WHAT IS LANDSCAPE ARCHITECTURE?

Mapping the Gaps Between Expert and Public Understandings of Landscape Architecture

A FrameWorks Map the Gaps Report

July 2019

Authors

Rose Hendricks, PhD, Researcher
Leann Down, MPP, MSW, Research Analyst
Marisa Gerstein Pineau, PhD, Researcher and Senior Associate
Andrew Volmert, PhD, Director of Research

FRAME WORKS INSTITUTE

Sponsored by the American Society of Landscape Architects (ASLA); Council of Landscape Architectural Registration Boards (CLARB); Landscape Architecture Foundation (LAF); the Landscape Architectural Accreditation Board (LAAB); and the Council of Educators in Landscape Architecture (CELA)

Contents

Introduction

Landscape architecture—the analysis, planning, design, management, and stewardship of built and natural environments—can benefit individuals and communities, as well as the broader environment. Yet, the public does not know much about the profession and, in turn, fails to appreciate what would be gained by more fully drawing on landscape architects' considerable expertise. This limits public interest in landscape architecture and constrains the field's ability to make the contributions of which it is capable.

In this report, we dig into public thinking—or lack thereof—about landscape architecture and the field's subject matter. If lack of public understanding of the profession were simply a hole in people's knowledge, it could, in theory, be filled by simply providing more information. But people's thinking is rarely so simple. As this report documents, the public's ability to productively absorb information about the field is constrained by deep assumptions about nature, design, and outdoor spaces. These assumptions and implicit understandings make increasing public understanding of landscape architecture a substantial challenge.

While substantial, this challenge is tractable. The first step is to understand the assumptions that members of the public use to reason about outdoor spaces and landscape architecture. If landscape architects better understand how the public thinks about their work, and how existing ways of thinking can either prevent them from getting their point across or assist them in doing so, they can learn to communicate in ways that deepen understanding of the profession and build support for involving landscape architects in existing and new spaces to a greater extent.

This report is the first step in a research project to identify effective ways of framing landscape architecture. The project is carried out in collaboration with, and supported by, the American Society of Landscape Architects (ASLA), Council of Landscape Architectural Registration Boards (CLARB), Landscape Architecture Foundation (LAF), the Landscape Architectural Accreditation Board (LAAB), and the Council of Educators in Landscape Architecture (CELA). Through a series of studies, the project will develop ways of talking about landscape architecture that communicators can use to successfully navigate public assumptions and beliefs.

This report distills the core ideas that experts in the field—including landscape architects themselves—want to communicate with the public about landscape architecture, and explores how the public actually thinks about the profession. The report also identifies and analyzes the communications challenges that emerge from comparing the experts' and public's perspectives and recommends

initial strategies that communicators can use to address those challenges. This lays the groundwork for future research, which will develop and test different ways of framing landscape architecture to understand how to deepen public understanding of the issue and build support for greater involvement of landscape architects in the analysis, planning, design, and management of built and natural outdoor spaces.

This report is laid out in four sections:

1. The **Expert View of Landscape Architecture** distills the principal ideas that characterize experts' thinking about landscape architecture. These are the key concepts that experts want to communicate to the public. This distilled "untranslated story" of landscape architecture is based on an analysis of interviews with experts.
2. The **Public View of Landscape Architecture** presents the cultural models[1]—the shared, implicit understandings, assumptions, and patterns of reasoning—that members of the public draw on when they think about landscape architecture, and outdoor spaces more generally. This analysis is based on in-depth interviews with a cross-section of members of the public.
3. The **Mapping the Gaps: Opportunities and Challenges** section offers a comparative analysis of expert and public perspectives, identifying the points at which these two sets of views overlap and diverge, articulating key challenges in communicating about landscape architecture as well as the opportunities presented by improved communication.
4. The final section outlines **Initial Recommendations and Future Research**. This section suggests specific strategies to deactivate unproductive ways of thinking and build on the public's more productive understandings. It also identifies a "to-do" list for future research.

A description of methods can be found in the Appendix.

The Expert View of Landscape Architecture

The points that follow describe the main themes that emerged from 12 one-hour interviews with experts in the field of landscape architecture from both the public and private sectors. Interviews took place in June and July 2018. Together, these themes comprise the untranslated story of landscape architecture—the key set of ideas and understandings that experts want to communicate to members of the public. The expert story is organized around five questions:

1. What is the field of landscape architecture?
2. What do landscape architects do?
3. What are the impacts of landscape architecture?
4. What challenges do landscape architects face?
5. What needs to happen for landscape architects to be fully utilized in society?

1. WHAT IS THE FIELD OF LANDSCAPE ARCHITECTURE?

- **Landscape architecture is the aesthetic and functional design of outdoor space to maximize its social, environmental, and economic value.** It is concerned with both the built environment (for example, manufactured components, such as sidewalks, buildings, and bridges) and the natural environment (for example, drainage patterns, native flora and fauna, and soil composition). Landscape architects collaborate with a number of other professionals, including city planners, engineers, architects, landscape contractors, geographers, and ecologists, across all stages of a project, including in the analysis, planning, design, construction, and ongoing maintenance of a space. Experts emphasized that landscape architects deal with "everything outside of a building," including living (for example, plants and other vegetation) and nonliving (for example, buildings or other structures) things.

- **Landscape architecture is an evidence-based, licensed profession that works at the intersections of architecture, urban planning, engineering, and the environmental sciences.** These related disciplines, or "peer disciplines," of landscape architecture tend to focus on individual components of a project—for example, the built structures (architecture), functional aspects (engineering), or natural systems in a site (ecology). Landscape architecture, on the other hand, is concerned with all of these components, and is a distinct field of expertise that requires its own skills, rigor, and licensure.
- **Landscape architecture requires cross-disciplinary expertise in environmental and social sciences, engineering, art, and design.** Because the field of landscape architecture focuses on the relationships between built and natural environments—such as how the soil or the water flow in a space will affect anything built upon it—practitioners need to have expertise in ecological and environmental sciences as well as structural engineering and construction. Experts also emphasized the importance of understanding how people interact with their surroundings and with each other, which requires expertise in community and social sciences, human behavior, design, and aesthetic preferences.

2. WHAT DO LANDSCAPE ARCHITECTS DO?

- **Landscape architects create safe spaces that promote positive experiences and health.** Making sure spaces are usable and beneficial for the people who interact with them is a central part of a landscape architect's job. Primarily, landscape architects make sure that spaces are responsive to users' needs and are designed to anticipate the interactions people will have within them. For example, landscape architects can make sure that publicly owned spaces have safe, efficient, and sustainable access points. In this way, landscape architects use design as a means to foster positive experiences within a place. At the same time, they design spaces that protect public safety, health, and wellbeing. For example, this may include ensuring that there are no known environmental toxins in an area.
- **Landscape architects work on large- and small-scale projects across the public, private, and nonprofit sectors.** Landscape architects can apply their expertise to a variety of projects, ranging from publicly funded projects with federal, state, or local governments to privately funded, commercial, or recreational developments. Across sectors, landscape architects can work on both large-scale projects (such as state and national parks or city plans) and small-scale projects (such as privately owned residential properties or community gardens).

- **Landscape architects promote environmental sustainability.** Experts emphasized that wasteful and environmentally unsustainable projects are often difficult to maintain and hinder usability. By taking into account the ecological conditions of a space, for example, landscape architects are able to promote designs that use resources efficiently and work *with*—rather than *against*—the natural environment, minimizing ongoing operating costs and maintenance needs. Experts made it clear that water flow, energy consumption, and construction materials are often top-of-mind when considering the environmental sustainability of a project. Green rooftops on buildings and permeable surfaces in parking lots, for example, are more water-absorbent, can help purify the air, and are effective in reducing heat outputs associated with typical black asphalt surfaces. Consequently, landscape architects create more enjoyable experiences for people who encounter their work while also benefitting the environment as much as possible. Similarly, when existing projects—or projects that are already well advanced in the planning process—neglect environmental sustainability or fail to foster positive human-environment interactions, landscape architects can provide the flexibility and expertise needed to address and mitigate any unanticipated negative impacts.
- **Landscape architects convene projects and foster interaction between groups.** Because landscape architects have cross-disciplinary expertise, they are able to forge connections between public, private, and third-sector systems, and experts from different fields. Experts emphasized that landscape architects are often able to speak the "languages" of their peer professions, such as architecture and engineering. This enables them to understand and communicate about the different aspects of projects so that key stakeholders—including funders and developers, public sector decision-makers, communities in which projects are located, and the peer professionals working on a project—are able to understand the project more holistically.

3. WHAT ARE THE IMPACTS OF LANDSCAPE ARCHITECTURE?

- **Landscape architects make spaces more usable.** Experts emphasized that spaces designed by landscape architects are more likely to be usable, safe, and aesthetically appealing. For example, playground design and aesthetics can impact how children use the equipment, and the stability, sustainability, and safety of built structures depend on the incorporation of landscape architects' knowledge of the ecological conditions of project sites. Landscape architects help to make sure projects are designed in ways that anticipate and respond to human needs, that have structures that are constructed on stable sites and made with safe materials, and that incorporate aesthetic elements to make sure they are visually appealing.

- **Spaces designed by landscape architects have direct and indirect effects on people's wellbeing.** Because landscape architects create places that people can enjoy and safely use, their work has direct positive effects on people's physical and mental health, and social and emotional wellbeing. For example, people tend to be less aggressive and more relaxed in green spaces, which are more plentiful when landscape architects are involved. Experts also discussed the indirect health benefits that occur when spaces are designed to promote healthy behaviors and interactions with surroundings, such as having accessible bicycle paths and networks of trails, which promote increased physical activity.
- **Landscape architects help communities to address environmental and technological challenges.** In addition to focusing on the usability, safety, and aesthetics of projects, landscape architects incorporate designs, plants and other materials that will not have negative long-term impacts on the environment. Landscape architects are also attuned to emerging societal needs, including designing systems to work with autonomous vehicles, mitigating the effects of climate change, ensuring equitable access to culturally inclusive public spaces, and promoting sustainable resource management. Experts highlighted that landscape architects will be key figures in making sure spaces are adaptable to our evolving social, technological, and environmental needs by making sure projects work *with*—and not *against*—the natural environment.
- **Landscape architects can save costs and promote economic development.** Because landscape architects anticipate future concerns or potential conflicts between built and natural environments, projects that incorporate their expertise save money in the long run. For example, by paying attention early in a project to water flow, soil composition and patterns of erosion and sedimentation, the chance of costly events, such as flooding, happening in the future will be minimized. Similarly, because landscape architects design spaces that foster positive relationships between people and their environments—including privately owned, commercial spaces—their involvement in commercial projects leads to more positive experiences between businesses, consumers, and communities.
- **Landscape architects design public spaces that provide civic and social benefits.** Experts noted that well-designed and usable public spaces—such as city squares or parks—provide settings in which community events, protests, rallies, or other civic actions can take place. Because landscape architects design spaces that are accessible to many different people, and have a variety of uses in mind, their involvement in public projects creates spaces where community, civic, and democratic activities can take place.
- **Spaces designed by landscape architects are more likely to promote equity.** Disenfranchised populations—including children, people with disabilities, communities of color, and low-income communities—in particular can benefit from landscape architects' involvement in project design. Because

landscape architects are versed in the principles of universal design, projects are more likely to be universally accessible to people of all ages, incomes, and abilities. For example, gym memberships are not affordable for everyone, but well-designed public spaces can provide opportunities for people to engage in health-promoting activities for free.

