The Shade of Tiara Anima, 2025

Acrylic on fabric on canvas

30" x 30"

Angele Heart, 2024

Acrylic on fabric on canvas

30" x 60"

Kauxia, 2024

Acrylic on fabric on canvas

16" x 26"

Lailuka, 2025

Acrylic on fabric on canvas

16" x 26"

Traces of Shade, 2023–2025

Mobile sculpture installation with acrylic on fabric, leaves, and kapok silk

Dimensions variable

Cidne Hart

Traversing the Warming Forest, 2025

Eco printing, rust printing, indigo printing, cyanotype, and natural dyes on varied fabrics

72" x 84" x 72"

The Sun Burns I, 2024

Shibori-resisted, indigo-dyed print on vintage fabric scraps

46" x 50"

The Sun Burns II, 2024

Shibori-resisted, indigo-dyed circle

Shibori-resisted, indigo-dyed print

on vintage fabric scraps

50" x 50"

Yarn Bombing Los Angeles

Forest for the Trees, 2011–2025

Mixed media including yarn, collage, knit material, and paint

Dimensions variable

Forest for the Trees Contributing Artists:

Edith Abeyta, Alyssa Arney, Mercy Azarcon, Amy Bauer, Alexis Bell, Tegan Bellamy, Luisa Bottari, Leslie Brown, Burbank's Fiber Fiends, Alexandra Busby, Diane Bush, Linda Cahoon, Jill Cary, Janice Carter, Mara Cheng, Jean Choate, Jen Chow, Kathryn Cobbin, Irene Cochran, Leighann Corbin, Bernice "Bee" Colman, Yolanda Diaz, Sue Dietel, Katelyn Dorroh, Erica Durante, Beth Elliott, Hui-Mei Ellis, Jacque Lene Engel, Chantal Eyong, Jennifer Fahy, James Jude Ferrera, Esther Finney, Liz Flynn, Amy Frey, The Fuzzy Panda, Glendale's Jewel City Knitters, Carmela Gomes, Becky Goodman, Grace, Linda Greco, Judy Gregory, Connie Griffin, Andy Hadwick, Jennifer Hall, Julia Hartley, Margaret Hatfield, Ruth Head, Laura Henley, Yolanda Hernandez, Amy Caterina Hill, Heather Hoggan, Lynne Hopper, Jeanette Johannes, Kristen Johannsen, Lisa Jong, Sarah Jung, Patty Kersting, Julie Kornblum, Arzu Arda Kosar, Jessica Lam, Diane Larsen, Bisi Lawal, Debi Leibovitz, Linda Leonard, Justine Leong, Sheilah Levin, Stella Ligutom, Terri Lonski, Sylvia Lyons, Kristie Mach, Geeta Mande, Charlotte Marshall, Karen Semenoff McCuaig, Silvia Mendoza, Tyler Mitzner, Theresa Knopf Morgan, Allie Moskowitz, Lauri Mraz, Alice Neal, Nancy Nelson, Janice Ogata, Pat Olson, Diane Olson-Baskin, Gilda Ongkeko, Racquel "Rocky" Ormsby, David Orozco, Olga O'Shea, Niccole V. Osborn, Pasadena's Crochet Meet Up, Lori Perea, Domenica Piumetti, Rita Poon, Nancy Pyne-Hapke, Irene Rezaie, Adrianna Rianna, Judy Richards, Penny Richards, Glenid Rivera, Dolores Robles, Connie Rohman, Marsha Rose, Mary Rosales, Joan Sauve, Erin Shea, Jocelyn Sia, Ginna Siman, Rachel Sirr, Andrea Smith, Kathleen Smith, Rita Smith, Jennifer Snoeyink, Beth Sterner, Ann Storc, Kazuko Tajima, Cameron Taylor-Brown, Jerene Thomson, Threadwinners, Kacy Treadway, Christina Tucker, Cristina Tueler, Evelyn Van Orden, Bonnie Vilchez, Nicole Wade, Jane Wang, Jessica Wards, Kayla Waxman, Fumiko Wellington, Natalie Welts, Nicholas Welts, West Flamingo Yarn Stormers, Wetherby, Maryam Will, Tracy Williams, Stefa Witt, Darlyn Susan Yee, Mariam Yonsset, Maria Zapata, and Carol Zou.

5. REFERENCES

- Aragón, C., Buxton, J., & Hamin Infield, E. (2019). The role of landscape installations in climate change communication. *Landscape and Urban Planning*, 189, 11–14. <https://doi.org/10.1016/j.landurbplan.2019.03.014>
- Bentz, J. (2020). Learning about climate change in, with and through art. *Climatic Change*, 162(3), 1595–1612. <https://doi.org/10.1007/s10584-020-02804-4>
- Burke, M., Ockwell, D.I., & Whitmarsh, L. (2018). Participatory arts and affective engagement with climate change: The missing link in achieving climate compatible behavior? *Global Environmental Change*, 49, 95–106. <https://doi.org/10.1016/j.gloenvcha.2018.02.007>
- de Guzman, E., & Holler, L. (2025). *Engaging the public on water issues through art* (pp. 1–35). UCLA Luskin Center for Innovation. <https://innovation.luskin.ucla.edu/wp-content/uploads/2025/08/Engaging-the-Public-on-Water-Issues-Through-Art-report-final.pdf>
- Descanso Gardens. (2024). *Descanso Gardens Audiences*.
- Dzyuban, Y., Hondula, D.M., Coseo, P.J., & Redman, C.L. (2022). Public transit infrastructure and heat perceptions in hot and dry climates. *International Journal of Biometeorology*, 65(10), 345–356. <https://doi.org/10.1007/s00484-021-02074-4>
- Klößner, C. A., & Sommer, L. K. (2021). Visual art inspired by climate change—An analysis of audience reactions to 37 artworks presented during 21st UN climate summit in Paris. *PLOS ONE*, 16(2). <https://doi.org/10.1371/journal.pone.0247331>
- Magaña, M. (2025, July 12). A new art show brings L.A. climate inequities to life at Descanso Gardens. *Los Angeles Times*. <https://www.latimes.com/environment/story/2025-07-12/art-show-climate-solutions-descanso-gardens>
- Morris, B. S., Chrysochou, P., Christensen, J. D., Orquin, J. L., Barraza, J., Zak, P. J., & Mitkidis, P. (2019). Stories vs. facts: triggering emotion and action-taking on climate change. *Climatic Change*, 154, 19–36. <https://doi.org/10.1007/s10584-019-02425-6>
- Moser, S. C. (2014). Communicating adaptation to climate change: The art and science of public engagement when climate change comes home. *WIREs Climate Change*, 5, 337–358. <https://doi.org/10.1002/wcc.276>
- Thomas, K. & Kim, J. (2025). *LABarometer: Shade report—Shade and tree planting attitudes in L.A. County*. University of Southern California Dornsife Center for Economic and Social Research. https://dornsife.usc.edu/cesr/wp-content/uploads/sites/54/2025/11/LABarometer_ShadeReport_FINAL.pdf
- USC Dornsife Center for Economic and Social Research. (2020). *LABarometer: The sustainability and resilience report*. University of Southern California. https://cesr.usc.edu/sites/default/files/Sustainability_Wave1_Report.pdf



UCLA LUSKIN CENTER FOR INNOVATION

Informing effective and equitable environmental policy

innovation.luskin.ucla.edu