Historically marginalized communities—including communities of color and low-income communities—perhaps stand to benefit the most from landscape architects' involvement. This is because racially segregated housing and discriminatory development practices across US municipalities have created communities in which the built and natural environments do not promote positive interactions and often work *against* a community's desires or needs. For example, highways that bisect communities of color may prevent people who live there from experiencing the social, economic, and environmental benefits of well-designed outdoor spaces in their neighborhoods. When landscape architects are included in projects, they are attentive to—and try to mitigate the effects of—past discriminatory design decisions, ensuring they are not repeated, and they aim to promote the wellbeing of all people who encounter a space.

4. WHAT CHALLENGES DO LANDSCAPE ARCHITECTS FACE?

- **Landscape architecture is not well understood.** Experts expressed the view that people frequently have incorrect, limited, or no understanding of landscape architecture. This limits a landscape architect's ability to engage or network with others—including clients, public agencies, colleagues, and the public—as they must first describe what the field *is* before describing the more nuanced specializations landscape architects might have or the benefits they could bring. Although landscape architects frequently collaborate with peer professionals—for example, architects and engineers—even these professionals often have a limited understanding of landscape architecture. This lack of understanding is problematic because landscape architects are less likely to be included in project proposals or consultations, as well as visioning, planning, and policy.
- **Landscape architects are often consulted after projects are complete or already underway.** Due to a limited understanding of the value of landscape architecture, developers and peer professionals often consult with landscape architects only after plans have been created or after construction, asking them to add on a planting plan rather than engaging them fully in project planning. When landscape architects are not involved in the early stages of planning, their expertise in anticipating how people, structures, and the natural environment will interact is not fully utilized. Experts noted the missed opportunities they see in many projects, where problematic aspects—for example, building entrances that require pedestrians to cross a drive-thru lane—could have been prevented had a landscape

architect been involved earlier in the planning phase. When landscape architects are not consulted, or are consulted only during later stages of development, projects are less likely to be sustainable, aesthetically appealing, and usable. Experts also pointed out that addressing problematic designs is more costly once construction has already begun, compared to making corrections earlier in the planning phase.

- **There are too few incoming landscape architects to address future demands.** Because landscape architecture is not well understood among members of the public, it is rarely a preferred career option for young professionals. Experts noted that many people do not learn about the field of landscape architecture until they are in higher education courses, or in programs for a peer profession such as architecture or engineering. With smaller enrollment numbers and fewer professionals entering the field, the challenges society will face over the next century—which landscape architects are especially equipped to address—will be even more daunting.
- **The diversity of the communities in which landscape architects work is not reflected within the field.** Experts shared that landscape architecture is not a diverse field, with few professionals from low-income communities or communities of color. Moreover, landscape architects often do not reflect the demographics of communities in which they work. Landscape architects are often seen as "outsiders," which can inhibit engagement with local communities in the planning and designing of developments—activities that are especially important if a landscape architect is not familiar with the needs and desires of a particular community. The lack of diversity in the field also results from barriers to entering the field of landscape architecture, such as the cost and time commitment of higher education—especially in comparison to other professional degree tracks—and lack of access to funded internship and scholarship opportunities, which often provide introductions to the field for young people considering their career options.

5. WHAT NEEDS TO HAPPEN FOR LANDSCAPE ARCHITECTS TO BE FULLY UTILIZED IN SOCIETY?

- **Increased public awareness and visibility of landscape architecture can increase the field's role in future and ongoing projects.** Experts reported that once people understand the value of landscape architecture, they are more likely to consider it as a career option, and project funders and local decision-makers are more likely to consult with landscape architects. Landscape architects tend to be humble about their work and do not seek credit, which limits the visibility of the profession. In both the public and private sectors, landscape architects should self-promote and communicate about their work, as well as highlight the role of landscape architects in work done by others. Experts noted that while this often occurs among landscape architects, these conversations should also happen across disciplines and sectors, with members of the public, peer professionals, developers, and policymakers.

- **Developers, funders, and local decision-makers should engage landscape architects at the beginning of each project.** Because it is more cost-effective and sustainable to develop a well-designed project from the start than to mitigate problems later on, landscape architects should be consulted on as many projects as possible, as early as possible. Experts emphasized that, ideally, landscape architects should be involved in the initial planning stages of projects before requests for proposals are made.
- **Higher education programs in related fields should raise the visibility of landscape architecture.** Despite a high level of collaboration between peer professionals, higher education programs in engineering, urban planning, and architecture are siloed and do not foster interdisciplinary training. Experts agreed that incorporating interdisciplinary courses through applied studios or integrative programs, such as opportunities that allow students in peer programs to apply their training collaboratively in applied consulting scenarios or in regional partnerships through study abroad programs, would better prepare landscape architects as well as peer professionals to address real-world challenges and understand the nuanced expertise that each field offers.

The Public View of Landscape Architecture

In this section, we present the cultural models—the implicit understandings, assumptions, and patterns of reasoning—that shape public thinking about landscape architecture, nature, and design. Cultural models are cognitive shortcuts to understanding: ways of interpreting, organizing, and making meaning of the world around us that are shaped through years of experience and expectations, and by the beliefs and values embedded in our culture.[2] These are ways of thinking that exist for all members of the public, although different models may be activated at different times. In exploring cultural models, we are looking to identify *how* people think, rather than *what* they think. These findings thus differ from public opinion research, which documents people's surface-level responses to questions. By understanding the deep, often tacit assumptions that structure how people think about landscape architecture and related topics, we are able to understand the pitfalls in the cultural landscape that prevent people from accessing the expert perspective described in the untranslated story above. We are also able to identify opportunities that communicators can take advantage of—existing ways of thinking that can help the public arrive at a fuller understanding of the issue. Mapping this cultural landscape thus provides communicators with a critical resource, allowing them to steer around unproductive ways of thinking and frame messages in ways that allow them to get their point across.

In describing the cultural models that people use to think about landscape architecture, it is important to emphasize at the outset that people are able to think about nature, design, and outdoor spaces (such as parks, streetscapes, and other open spaces) in multiple ways. People toggle between these models, thinking with different ones at different times, depending on context and conversational cues. Some models are dominant, and shape public thinking more consistently and predictably, while others are recessive and play a less prominent role.

We begin by describing cultural models of landscape architecture, which shape thinking about the profession. These models are, as we discuss, relatively superficial, deriving from how they think about landscapes and architecture

as separate entities, because members of the public have limited understanding of the profession. Yet, as the research described in this report illustrates, the public *does* have deeper, more well-entrenched ways of thinking about nature, design, and outdoor spaces, and these ways of thinking are likely to be activated when people hear about the work of landscape architecture. In other words, while public thinking about the field of landscape architecture itself is thin, people have more developed ways of thinking about the subject matter of landscape architecture. These will shape how they respond to messages about landscape architecture and influence how they absorb new information about the profession and its work.

CULTURAL MODELS OF LANDSCAPE ARCHITECTURE

Landscape architecture was not a top-of-mind topic for participants. When asked about well-designed outdoor spaces—what they look like and how they come to be—participants rarely mentioned landscape architects or landscape architecture. Later in the interview, when interviewers asked explicitly about landscape architecture, most participants indicated some familiarity with the term, but they explicitly indicated or implicitly signaled that the profession is not a topic to which they had dedicated much thought.

The *Landscape Architecture = Landscape + Architecture* Cultural Model

When interviewers asked explicitly about landscape architecture, participants were able to think about the field by drawing upon understandings of the concept's component parts: "landscape" and "architecture." They came up with ideas about what the field might involve by drawing on associations with, and understandings of, the elements that make up the term.

> **Researcher:** *Have you ever heard of the profession of landscape architecture?*
> **Participant:** *Not really. I know about landscapers that go around and trim your lawns, and bushes, and stuff, but I've never heard the architecture part.*
>
> **Researcher:** *If you had to guess based on the name, how would you describe it?*
> **Participant:** *I don't know. I mean, landscape architecture. So, architecture that's fitting for whatever environment that it's gonna be in?*

As the quotes above illustrate, the need to draw on associations with the term's component parts indicates that participants lacked a model of landscape architecture as a distinct concept. In other words, they could not think about landscape architecture as something other or more than the sum of its parts.

Because participants reasoned that landscape architecture must sit, somehow, at the intersection of the two fields implicated in its name, they recognized that landscape architecture could not be identical to either component profession (landscaping and architecture) on its own.

Despite vague understandings of how landscape architecture is distinct from the professions included in the name, participants assumed that it is different, at least in some way, from landscaping.[3] This finding was somewhat unexpected because the experts and professionals we spoke to described experiences in which the public had equated landscapers and landscape architects. However, because participants were often unclear about *how* the two were distinct, our finding does not deviate substantially from landscape architects' experiences. Nevertheless, there was widespread recognition that, at least in some way, landscapers and landscape architects do different work.

> **Researcher:** *What about landscape architects versus landscapers? Are there differences there?*
> **Participant:** *Landscapers are like the worker bees whereas the architect is like the queen of the hive where she is kind of directing everything because she has a greater vision whereas the landscapers are the people carrying out the commands of the queen so to speak.*
>
> **Researcher:** *What about landscape architects versus landscapers?*
> **Participant:** *I think a landscaper is probably the implementation of the landscape architect. The landscape architect is the idea guy. The landscaper makes it happen.*

At the same time, they assumed that landscape architects and architects are also distinct.

> **Researcher:** *Do you think landscape architects are different from architects?*
> **Participant:** *Yeah.*
> **Researcher:** *How so?*
> **Participant:** *Totally different medium, and I would think different skill and different field too. I don't think you'd get the same relaxing joy out of a building as you would from designing an outdoor space.*
>
> **Researcher:** *Do you think landscape architects are different from architects?*
> **Participant:** *Yeah.*
> **Researcher:** *How so?*
> **Participant:** *They're not dealing with shapes of wood and the structures of a home. They're dealing with the outdoor kind of open air basically.*

In reasoning about landscape architecture as a profession defined by its component terms, participants drew on multiple understandings of both "landscape" and "architecture." Below, we review the specific ways of thinking about these terms that arose as people speculated about what "landscape architecture" is, and then discuss how people combined these understandings to arrive at conceptions of landscape architecture.

Implication for Communicators

The *Landscape Architecture* = *Landscape* + *Architecture* cultural model is thin, which poses a fundamental challenge—but also an opportunity. The reality that people lack clear ways of thinking about the profession means that communicators face the challenge of filling this gap in understanding. Yet the lack of entrenched understandings of the profession means that there are no deep, unproductive ways of thinking that must be overcome. Moreover, because people are able to quickly arrive at some understanding of the field through their associations with its component terms, communicators can leverage the more productive associations to generate a quick—if thin—grasp of the field. Below, we discuss the implications of the specific understandings of "landscape" and "architecture" that people employ, highlighting which of these models communicators should aim to activate as they seek to establish a deeper public understanding of the field.

THINKING ABOUT "LANDSCAPES"

The *Landscape* = *Plants* Cultural Model

Perhaps the most dominant way that participants thought about landscape architecture was through the association of landscapes with the planting of things like trees, flowers, shrubs, or grass. This association likely stems from familiarity with landscaping—both as a feature of the world around them, and as a profession. When thinking in this way, people described landscape architects' expertise and day-to-day work as predominantly or exclusively focused on things that can be planted, though the landscape architects were rarely assumed to be the ones doing the planting themselves.

> **Researcher:** *What background knowledge would landscape architects have?*
> **Participant:** *Definitely has got to have some horticultural experience. Something related to landscape and plant life in general.*

Researcher: *What kind of talents or skills do you think [landscape architects] need—or background knowledge?*
Participant: *They'd better have a good knowledge of bushes and plants and all of that, and how they work together.*
Researcher: *If you had to guess, what do you think landscape architects do?*
Participant: *Design the outdoor area. See what trees and bushes would look nice in that area. You know, what plants would go for which season.*

Implication for Communicators
The *Landscape* = *Plants* cultural model obscures the many facets of landscape architecture that do not involve horticulture. When thinking with this model, people do not recognize the full scope of landscape architecture projects or the breadth of landscape architects' expertise. This limited view will prevent people from recognizing the value of landscape architecture and the role landscape architects can play in advancing goals like environmental sustainability and public health. Communicators should be careful not to focus solely on vegetation, as this is highly likely to cue this model and constrain thinking about the scope of landscape architects' expertise.

The *Landscape* = *Outdoors* Cultural Model

When thinking about landscape architecture, participants sometimes assumed that "landscape" denotes anything outside of buildings. This includes not only vegetation, but also constructed or artificial features that can be found outdoors, such as ponds, fountains, trash cans, and parking lots. When thinking with this model, people assumed that landscape architects design all parts of an outdoor space, working with both natural and human-made materials.

Researcher: *What does a landscape architect do?*
Participant: *He or she is more broad than just designing statues. A landscape architect is going to look at the actual things in the park itself and say, okay, I think a nice ring of statues here would look good, or we need trees ringing the park because that's the culture of this city.*

Participant: *To me, [being a landscape architect] would be almost like an architect, but just you're doing the outside instead of the structure of a building.*

As the second quote illustrates clearly, this model is quite thin. The association of landscapes with outdoor spaces provides little sense of the specific expertise that landscape architects have or how they leverage that expertise for impactful design.

Implication for Communicators

The *Landscape* = *Outdoors* cultural model opens up space for thinking about the various systems that landscape architects design. The model brings into view the reality that landscape architecture involves much more than plants—that it involves the design of outdoor spaces more broadly. This is a productive starting point for communicators, because it helps avoid narrow understandings of what landscape architects work on. Because the model is thin, communicators will need to fill it in and expand it. This might be accomplished, for example, by providing concrete examples of designed spaces, and explaining how landscape architects work with different features when designing spaces.

The *Landscape* = *Environmentalism* Cultural Model

A final, more recessive way of thinking about the "landscape" component of landscape architecture is that it implies concern about and action aimed at protecting the environment. This assumption extends the associations with plants and outdoor spaces present in the cultural models discussed above and adds the idea that working with landscapes involves work to *protect* environments. When thinking with this model, participants described landscape architects as people who care about the environment and design spaces that contribute to the health of the environment.[4]

> **Researcher:** *What would it look like if landscape architects were more involved in planning than they already are?*
> **Participant:** *Maybe more environmentally safe with special trash cans they have or something. And probably just more green, maybe even recycled materials used to build these buildings or recycled materials used to make the statues or trash cans or sidewalks, more of an environmentalist view on architecture.*
>
> **Researcher:** *What kind of skills would you guess that a landscape architect would ideally have?*
> **Participant:** *Environmental and architectural.*
> **Researcher:** *Can you tell me more about that?*
> **Participant:** *Well, what's gonna make an impact, a positive impact on the environment. Like, not bringing in an oil refinery there next to the beach.*
>
> **Researcher:** *What do you think a world without landscape architects at all would look like?*
> **Participant:** *It would probably have an environmental impact. That world that you're speaking of was probably the '80s. And so now we're correcting ourselves, or trying to.*

Implication for Communicators

The *Landscape* = *Environmentalism* cultural model facilitates thinking about landscape architects' ability to promote sustainability. When members of the public draw on this model they infer that, since landscape architects know and care about the environment, they must have a positive impact on it. Communicators should seek to pull forward this model in people's thinking and flesh it out by explaining how landscape architects' work protects the environment, as this is not well understood by the public.

THINKING ABOUT "ARCHITECTURE"

The *Architecture* = *Art* Cultural Model

Participants strongly associated architecture with art. When thinking with this model, participants assumed that landscape architects are creative professionals whose primary purpose is designing visually appealing, unique landscapes (gardens or outdoor spaces). Although participants always talked about artistic contributions to outdoor spaces in positive terms, the association of landscape architecture with aesthetics led to a devaluation of the profession, as aesthetic concerns were assumed to be unnecessary, and not a top priority.

> **Participant:** *I think the landscape architect would be the prom dress that goes on your date. Your building, your house is you, and the landscape architect is the one that's going to make you look good.*
> **Researcher:** *So, it's about the visual appeal, the aesthetic appeal.*
> **Participant:** *That's what I think. I think, when I think about what they do, the same way that you can tell an architect to build you a house. They're going to do it in a way that's going to look good, in a way that I couldn't have imagined myself.*
>
> **Researcher:** *If there were a lot more landscape architects, do you think the world would look different?*
> **Participant:** *I think so. The same way people take pride in their craftsmanship when they make furniture or sculptures, art—things like that—I mean, it's a form of art, because it's aesthetically pleasing when done correctly and done right.*

Implication for Communicators

The *Architecture* = *Art* cultural model cultivates an appreciation for the aesthetic value of landscape architecture but inhibits thinking about its broader value. When thinking with this cultural model, people spoke positively about landscape architecture, and felt that beautiful spaces are important and valuable. This way of thinking can lead to greater desire for well-designed outdoor spaces and support for the involvement of landscape architecture in those spaces. However, because this model highlights only one facet of landscape architecture, it impedes a full understanding of landscape architecture's potential contributions. And because people devalue the aesthetic and creative component of design, the model can make it hard for people to see why landscape architecture is important. In this case, the model could depress support for greater utilization of landscape architecture in society.

The *Architecture* = *Technical Planning* Cultural Model

Thinking about landscape architecture is sometimes shaped by an understanding of "architecture" as a discipline that relies on planning, oversight, and technical rigor. When this assumption about architecture informs thinking about landscape architecture, landscape architects are thought of as professionals who create precise and mathematical plans for outdoor spaces. Although this way of thinking does not preclude the possibility that landscape architects' plans might involve creativity, its focus on technical rigor overshadows potential aesthetic aspects of landscape architecture.

> **Participant:** *[Landscape architects have] got to map things out. Which does require math, you've got to know your angles, dimensions, your measurements.*
>
> **Participant:** *By being an engineer and being a planner, those people have that knowledge, their education base, and they've done it hopefully a little bit so they know what works and what doesn't work.*
>
> **Participant:** *[Landscape architects are] probably in the office on a computer or they probably have special computer software that gives them a 3D view of how they want to build things. They probably do a lot of blueprints and design, probably a lot of engineer work that we probably have no idea that they're doing. A lot of precise measurements, so they're probably excellent at math as well.*

Implication for Communicators

The *Architecture* = *Technical Planning* cultural model fosters a recognition of landscape architecture's technical rigor. In enabling people to recognize the mathematical and scientific skills of landscape architects, this model encourages a more expert-like understanding of the profession. At the same time, it is thin—people are often unsure exactly what it is that landscape architects are planning—so this model needs to be built on and expanded to generate a more comprehensive understanding.

The *Architect* = *Expert* Cultural Model

Participants used respectful terms to describe architects and their work, whenever they were discussed. People recognize that architects have extensive training that makes them experts in their field, and they sometimes applied this insight to thinking about landscape architects, assuming that these professionals must also have training and expertise that makes them effective at their work. What, exactly, that expertise might involve depended on the understanding of "landscape" that participants had in mind. Regardless of the content of the work, this model led people to think about landscape architects as high-level professionals who oversee others, rather than as laborers who "get their hands dirty."

> **Participant:** *[Landscape architects] might not necessarily be getting their hands dirty and actually planting the trees, but they're going to be overseeing it.*
>
> **Researcher:** *When there's a project for a new park, building, or road, what role do you think a landscape architect should play in the project?*
> **Participant:** *Should be an expert in designing and creating spaces that invite human activity.*
>
> **Participant:** *I think [landscape architects are] well-learned folks. I think there's probably a certification for these people and years of schooling, a formal education.*

Implication for Communicators

The *Architect* = *Expert* cultural model encourages an appreciation of landscape architects' skills and expertise. This model leads to an appreciation of the skill of landscape architects that is commensurate with the training and experience required to practice the profession. When members of the public draw on this model, they recognize that landscape architects bring unique and valuable expertise to the projects they work on. This makes people more likely to support their involvement in the design and management of outdoor spaces. Communicators can leverage this model to increase the salience of the field, although strategies are needed to generate understanding of what, exactly, landscape architects' expertise entails.

Landscape + *Architecture* = Varied Understandings of Landscape Architecture

The cultural models discussed above—surrounding the definitions of "landscape" and "architecture"—can be combined in different ways to generate specific ways of thinking about landscape architecture. The different associations of the two terms were mixed and matched by participants to create specific understandings of the profession. While the definitional models can be combined in any way, some combinations were particularly common. We review these below to illustrate how the mix-and-match process works.

Landscape = *Plants* + *Architecture* = *Art* → Artistic Garden Designers

When these two cultural models were joined in the service of defining landscape architecture, participants described landscape architects as professionals who use plants, such as grass, trees, flowers, or shrubs, to design attractive outdoor spaces. In other words, landscape architects are artistic garden designers.

> **Participant:** I think they're probably good at two things. Envisioning a beautiful area and probably have to have some horticulture experience. So, they would be knowledgeable about plants and what it takes to grow them, and maintain them, and then have some kind of design background to make a beautiful space.
>
> **Participant:** It'd be fun. I mean, if I had that kind of talent, I would think that you would be thinking of the structure of the ground and what would look best there plant-wise.

Participant: They have to make sure it's appealing to the eye. So, the big part of landscapes—the grass, the trees, flowers, bushes.

Researcher: [Can you] describe the kinds of background knowledge you feel that a landscape architect would need to have?

Participant: A variety. Not only of a great variety of plants and how they tend to grow and what they tend to need. Some sense of an artistic vision of how to implement it in such a way that it's not cluttered. But also doesn't feel very regimented. I don't want to see a bush every three feet.

***Landscape* = *Environmentalism* + *Architecture* = *Technical Planning* → Environmental Planners**

Most commonly, the *Landscape = Environmentalism* cultural model was combined with the *Architecture = Technical Planning* model. This led participants to describe landscape architects as people who use scientific and mathematical skills to plan outdoor spaces that will benefit the environment. Due to the thinness of these models, people were usually unclear on exactly *how* landscape architects' plans would improve the environment.

Participant: We're really on this global tipping point and whether one thinks it's caused by human activity or doesn't think it's caused by human activity is irrelevant. We know that certain things are happening in our environment and, going forward, [by] adding landscape architects who are trained experts who can analyze data and incorporate that into designs we can minimize our negative impacts and maximize our beneficial impacts on our environment and that becomes more and more important.

Participant: [Landscape architects had] better have a good knowledge of even bushes and plants and all of that, and how they work together. And seasonally, what works here in Kansas or Missouri. Also, just a good base of soil is really important to know—about the dynamics of floodplain and terracing and then grasses. Gosh, there's a lot to know.

CULTURAL MODELS OF NATURE

As discussed in the previous section, members of the public do not have deep, well-established ways of thinking about landscape architecture. They do, however, have access to deeper models that enable them to think about the subject matter of the field. As we discuss later on, people have their

own models of what a "designed" outdoor space looks like, and these models have direct implications for thinking about landscape architecture. Yet thinking about outdoor spaces is also shaped by even more foundational cultural models of nature. In this section, we explore these cultural models, explain how participants applied them when thinking about the work of landscape architecture, and discuss the implications of these models for communications about the field.

The *Natural vs. Human-made* Cultural Model

Throughout the interviews, participants most commonly defined nature as anything that has not been made by humans.[5] This includes things like plants, animals, oceans, mountains, deserts, and forests. Nature and humans are seen as mutually exclusive.

> **Participant:** *Nature has been there longer than man, than the humans. The nature existed long before us. We didn't make it.*[6]
>
> **Participant:** *I guess nature is a place that doesn't have human development.*

The distinction between natural and human-made things and places also has an evaluative element to it. When thinking about nature and humans in contrast with each other, nature's appealing characteristics and humans' unappealing ones are amplified. Nature is seen as the ideal, immune from human complexities and vices. The assumption that "natural is good" is a tacit one. Participants took this for granted and did not volunteer explanations for why this is so. When asked, they were often hard-pressed to articulate their reasoning. A close analysis of people's comments reveals that people assume that nature is simpler and freer, which makes it both more conducive to physical, mental, and spiritual health and less constraining.

> **Participant:** *Well, right now there's two kinds of outdoor spaces. There's man-made outdoor spaces and natural outdoor spaces. I prefer natural outdoor spaces which are mountains, and rivers, and fields, and things like that and then the man-made ones can be fun, but they've got fences, and equipment, and preconceived things to do. So, there's less creativity of figuring out what you want to do.*
>
> **Participant:** *And there's the things that kind of bum me out a little bit, you know—artificial soccer fields. They just put a bunch of artificial grass. It's still an open space, but that's just personal preference to me. I would rather see natural grass, but—*
> **Researcher:** *Why?*
> **Participant:** *As a kid when I played those sports, there was a certain feeling that you get about playing on a natural surface rather than a fabricated surface. That kind of diminishes the experience, for me, a bit.*

> **Researcher:** *If you were to design an ideal beach, what would you do to make it ideal?*
> **Participant:** *[LAUGHTER] How would I design it? Generally speaking, I couldn't design it, because nature's already done it. Therefore, there would be nothing that I could do—add or subtract to it to—and anything I tried to do to it would probably subtract to what nature's already done, which is probably better than what most humans can do when it comes to natural landscaping.*

As the quotes above illustrate, participants often drew on this model when thinking about designed outdoor spaces. As such spaces, by definition, have been shaped by humans, they were often thought of as inherently inferior to truly natural spaces. Because nature is considered to be the ideal, people view designed outdoor spaces—and the elements within them that have been made by humans (for example, artificial grass)—as less appealing.

Implication for Communicators

The *Natural vs. Human-made* cultural model equates design with harm, which will make it hard to see the value of landscape architecture. By creating a clear distinction between the natural ideal and those things and places that have been shaped by humans, the model leads people to see intervention in, or design of, outdoor spaces as something that inherently harms nature. This leads to a devaluation of designed outdoor spaces. And the view of designed outdoor spaces as inferior makes it hard to recognize the value of designers—including landscape architects. This model is such a foundational way of thinking about nature that it may be difficult to background it in people's thinking. More research is needed to identify strategies communicators can use to navigate this deep model.

The *Nature vs. Technology* Cultural Model

When participants thought about the relationship between nature and modern life, they frequently discussed technology, which they saw as harmful in two ways: It distracts people from engaging with nature; and it is a tool that is used to directly harm the natural environment. This way of thinking is related to the *Natural vs. Human-made* cultural model, yet these distinctive assumptions about technology lead to more specific patterns of thinking about outdoor spaces.

Technology is understood as the epitome of human creation. For a true experience of nature, technology like phones and other electronics should be absent, as these distract from connection to nature.

Participant: *When I'm on the bike path, I'm away from that crazy traffic, technology everywhere. Just throw the cell phone down, go on my bike, I don't even have the phone with me and just ride.*

Researcher: *You mentioned flowers. Why is that important?*
Participant: *People like seeing scenic things, we like to mix the city with the country. We don't just want to be too city. We don't just want all technology and all concrete.*

This model leads people to see technology as disruptive to our relationship with nature because they believe that the increasing time and energy that people devote to developing and using technology keep them from spending as much time in, and focusing on, nature.

Researcher: *Can you describe your ideal place?*
Participant: *I would say nature—something that kind of connects you with our humanity. I think we're starting to sort of de-evolve into something that's like more like a cyborg. There's like an extra component in us. Everyone is so concerned with social media, and likes and followers, and stuff. I think leaving that and going out into something that separates you from technology.*

Researcher: *Can you tell me what a good park looks like to you?*
Participant: *I don't necessarily want to see technology in the park because there is enough of that already out there.*

In addition to assuming that technology distracts attention from nature, when thinking with this cultural model, participants talked about how technological innovation—particularly through industrialization—has harmed the natural environment and, in turn, humans. The model focused attention on how technological progress has depleted natural resources and introduced pollutants and toxins into the environment that make it less conducive to human health and enjoyment.

Participant: *If you deplete the natural resources, if you put chemicals in the water, if you keep having oil spills, if the air is toxic then how will we live? We will cease to exist.*

Participant: *You know if you could get all of those cars off the road, and take public transportation, that's going to be healthy for the environment.*

As the quotes in this section illustrate, members of the public think of technology and nature as inherently incompatible.

When applied to thinking about designed outdoor spaces, this cultural model leads to skepticism or rejection of technological features. Outdoor spaces should, to the greatest extent possible, be technology-free.

Implication for Communicators

The *Nature vs. Technology* cultural model fosters an appreciation of outdoor spaces, but it obscures the benefits that modern technology can have for the design of those spaces. On the one hand, this cultural model encourages concern about the detrimental effects of technological progress on the environment, which may lead to support for the development and conservation of natural spaces. On the other hand, by placing nature and technology in opposition, this model makes it hard to think about ways that technology—such as the use of sustainable materials and systems—can contribute to the design of good outdoor spaces. Communicators will need strategies for helping the public see how the right kinds of technology can be used in designed outdoor spaces to promote environmental sustainability.

The *Nature as Resource* Cultural Model

Members of the public often think about nature in terms of what they can get from it. In other words, it is assumed to be a resource for human use and consumption. Viewed in this way, people treat nature as a provider of tangible goods (for example, crops), experiences (for example, opportunities to exercise or socialize), and states of mind (for example, relaxation).[7]

> **Researcher:** *When we think about nature, how is it important to maintain this connection?*
> **Participant:** *I would say it's very important. That's where we get our food from. How can we survive without nature? It doesn't matter if you are a vegetarian or you eat meat or whatever, it all comes from nature. So without nature how do we eat? And if we don't eat, how do we live? Humans are powered by food. If we destroy nature, then we will cease to exist because we are dependent on nature. We can live without computers and technology, we can go back to the stone—not the stone ages, but we can go back in time to when we didn't have cars and we didn't have internet and we can still exist. Without nature we can't exist.*
>
> **Researcher:** *What would be an ideal space for [a] house to be located?*
> **Participant:** *Outside the city, lots of open space, but trees also and a water source. Very important to have a water source.*
> **Researcher:** *Why?*
> **Participant:** *So you can be self-sufficient. You could survive. You could grow food. You could fish.*

People are especially likely to draw on this cultural model when thinking about the relationship between nature and human health. Nature is assumed to be a valuable resource that, when consumed, improves health. For example, outdoor spaces provide vitamin D from the sun, fresh air, and opportunities for exercise and recreation that don't exist indoors. Spending time in nature also has positive mental health effects, by reducing stress and anxiety.

> **Participant:** *It's already a known, given medical fact that being outdoors and getting some exercise and getting some fresh air is conducive to health. The more you do, the healthier you're going to be. There's also the psychological benefits of relaxation and stress relief, and just realizing that there's more to life than 40 hours a week behind a counter saying "Hi. Do you want cheese and a Coke with that hamburger?"*
>
> **Participant:** *I think wide open spaces and being around nature is huge for mental health. And physical health too. Because you can take walks, you can do sports, you can run, you can breathe. You can feel alive.*
>
> **Researcher:** *Can you talk a little more about the mental health part? How does that work?*
> **Participant:** *I think fresh air, fresh oxygen that's put off by plants and everything. Being around the sunshine, being able to listen to birds fly—they all create endorphins, I think, that make you a little happier or more relaxed. Like I said, nature doesn't have anxiety, so it's anxiety-reducing.*
>
> **Participant:** *I enjoy walking because it gives me vitamin D and it also is good for the brain. It helps and it gives you melatonin which you can get from the Earth naturally without having to take something.*

When the *Nature as Resource* cultural model is applied to thinking about designed outdoor spaces—a specific form of nature, loosely defined—"good" spaces are seen as those that provide ample resources for people to take advantage of. For instance, positive outdoor spaces were often described as ones with a variety of features—like lakes, walking paths, and sports fields—that cater to different people's desires. In other words, an ideal outdoor space is one with maximal resources for users.

Researcher: *If you were to design a good park what would you pay attention to?*
Participant: *They should be multi-use kind of places that just encourage lots of people to come and enjoy themselves and if they just want peace and quiet. They can also have great dedicated areas where they can take their animals off their leash.*

Researcher: *What makes a good park?*
Participant: *Depending on what you want to be doing, some—like Balboa Park is really huge so you can do all sorts of different things. You can do biking, you can do walking, but if you are just looking for quality family time, just something that has a bathroom, grass area, that brings family, food, and happiness.*

In these comments, we see how the *Nature as Resource* cultural model—in contrast to the *Natural vs. Human-made* and *Nature vs. Technology* models—enables people to think about designed outdoor spaces as nature. The *Nature as Resource* model does not oppose human design with nature in the way that these other models do. The *Nature as Resource* model leads people to evaluate natural and constructed features according to a single, common criterion: Are they useful? When thinking in this way, bike paths and bathrooms are not seen as degradations of nature but as useful enhancements to it.

Implication for Communicators

The *Nature as Resource* cultural model generates a positive appreciation for the role of design in outdoor spaces, but it constrains thinking about the purposes of design. On the one hand, the model enables people to see how design—and, potentially, landscape architects—can be useful. In particular, the model supports appreciation for the importance of well-designed outdoor spaces in promoting human health. On the other hand, the focus on how nature can best serve humans makes it hard to think about reasons that nature is important beyond human needs and desires. When applied to thinking about outdoor spaces, this cultural model is likely to lead people to devalue designs that prioritize environmental benefits, particularly if in doing so they reduce easily discernable, short-term benefits for humans. The model is likely, in turn, to make it harder for people to see the value of landscape architecture's role in promoting environmental sustainability. For this reason, communicators should exercise caution in cuing this model. Further research is needed to determine how to talk about the uses of designed outdoor spaces without reinforcing "instrumental" thinking that undermines concern for the environment.

The *Nature as Roots* Cultural Model

When people draw on the *Nature as Roots* cultural model, they think about nature as the source of human life. That is, we not only depend on nature for our survival, but it is because of nature that our species exists in the first place. As in prior FrameWorks research on urban nature, participants sometimes talked about human origins in evolutionary terms and sometimes did not, but in both cases assumed that, in some way or another, "we come from" nature.[8] This has created a spiritual or emotional connection that draws us back to nature, motivating us to spend time outdoors and creating fulfilling experiences when we do. Although people brought up this connection with nature when talking about untouched nature outside cities (for example, National Parks), they also brought it up when discussing the benefits of having trees along streets or otherwise incorporating nature into urban life. Even a tree or two has the capacity to connect us to our origins—to remind us that nature is vast and powerful; that it has created the conditions on which our existence depends; and that humans are just one component of a larger planetary system.

> **Participant:** *I think nature is beautiful and, as humans on this planet, we have shifted away from being in nature as much as we used to and so I think it's kind of a reminder of just the planet we live on. It makes you appreciative of Mother Nature and the miracle of everything. Birds come to trees and the leaves fall. The leaves change colors. It's alive.*
>
> **Participant:** *We are creatures of nature and we evolved in a green world and it just seems to be a part of our connection to our planet.*
>
> **Participant:** *I think it's probably human nature to want to be able to periodically reconnect with nature.*

In contrast to the *Natural vs. Human-made* cultural model, the *Nature as Roots* model understands human beings as part of nature. It is no accident that, in the final quote, the connection to nature is described in terms of "human nature"—humanity and nature are paired in this concept. The idea that we come from nature means that we are connected to it rather than standing in opposition to it, even if we have come, perhaps, to stand apart from nature in some ways.

Although designed outdoor spaces were not top-of-mind when thinking with this cultural model, it is important to note that such spaces were not excluded from thinking. The model allows people to see how outdoor spaces in urban areas—spaces that landscape architects work on—can connect human beings to nature.

Implication for Communicators

The *Nature as Roots* cultural model fosters an appreciation for outdoor spaces and leaves space for—but does not highlight—the role of design. When thinking with this model, members of the public see spending time in nature as valuable, and the model leaves room for productive thinking about designed outdoor spaces. The model does not, however, specifically highlight the value of design. Communicators can productively leverage this model by highlighting how designed outdoor spaces help us reconnect with nature, but must be sure to emphasize the role of design in incorporating experiences of nature into urban settings.

The *Open Space, Open Mind* Cultural Model

In the interviews, the openness of nature and outdoor spaces was frequently highlighted. In contrast to indoor spaces, outdoor spaces are thought about as less confined—people can see long distances in many directions and can more freely move around. When thinking with this cultural model, people assume that this physical openness allows for mental "openness." When minds are "open" in this way, negative thoughts or stressors can escape. At the same time, the openness allows new thoughts to enter. In other words, in nature, people are more receptive to new ideas; they can reflect; they can release negative thoughts; and they can think freely and creatively.

> **Researcher:** *What do you think it is about being outdoors that allows you to decompress?*
> **Participant:** *I think that it's open. In here, you're all closed in and it doesn't even need to be a small room or anything. Just that you're closed in. You get outside and it's kind of like a weight off and you can regroup, and recharge yourself. It frees you to do what you need to take care of.*
>
> **Researcher:** *What does an ideal park look like to you?*
> **Participant:** *[A place with] peace and quiet. I want to be in an open space. I think the illusion that you're not confined, even though you kind of are, because it's a created space, but it's designed to create that illusion for you.*
>
> **Researcher:** *How are people benefitted when there's open space like you described?*
> **Participant:** *I think you need a place to decompress. You need to have a place to not have people in your face. It's really hard to put in a sentence or in words, but I think open space is the best way to explain it—that it's openness, that you're not just in a city.*

Implication for Communicators

The *Open Space, Open Mind* cultural model builds appreciation for outdoor spaces, but minimizes the role of design. This model enables members of the public to recognize that nature has important cognitive and emotional benefits. At the same time, the model backgrounds the role of design in promoting these benefits, since it focuses on the absence of constraint rather than the presence of features in a space. When communicators tap into this cultural model, they should work to expand it by explaining how landscape architects can intentionally create urban outdoor spaces that replicate the openness of wilder spaces and provide the same cognitive and emotional benefits.

CULTURAL MODELS OF DESIGNED OUTDOOR SPACES

In the interviews, participants were asked to think of designed outdoor spaces and to explain what makes for a good outdoor space. In their answers, participants frequently focused on parks, which are the prototype of a designed outdoor space for members of the public. Participants were, however, able to easily extend their reflections to other public spaces and, sometimes with a bit more prompting, to privately owned ones.

In thinking about these spaces, people drew on a variety of cultural models, including models that center on what design involves, and models that center on the spaces themselves and the factors that influence them. We review each model, explaining how they shape people's thinking about designed outdoor spaces and, in turn, their implications for communicators looking to increase understanding of the value and function of landscape architecture.

Two Models of Design: The *Design = Object Selection* Cultural Model

When people think about what it means for an outdoor space to be designed, they often think of tangible features and visible objects. These features and objects can include natural elements like trees or plants, but this model most frequently encourages people to think of inanimate things, like fountains, benches, or playgrounds. Design decisions, then, are about which objects to include and where to install them. This focus on objects creates a conspicuous absence of thinking about other design considerations—such as how existing features of the landscape might be modified and how the space's design affects sustainability.

Researcher: *For you, what does a good park look like?*
Participant: *Downtown, you might want a park that is more interactive. There's rose gardens, or fountains for people to walk by and play at. If it's more urban, there's going to be more eye candy. There's going to be more things to look at, things to do, things to smell.*

Researcher: *What does a good park look like for you?*
Participant: *Benches—lots of benches. I like the walkways, trees. […] Statues are nice.*

Researcher: *What would that communal space ideally look like?*
Participant: *I suppose for them to have the outdoor benches, to have the covering. […] A water fountain certainly would be good. Something pretty to look at like a fountain or like a really nice garden. So, a place they would go on their lunch hour, maybe, if the property itself had access to the roach coaches or some kind of vendor things where it makes sense to go out, get your food, and sit down.*

Implication for Communicators

The *Design = Object Selection* cultural model backgrounds invisible design features. Because this model highlights physical things, when people draw on it to think about what makes for a well-designed outdoor space, they struggle to think about invisible design considerations—such as water flow, energy consumption, or construction materials—that landscape architects often take into account. Because it fails to acknowledge a large number of the considerations involved in designing for outdoor spaces, it is likely that this model will impede full understanding of what landscape architects do and why their work is valuable. To bring this work more fully into view, communicators must emphasize and explicitly discuss these invisible aspects of design.

The *Design = Convenience* Cultural Model

When thinking about what makes for good or poor design of an outdoor space, participants frequently focused on convenience. When thinking in this way, people assume that the primary goal of outdoor spaces is ease of use (for example, accessible parking lots, available trashcans, and smooth walkways). Within this model, convenience is seen as a hallmark of a well-designed outdoor space, and inconvenience is seen as a hallmark of a poorly-designed one.

Participant: *A good park [involves] easy access to necessary amenities, be it restrooms or food.*

Researcher: *If you were to design a public beach, and you wanted it to be a good one, what things would you pay attention to?*
Participant: *As you're going down to the beach, there should be plenty of places to rinse off your feet and stuff.*

Researcher: *What's your idea of a good park?*
Participant: *Proper ingress and egress like sufficient parking, or easy ways to get into the park.*

Implication for Communicators
The *Design = Convenience* cultural model obscures important design considerations. Because this model leads people to think narrowly about convenience as the primary goal in the design of outdoor spaces, it makes it hard to think about other important considerations—such as safety or sustainability—that landscape architects frequently take into account in their work. And by narrowing the perception of what design involves, the model is likely to reduce appreciation for the value that landscape architects add, and, in turn, to diminish demand for and support of greater utilization of landscape architecture in society.

FOUR MODELS OF INFLUENCES ON OUTDOOR SPACES

The *Parks are Porous* Cultural Model

When talking about what makes a park (or, occasionally, another outdoor space) a good one, people frequently pointed to the importance of the surrounding area. They described parks as taking on the character of the broader communities in which they are situated. That is, if a park is in an area that is deteriorating or that has high crime rates, the park will, in time, also deteriorate or attract crime. And parks in safe and stable communities will be properly kept up, safe places.

Participant: *If you build in the ghetto, it's going to be less safe.*

Participant: *It could be a pristine park, but if it's surrounded by an area that I feel is unsafe…I might have to fight my way in there, not literally, but mentally I can't get in there.*

Participant: *And then you also want to make sure it's not near somewhere where it's going to invite negative behavior or lifestyles. So, not near risky businesses where—hey, you just got three liquor stores around the place, what do you expect is going to happen?*

The idea that parks are shaped by the surrounding area is underpinned by a cultural model that considers parks to be porous spaces. They are literally open to anyone and anything that wants to enter, and metaphorically open, in that they take on the character of their community (safe or unsafe, stable or unstable, upstanding or not). This porousness renders parks susceptible to infiltration by external influences. These influences seep into the park. A key feature of the porousness is that it tends to be thought of as one-directional. While (predominantly negative) aspects of a community inevitably enter *into* the park, characteristics of the space itself are rarely thought of as seeping *out* into the larger community.

> **Participant:** *You also have the element of people coming in and living in the parks who shouldn't be living there or having at night the problems that people who are selling drugs or just hanging out in negative ways, smoking pot or whatever in the park.*
>
> **Participant:** *Depending on where the park is located, you could be locating a park—and some people have had experience where "hey, we could probably decrease crime if we had a park", and then the park turns into the place where people go to do those kinds of things.*

Implications for Communicators

The *Parks are Porous* cultural model makes it hard to see how well-designed spaces benefit communities. By focusing exclusively on the impacts that the community has on the space, this model makes it hard to think about how influence can work in the opposite direction—how the park can benefit the community. This, in turn, diminishes the potential value of landscape architecture. Communicators need strategies for countering this type of one-directional thinking and for effectively explaining how the positive characteristics of a well-designed outdoor space can seep out into the community.

The Parks are Porous cultural model justifies inequities. The idea that parks and other outdoor spaces in low-income or high-crime neighborhoods will quickly become degraded or unsafe leads to the conclusion that establishing these spaces in these areas is a waste of resources and that such spaces should only be established in "better" neighborhoods. This way of thinking justifies inequalities of access to well-designed outdoor spaces and perpetuates the status quo—that the communities that need well-designed outdoor spaces the most are the least likely to receive them. To shift people away from this way of thinking, communicators need strategies for bringing into view the ways in which positive features of a space move outward to benefit the surrounding community.

The *Resource Requirements* Cultural Model

When thinking about what shapes outdoor spaces, participants often highlighted the importance of the resources available for designing, installing, and maintaining those spaces. When thinking with this model, participants explained the existence of higher quality outdoor spaces in wealthy communities as a function of the greater availability of financial resources, rather than, as with the *Parks are Porous* model, explaining this as a reflection of the community's character.

> **Researcher:** *Do you think some communities are more likely to have well-designed outdoor spaces?*
> **Participant:** *I think resources has a lot to do with it. If a community has the resources to get all of the subject matter experts that we talked about earlier and has the ability to make it a diverse area, rather than just the one spot that has grass—I think that has a lot to do with it.*
>
> **Researcher:** *In your mind, you think some communities are more likely to have well-designed parks over others?*
> **Participant:** *Yes. I think more of the urban areas probably have maybe less attractive parks because maybe they don't have the funding for it.*
>
> **Participant:** *I think areas that are higher up on the socioeconomic ladder have a tendency to have more well-designed outdoor spaces than…*
> **Researcher:** *Okay. And why is that?*
> **Participant:** *I think probably number one is a different level of funding.*

Implication for Communicators

The *Resource Requirements* cultural model brings into view the financial requirements of well-designed outdoor spaces. Communicators can likely counter the unproductive thinking prompted by the *Parks are Porous* model by emphasizing the role of resources in determining the existence and quality of outdoor spaces. This model provides a productive starting point for communicators advocating for expanding access to high-quality outdoor spaces.

The *User Contributions* Cultural Model

At times, participants emphasized the role of the users of outdoor spaces in influencing how they turn out. Because users know best what spaces will be used *for*, they should have an active role in their creation. In the context of public outdoor spaces, this means that users should be invited and encouraged to provide input on plans for new outdoor spaces. Participants sometimes suggested that commercial areas (for example, shopping centers) should also be designed with a consideration for how users will interact with the space.

> **Researcher:** *Aside from the designers themselves, whose role is it to make sure that outdoor spaces are designed well?*
> **Participant:** *The greater community at large. The public needs to be engaged in their communities so that things happen that serve what we call the greater good. That benefit the most people with the fewest negative impacts. And that involves reaching out, calling for the community to come see, here is our ideas. What do you think of these ideas?*
>
> **Researcher:** *What can be done to make sure outdoor spaces are well designed?*
> **Participant:** *That community where you're going to put that park becomes a part of the design. And not only does it give them a park that they will want to use, but it's also that buy-in. I mean, they feel an ownership of it.*
>
> **Researcher:** *Do you think communities should be involved in planning of outdoor spaces?*
> **Participant:** *Yes, I definitely think so. I think they know what they want. I think that community should have a huge say-so in the parks in their communities. You don't just want a planner to come through that stays in a rural community and say, oh they'll like this and this and that, and then you don't even know these people.*

In addition, according to this way of thinking, once outdoor spaces exist, users of those spaces determine their quality. When members of the community make an effort to clean their shared spaces, for example, those spaces are much more likely to meet people's needs and desires in the long term.

> **Participant:** *If you approach, say, a beach with the idea of "I'm just here to have fun and not worry about the consequences," you're going to get a beach that's trash, right. Alcohol bottles on the beach, cigarette butts, whereas if you approach it as a more of a "I'm here to enjoy myself but I'm also here to make sure that I don't disrespect the property for those coming after me" and you clean up after yourself. . .*
>
> **Researcher:** *If someone just gave you the privilege or the responsibility of designing a brand-new park and you want to make it a good one, what are the sorts of things you are going to pay attention to?*
> **Participant:** *It would be clean. People would want to clean up after themselves and not leave messes because when they came there it was so nice.*

Researcher: *What happens when people have pride in the city?*
Participant: *They take care of their properties. They don't litter. They don't leave their cars out on the street overnight broken down.*

Implication for Communicators
The *User Contributions* cultural model fosters understanding of outdoor spaces as truly shared spaces. By focusing attention on users, rather than owners, this cultural model brings into view the effects that members of the community can have on community spaces. There is a danger that a focus on use may lead to consumerist thinking—on short-term benefits and convenience—and make it hard for people to see longer-term effects on the environment and the community's health. To productively leverage the model to communicate about landscape architecture, communicators should first explain that community involvement is common practice for many landscape architects and, second, emphasize the broader needs of the community rather than focusing narrowly on immediate uses of spaces.

A BLACK BOX: EFFECTS OF DESIGN ON THE ENVIRONMENT

Although members of the public believe that outdoor spaces are in some way related to the broader environment, they are unsure whether or how the design of a space affects the environment. The relationship between the design of a space and its environmental consequences comprises a "black box" of uncertainty in people's thinking.

Researcher: *Do you think that the design of an outdoor space might impact the environment?*
Participant: *I have no idea. I don't think so. I don't know.*

Participant: *Maybe we don't really know that much about how these spaces are affecting environments.*

When pushed to speculate about potential effects of the design of an outdoor space on the environment, most participants assumed that any outdoor space was probably at least modestly beneficial for the environment. This assumption arises, at least in part, from the *Natural vs. Human-made* cultural model, since people reason that dedicated spaces like parks, beaches, or yards, for example, usually preserve a bit of nature and are therefore better for the environment than any building, road, or parking lot that might otherwise occupy the same area.

Researcher: *Do you think the design of an outdoor space might impact the environment?*
Participant: *I don't know. Impact it? If it's impacting it, it could only be helping it, I would think. Because you're outdoors more and doing more with the environment, hopefully not destroying it. But I guess actually building something is—you're taking away from that outdoor space. But, well, so is your house. Anyway, no, I think it wouldn't be bad unless—it depends on what you do.*

Participant: *That's one of the reasons why parks are so popular and people like them is because they do benefit the environment. They bring some nature back. Wildlife, plant life, whatever.*

Researcher: *I'm wondering if you think of it as having an effect on the larger environment or not so much?*
Participant: *Well, definitely, if it does have trees if it does have that, it's going to be giving you that fresh air. If you just flatten out a space and you just have—I've seen parks [where it's] just like foam, all the green is gone. It's just foam and black top and a playground. There's no nature there.*

In these quotes, we see the idea that outdoor space—especially if it's green—is good for the environment, but little idea of how design matters.

Implications for Communicators

The black box of the effects of design on the environment impedes understanding of a key reason why landscape architects should be more involved in the design and maintenance of outdoor spaces. Because people do not understand how the design of an outdoor space can have significant and varied effects on the environment, it is hard for them to recognize how involving landscape architects would benefit the environment. Without this recognition, members of the public are less likely to demand that landscape architects play a prominent role in projects for outdoor spaces. By clarifying and explaining the ways in which good design benefits the environment, communicators can fill in this black box and help people understand why the involvement of landscape architects is important.

Mapping the Gaps: Opportunities and Challenges

In this report, we have reviewed how experts understand landscape architecture and its value, and we have described the underlying patterns of thinking that shape how members of the public think about landscape architecture and the subjects that the field is concerned with. In this section, we identify the overlaps and gaps between expert and public perspectives to reveal important communications challenges and opportunities.

OVERLAPS IN THINKING

There are important points of overlap (or common ground) between expert and public understandings of landscape architecture, nature, and designed outdoor spaces. Communicators can use these overlaps as starting points to expand understanding of landscape architecture. Both experts and the public understand that:

- The profession of landscape architecture is distinct from landscaping and from architecture—at least to some extent.
- Landscape architects have expertise in areas like plants, engineering, aesthetics and design, and/or environmental science.
- Spending time in outdoor spaces can have physical and mental health benefits.
- Designed outdoor spaces can benefit the environment and human health.
- Good outdoor spaces are functional and enjoyable for people.
- Outdoor spaces are embedded in—not distinct from—the communities that surround them.
- Affluent communities tend to have access to more and better outdoor spaces.
- Communities and professionals should work together in making decisions about new outdoor spaces.

GAPS IN UNDERSTANDING

Analysis also uncovered gaps between expert and public understandings of nature, outdoor spaces, and landscape architecture, which reframing efforts must address in order to cultivate fuller public understanding of the profession and its value.

1. ***Landscape Architects:* Multidisciplinary Professionals vs. Narrow Focus on Plants or Aesthetics.** Experts emphasize that landscape architecture requires cross-disciplinary expertise in environmental and social sciences, art, and design. This enables landscape architects to approach projects holistically, to design spaces that are simultaneously safe, enjoyable, and good for the environment. Although members of the public realize that the profession involves plants and/or aesthetic design, they tend to think narrowly about what landscape architects have expertise in and actually do.

2. ***Nature:* Incorporated into Human Designs vs. Must be Untouched.** This is a deep and foundational gap. Landscape architects see their work as creating spaces that enhance humans' relationships with nature. A key goal is to design spaces that incorporate nature into everyday life. The public, by contrast, thinks of nature and humans as fundamentally opposed, which makes the very idea of *designed* natural spaces almost contradictory, and therefore, hard to think about. For the public, to be classified as "nature," an area must be untouched by humans. This foundational gap must be bridged in order for people to think more fully and productively about the design of outdoor spaces.

3. ***Technology:* Opportunity vs. Threat.** While experts recognize that ongoing technological innovation opens possibilities for designing more sustainable outdoor spaces, the public thinks about technology through a markedly more negative lens. In the minds of members of the public, technology harms us by keeping us indoors and by directly causing environmental deterioration. In the public view, when it comes to nature and outdoor spaces, technology brings very few benefits and numerous harms.

4. ***Design Goals:* Multiple vs. Just Convenience.** Although different landscape architecture experts have different specializations, experts consistently emphasize that multiple priorities must be taken into account in the design of landscape architecture projects, such as human health, enjoyment, and environmental impacts. The public, by contrast, assumes that convenience and ease of use should be top priorities for outdoor spaces.

5. ***Design Process:*** **Holistic and Varied vs. Object Selection.** When explaining what the design of outdoor spaces involves, experts emphasize that landscape architects make decisions about different aspects of the space—everything from drainage patterns to the interaction of built environments with the native ecosystem to selection of materials. The public, on the other hand, when thinking about what makes for a well-designed outdoor space, focuses narrowly on objects like trashcans or benches and other visible features like parking lots or bathrooms. Key aspects of the design process are thus completely out of view for the public.

6. ***Effects of Design on Environment:*** **Substantial vs. Off-the-Radar.** Experts noted that landscape architects can create designs that benefit the environment. They can anticipate environmental challenges and design outdoor spaces that prevent and mitigate harmful effects of those challenges, in addition to increasing a space's overall sustainability (for example, through the water and energy needed to maintain it). While the public tends to see outdoor spaces as generally good for the environment, people do not understand the environmental impact of design.

7. ***Spaces and Communities:*** **Effects Spill Out vs. Influences Seep In.** Experts assert that well-designed outdoor spaces can positively affect a community's health, safety, sustainability, long-term costs, and civic engagement. Members of the public, on the other hand, only think about the opposite direction of influence, assuming that the characteristics of a community surrounding an outdoor space will inevitably infiltrate and influence the state of the space. They fear that if an outdoor space is located in a less stable neighborhood, not only will the neighborhood fail to experience its benefits, but the space will actually deteriorate and take on the characteristics of its problematic surroundings.

8. ***Ideal Locations:*** **Everywhere vs. Good Neighborhoods.** Experts emphasize that disenfranchised populations can especially benefit from well-designed outdoor spaces and that all communities should have access to landscape architects' expertise. Members of the public, on the other hand, see it as a better investment to establish outdoor spaces in more stable neighborhoods (in large part because they view these spaces as influenced *by* the neighborhood, rather than acting upon it, as described above). In turn, they don't see a compelling reason to increase landscape architect involvement in struggling areas.

9. ***Landscape Architects' Role:*** **Critical vs. Off-the-Radar.** Landscape architects explain that they can positively affect new and existing outdoor spaces if they are brought into conversations about those spaces earlier and more often. Yet members of the public don't demand that landscape architects are included in public projects because they have either no or only vague understanding of what these professionals do.

Initial Recommendations and Future Research

For those communicating about landscape architecture, the findings presented here are simultaneously promising and problematic. In some ways, public thinking is aligned with landscape architects' thinking, giving rise to an appreciation of nature and well-designed outdoor spaces. In the interviews, members of the public spoke positively about nature generally, and parks and other designed outdoor spaces more specifically. They could differentiate, in detail, between spaces they considered to be well designed, and those they did not. And they recognized the importance of having good outdoor spaces like parks, streetscapes, and areas around buildings.

At the same time, other patterns in public thinking create unique challenges for communicating about landscape architecture. To begin with, members of the public have little to no understanding of landscape architecture as a distinct concept. People tend to make sense of the profession by drawing from their understandings of the component terms, which results in incomplete understandings of the field. And people's models of nature and designed outdoor spaces constrain thinking about the subject matter of landscape architecture and what the field's work might involve. At the most basic level, because nature and human activity are understood as mutually exclusive and opposed concepts, people have a hard time thinking about how truly natural spaces can ever be "designed." When they think about designed outdoor spaces, they tend to focus on built objects—in part because they can understand how these human-made products are designed—and thus have difficulty seeing key aspects of design that lie at the heart of landscape architecture.

The analysis of cultural models presented in this report therefore has important implications for communications practice around landscape architecture. More research is needed to identify the best ways of tackling the most difficult communications challenges that emerge from this study. Nevertheless, we can offer the following recommendations as a provisional strategy that people communicating about landscape architecture can adopt now.

1. **Paint an expansive picture of landscape architecture.** To bring the broad scope of the field's work and expertise into view, communicators should explicitly highlight the range of subject areas in which landscape architects have expertise, the various kinds of considerations they account for, and the different systems—particularly those that don't exclusively pertain to aesthetics, convenience, or plants—that they include in their designs. For example, being explicit about how landscape architects take into account sustainability, economic, or human health considerations is critical to expand people's understanding of the field.

2. **Avoid over-emphasizing landscape architects' aesthetic expertise.** Because this facet of landscape architecture is already relatively understood, and because focusing on this leads people to undervalue the field, communicators should focus on landscape architects' expertise in other domains, such as human behavior, health, or the environment. Further research should reveal effective ways of integrating the visual component of landscape architecture with other components so that aesthetic expertise is not buried, but, provisionally, communicators should take care not to over-emphasize the beauty of the designs that landscape architects create.

3. **Explain the benefits of well-designed outdoor spaces for communities and societies.** To broaden public thinking about the importance of well-designed outdoor spaces, communicators should highlight broad community and societal benefits, such as environmental, health, civic, and economic benefits, and explain how good design can lead to these outcomes. Spotlighting these wide-ranging collective benefits is critical to help people recognize the importance of well-designed outdoor spaces and, in turn, landscape architecture. This may be achieved, for example, through the use of concrete examples that explain how landscape architecture produces beneficial outcomes—especially for the environment. Communicators can fill in the public's "black box" around the effects of design on the environment by providing examples of good design and explicitly linking those design features to the positive environmental outcomes. Because members of the public have little existing grasp of what, specifically, landscape architects do, specific examples of the field's work are vital.

4. **Explain how *all* communities—especially disenfranchised ones—benefit from well-designed outdoor spaces.** Communicators can use explanatory chains—clear, step-by-step explanations of cause and effect—to show how the presence of good outdoor spaces benefits particular groups, like children or people with disabilities, or particular communities, like communities of color and low-income communities. While further research is needed to identify the most effective ways of explaining these effects, communicators can use explanatory chains to begin to increase people's understanding of how outdoor spaces can benefit these groups and communities. For example, explanatory chains might be used to explain how spaces that use universal design principles are accessible to people with disabilities and,

in turn, how these design features improve their health and wellbeing. Or an explanatory chain might be used to explain how creating a well-designed outdoor space can help, in part, to mitigate and redress a history of discrimination against a community.

5. **Highlight landscape architecture examples that have productively leveraged technology or other innovations.** To counteract the assumption that nature and technology are necessarily at odds with each other, communicators should describe landscape architecture projects with innovative design components and explain how those innovations have produced spaces that are more positive for individuals, communities, or the environment.

6. **Avoid consumerist language.** Communicators should take care not to use language that suggests an overly instrumental attitude toward nature or the outdoors. Focusing solely on what people can "get" from well-designed outdoor spaces is likely to undermine concern with environmental sustainability. Similarly, stressing convenience in the design of outdoor spaces will narrow thinking about the purpose of design and make it difficult for landscape architects to advance the range of goals the field recognizes to be important.

These recommendations provide preliminary strategies for translating key ideas about landscape architecture for the public. However, designing a comprehensive communications strategy capable of overcoming the deeper challenges identified in this report will require the development and testing of new frames. The following is a list of key tasks for future reframing research:

1. **Expand understanding of the scope of landscape architecture.** The public can recognize that landscape architecture involves some combination of plants, aesthetic design, and environmental considerations, but people have a very thin understanding of what landscape architects actually do and key aspects of their work are completely out of view. Future framing research must find ways to broaden people's understandings of landscape architects' expertise and work. In particular, it should explore ways of conveying landscape architects' multidisciplinary backgrounds and the breadth of the considerations they take into account when designing outdoor spaces.

2. **Broaden understanding of what outdoor design involves.** Further research is needed to determine how best to broaden understanding of design beyond the selection of physical objects that make spaces more pleasant or convenient. Communicators need strategies for demonstrating the diverse, widespread, and often invisible nature of many elements of landscape architects' work.

3. **Deepen understanding of how landscape architects can benefit society.** Although members of the public recognize that outdoor spaces are beneficial, they do not recognize the role of design—or landscape architects—in promoting these benefits. Future framing research should explore ways to convey how landscape architecture promotes collective benefits in each of the following areas:

- **Health and wellbeing.** People generally attribute health benefits to all outdoor spaces, assuming that such benefits are inevitable and therefore do not have to be considered while designing an outdoor space. Communicators need strategies to explain that *well-designed* outdoor spaces have the most positive effects on people's physical, mental, and social-emotional health.
- **Safety.** When thinking about safety, participants spoke almost exclusively about the area surrounding a space, assuming that neighborhood stability or instability would seep in and affect the space's safety. This means that they rarely thought about how the *design* of the space might play an important role in determining how safe that space is. Future research can determine ways to increase people's understanding of how landscape architects can improve the safety of the spaces they work on.
- **Civic engagement.** Civic and community-building effects were not top-of-mind for participants, and when they were mentioned, they were generally associated with all outdoor spaces. Research is needed to understand how to make these benefits more salient and to effectively explain how well-designed and usable public spaces—such as city squares or parks—can facilitate gatherings, protests, rallies, or other civic actions.
- **Environment.** Strategies must be developed to help the public see how the design of outdoor spaces can improve sustainability.

4. **Generate understanding of how landscape architecture can promote equity by designing positive outdoor spaces that disenfranchised communities can benefit from.** Many participants recognized that low-income communities are less likely to have well-designed spaces, but they didn't see this as a problem that could be addressed by expanding access to such spaces: a solution to which landscape architects could contribute. Future framing research is needed to determine ways to effectively explain how well-designed outdoor spaces can benefit communities that have been discriminated against in the past, and landscape architects' potential contributions in such design.
5. **Increase appreciation of the value that landscape architects add to new and existing outdoor spaces.** Communicators need strategies to help people see landscape architects as crucial—not a "nice extra." Building appreciation of the field's value is necessary to increase public demand for involving landscape architects in the design of outdoor spaces.

Conclusion

Landscape architects face notable challenges in communicating the importance of their work to members of the public. People have limited knowledge of the field, and while people generally think about nature and outdoor spaces in positive ways, their understandings of these minimize, or fail to include, the role of design.

The cultural models findings presented in this report map out the terrain that communicators must navigate. By understanding public thinking, communicators can steer clear of misunderstandings and possible sources of resistance. And by knowing where the terrain is more easily navigable—where people's existing ways of thinking are more productive—communicators can more easily get their message across.

The provisional communications recommendations provided here can help begin to shift public thinking about landscape architecture. While further research is needed to identify a comprehensive reframing strategy, these recommendations can be used to start expanding understanding of, and support for, landscape architecture.

Appendix

METHODOLOGY

Expert Story

To explore experts' perspectives of landscape architecture, FrameWorks conducted 12 one-on-one, one-hour phone interviews with participants, whose expertise included research, teaching, and practice in the field of landscape architecture. Interviews were conducted in June and July 2018 and, with participants' permission, were recorded and transcribed for analysis. The list of interviewees was developed in partnership with the American Society of Landscape Architects, Council of Landscape Architectural Registration Boards, Landscape Architecture Foundation, the Landscape Architectural Accreditation Board, and the Council of Educators in Landscape Architecture.

Interviews with experts consisted of a series of probing questions designed to capture experts' understandings about what landscape architecture is, what landscape architects do, what the impacts of landscape architecture are, who benefits, what challenges landscape architects face, and what needs to happen to make sure landscape architects are fully utilized in society. In each conversation, the researcher used a series of prompts to challenge interviewees to explain their work, experience and perspectives. Interviews were semi-structured in the sense that, in addition to pre-set questions, researchers repeatedly asked for elaboration and clarification and encouraged interviewees to expand on concepts they identified as particularly important.

Analysis used a basic grounded theory approach.[9] Researchers pulled common themes from each interview and categorized them. They also incorporated negative cases into the overall findings within each category. This procedure resulted in a refined set of themes, which researchers supplemented with materials reviewed from relevant literature.

Cultural Models Interviews

The cultural models findings presented in this report are based on a set of interviews with members of the public. Cultural models interviews—one-on-one, semi-structured interviews lasting approximately two hours—allow researchers to capture the broad sets of assumptions, or "cultural models," which participants use to make sense of a concept or topic area.

These interviews are designed to elicit ways of thinking or talking about issues— n this case, issues related to nature, design, and landscape architecture. Interviews covered thinking about nature in broad terms before discussing designed outdoor spaces and landscape architecture. The interviews touched on what makes for good outdoor spaces, who is and should be involved in their design, and changes that would improve the design of outdoor spaces. The goal of these interviews was to examine the cultural models participants brought to the table when thinking about landscape architecture, so researchers gave participants the freedom to follow topics in the directions they deemed relevant. Researchers approached each interview with a set of topics to cover but left the order in which these topics were discussed largely to participants. All interviews were recorded and transcribed, with participants' written consent.

To understand public thinking about landscape architecture and related issues, the FrameWorks Institute conducted in-person, in-depth interviews with 16 members of the public in November 2018 in Kansas City, MO and San Diego, CA. This is a standard sample size for research designed to uncover cultural models, since the research looks for ways of thinking that are shared across the sample, rather than specific differences between individuals or subsamples.[10] Cultural models begin to emerge after examination of a portion of the total sample (for example, 7–10 interviews), and interpretation of the cultural models in the data are established independently by multiple researchers and then discussed until the researchers have arrived at a common understanding of the patterns at play in the data. However, to further ensure that the cultural models in this set of interviews reflect truly widespread, shared ways of thinking, the initial analysis was supplemented by a secondary analysis of 20 prior interviews conducted by the FrameWorks Institute on the topic of urban nature, which focused on understanding how members of the American public think about nature in urban contexts, including its benefits for health and wellbeing.[11] These interviews took place in January and February 2015 in four locations: San Jose, CA; Kansas City, CA; Frederick, MD; and Los Angeles, CA.

A market research firm recruited all 16 participants, based on a series of criteria that ensured that participants did not work in landscape architecture or any related professions. The participant sample included nine women and seven men. Of the 16 participants, nine considered themselves "white or Caucasian," three as "African American," and four "Hispanic." Seven participants described their views as "liberal" or "lean liberal," five as "conservative" or "lean conservative," and four as "middle of the road." Eight participants reported living in an urban area, six in a suburban area, and two in a rural area. Two participants said they belong to the 21–29 age group; three to the 30–39 age group; four to the 40–49 age group; four to the 50–59 age group; and three to the 60+ age group. Education was used as a proxy for socio-economic status. Six participants had some college experience; one had a degree from a two-year college; seven were college graduates; and two had post-graduate education.

To analyze the interviews, researchers used analytical techniques from cognitive and linguistic anthropology to examine how participants understood issues related to landscape architecture.[12] To accomplish this, researchers identified common ways of talking across the sample to reveal assumptions, relationships, logical steps, and connections that were commonly made, but taken for granted, throughout an individual's talk and across the set of interviews. In short, the analysis involved patterns discerned from both what was said (i.e., how things were related, explained, and understood) and what was not said (i.e., assumptions and implied relationships). In many cases, analysis revealed conflicting models that people brought to bear on the same issue. In such cases, one of the conflicting ways of understanding was typically found to be dominant, in the sense that it more consistently and deeply shaped participants' thinking. In analyzing the interviews, researchers looked for patterns across the full sample of interviews.

Endnotes

1. On cultural models, see Quinn, N., & Holland, D. (1987). Culture and cognition. In D. Holland & N. Quinn (Eds.), *Cultural models in language and thought* (pp. 3–40). Cambridge: Cambridge University Press.

2. Shore, B. (1998). *Culture in Mind: Cognition, Culture, and the Problem of Meaning*. Oxford: Oxford University Press.

3. After gauging initial understandings of landscape architects and architecture, researchers provided a very general definition of the term to ensure that for the rest of the interview, all participants had at least a minimal common understanding of the topic being discussed. This definition described landscape architects as "professionals who plan, design, and manage outdoor spaces and specified that their goal is to make these spaces better for people, communities, and the environment." The definition was designed to be very general so that researchers could better understand how participants understood the profession without substantial information about it. They could, in theory, account for the provided definition while still conceiving of landscape architects as synonymous with landscapers or with architects, but this was not the case—they almost unanimously stated that landscape architects are distinct from the two peer professions included in the name and justified this position with points that were not included in the provided definition.

4. Although the high-level definition provided to participants earlier in the interview did mention that one goal of landscape architecture might be to make spaces better for the environment, it is notable that a sizable minority of participants had either already assumed or picked up on and extended this concept. These participants' assumptions about the relationship between landscape architecture and the environment were more specific and fully developed than the broad idea that had been mentioned to them earlier in the interview, which suggests an underlying cognitive association between landscapes and environmental concerns that was brought to bear on reasoning about landscape architecture.

5. Prior FrameWorks research has revealed that not only do members of the public think about urban nature through this natural/human-made dichotomy, but they also think about other topics, like pesticides and tobacco, in similar ways. For example, see Levay, K., Hendricks, R., & Volmert, A. (2018). *The landscape of public thinking about farming: Mapping the gaps between expert and public understandings*. Washington, DC: FrameWorks Institute.

6. Interview data from the current project was supplemented by a secondary analysis of previous FrameWorks Institute research on urban nature. Because some of the topics discussed in interviews for this earlier research were similar to those discussed for the current project, data from the previous work was used to contextualize findings from the new interviews. For more information on the previous work, see Lindland, E., Fond, M., Haydon, A., & Kendall-Taylor, N. (2015). *"Nature doesn't pay my bills": Mapping the gaps between expert and public understandings of urban nature and health.* A FrameWorks Research Report. Washington, DC: FrameWorks Institute.

7. Prior FrameWorks research found that the UK public draws on a similar instrumental model to think about the ocean—one component of nature. Lindland, E. & Volmert, A. (2017). *Getting below the surface: Mapping the gaps between expert and public understandings of ocean change and marine conservation in the UK.* A FrameWorks Research Report. Washington, DC: FrameWorks Institute.

8. Lindland, E., Fond, M., Haydon, A., & Kendall-Taylor, N. (2015). *"Nature doesn't pay my bills": mapping the gaps between expert and public understandings of urban nature and health.* A FrameWorks Research Report. Washington, DC: FrameWorks Institute.

9. Glaser, B. & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research, Observation.* Chicago: Aldine PubCo; Strauss, A. & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Newbury Park, CA: Sage Publications.

10. Quinn, N. (Ed.). (2005). *Finding Culture in Talk: A Collection of Methods.* New York: Palgrave Macmillan.

11. Lindland, E., Fond, M., Haydon, A., & Kendall-Taylor, N. (2015). *"Nature doesn't pay my bills": mapping the gaps between expert and public understandings of urban nature and health.* A FrameWorks Research Report. Washington, DC: FrameWorks Institute.

12. Quinn, N. (Ed.). (2005). *Finding Culture in Talk: A Collection of Methods.* New York: Palgrave Macmillan.

ABOUT THE FRAMEWORKS INSTITUTE

The FrameWorks Institute is a nonprofit think tank that advances the mission-driven sector's capacity to frame the public discourse about social and scientific issues. The organization's signature approach, Strategic Frame Analysis®, offers empirical guidance on what to say, how to say it, and what to leave unsaid. FrameWorks designs, conducts, and publishes multi-method, multi-disciplinary framing research to prepare experts and advocates to expand their constituencies, to build public will, and to further public understanding. To make sure this research drives social change, FrameWorks supports partners in reframing, through strategic consultation, campaign design, FrameChecks®, toolkits, online courses, and in-depth learning engagements known as FrameLabs. In 2015, FrameWorks was named one of nine organizations worldwide to receive the MacArthur Award for Creative and Effective Institutions.

Learn more at **www.frameworksinstitute.org**

A research report by the FrameWorks Institute

July 2019

Please follow standard APA rules for citation, with the FrameWorks Institute as publisher.

Hendricks, R., Down, L, Pineau, M.G., & Volmert, A. (2019). *What is Landscape Architecture?* Washington, DC: FrameWorks Institute.