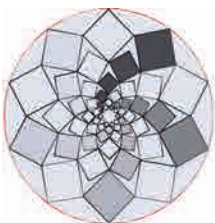
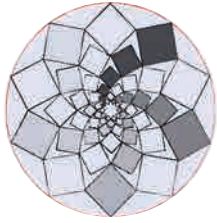


Spiritual Approaches to the Built Environment

Conversations on the Future of Built Environments and Design Professions



ACSF Architecture, Culture,
and Spirituality Forum



ACSF

Spiritual Approaches to the Built Environment

Conversations on the Future of Built Environments and Design Professions

Thomas Barrie FAIA: Project Director and publication editor

An Architecture, Culture, and Spirituality Forum Publication

© 2026

The Architecture, Culture, and Spirituality Forum reserves all rights to this publication.

The Architecture, Culture, and Spirituality Forum

811 North Bloodworth Street

Raleigh, NC 27604

<https://acsforum.org/>

Contents

Acknowledgements

The Critical Conversations Project

1. Introduction

9. Justice & Participation

25. Environmental Adaptation & Ecotechnology

41. Transcendent Human Habitats

55. Appendix

Princeton Sessions | Typical Schedule

Critical Conversations Project Briefing Book Questions

Panelist Biographies

Select Bibliography

Notes



Justice & Participation

Left to right: Thomas Beaudoin, Julio Bermudez, Karla Britton, Bryan Bell, Thomas Fisher, Caitlin Watson, Thomas Barrie

Acknowledgements

Projects of this scope and duration depend on many for their success. First of all I want to sincerely thank the Center of Theological Inquiry (CTI) in Princeton, NJ. Without Director William Storrar's belief in the project and support, it would not have happened. CTI provided logistical support and accommodations at the gracious Nassau Inn, and hosted memorable dinners in Princeton. I am grateful for ACSF's long association with CTI and for my friendship with Will.

Julio Bermudez, my friend and colleague at ACSF, was also instrumental in its success. From nascent ideas about gathering a group of visionary experts from a diverse range of disciplines, to the completion of the film, he provided wise counsel, support, and execution of crucial tasks.

I also want to thank the panelists who paused their busy careers to spend an intense weekend in Princeton, NJ. All came with open hearts, expansive intellects, and fierce convictions resulting in the exciting and at times profound conversations around the table at the Nassau Inn.

Thanks also to Dan Preston and Maggie Rose of Telequest, whose professional expertise was only exceeded by their passion for the project. They produced the *Spiritual Approaches to the Built Environment* film that has been screened at universities and venues nationally. We hope that it will continue to provoke the kinds of productive conversations and actions that our time demands.

The Board of Directors of ACSF also had important roles to play – from committing funds, to navigating challenges to the project. The COVID-19 pandemic upended the schedule resulting in significant delays and the cancellation of a fourth session entitled *Cultural Consciousness*. With the board's support we pivoted to two webinars comprising all four themes. Panelists included many who joined us in Princeton, and also those who could not: Sigurd Bergmann, Ph.D., (Emeritus Professor, Religious Studies, Trondheim, Uppsala, Lund, Munich), Prem Chandavakar, (Managing Partner of CnT Architects, Bangalore, India), S. Brent Rodriguez-Plate, Ph.D., (Associate Professor by Special Appointment, Hamilton College), and Alberto Perez Gomez, Ph.D., (Emeritus Professor, School of Architecture, McGill University).

Thanks to all.

Thomas Barrie FAIA | Project Director and Publication Editor



Environmental Adaptation & Ecotechnology

Left to right: Roberto Chiotti, Rachel Armstrong, Brigitte Shim, Thomas Barrie, Margaret Jankowski, Julio Bermudez, Linda Powers Tomasso

The Critical Conversations Project

In 2021-22 the Architecture, Culture, and Spirituality Forum conducted a series of thematic roundtable discussions in partnership with the Center of Theological Inquiry in Princeton, NJ as a continuation of their *Religion and the Built Environment* theme year. Named *The Critical Conversations Project*, it convened a multidisciplinary group of experts from architecture, landscape architecture, urban design, public interest design, theology, psychology, history, and environmental health in three sessions. The project videographer filmed interviews at the end of each session and produced a feature length film entitled *Spiritual Approaches to the Built Environment*. Throughout the goal was to broaden considerations of leading-edge issues of the built environment and design professions through incorporating spiritual perspectives.

Participants were tasked to address how the cultural, ethical, environmental, or transcendent aspects of the built environment may address contemporary challenges of spatial and environmental injustices, economic discrimination, climate change, globalization, urbanization, and the loss of place and meaning, and other contemporary imperatives of the design professions and built environments. The first session, *Justice & Participation* addressed how built environments may support equity and inclusion and encourage participatory and democratic decision-making processes; the second, *Environmental Adaptation & Ecotechnology*, how sustainable built and natural ecosystems may be in spiritual and material harmony with nature, the cosmos, and the resources of the earth, and the third, *Transcendent Human Habitats*, how holistic approaches and designs may foster human well-being and spiritual growth and help evoke transcendent experiences.

We recognized that we live in a pivotal time with promises and perils of rapid change – and that our most vexing problems are directly related to the built environment. We accepted that the design professions have the ability – and responsibility – to seek, design, and implement solutions.

This publication introduces the three themes and documents the dialogs of each of them. We hope that they provoke productive thinking about spiritual approaches to the most vexing issues faced by the design professions.



Transcendent Human Habitats

Left to right: Nader Ardalan, Rumiko Handa, Kevin Ladd, Thomas Barrie, Tammy Gaber, Suchi Reddy, Julio Bermudez, Trey Trahan

Introduction

Humans are very intelligent creatures, but not highly evolved ones. In our relatively short time on the earth, we have made remarkable progress in creating environments that support our needs and advance our knowledge. The Anthropocene has established our dominance as a species and produced an astonishing spectrum of accomplishments and knowledge. However, our successes have also resulted in profound challenges to the future flourishing and survival of our, and other, species.

Organized religions have played a crucial role in our successes and still have much to offer, but are often missing essential perspectives to address the world we have created. The emergence of a more generalized spirituality that draws from a variety of wisdom traditions is a response to this deficiency. A common theme is the imperative to deepen our consciousness of the interdependence of our individual and collective lives and the earth that supports them. Images of the earth from the Apollo 8 mission are often cited as a catalytic moment.

Several impulses define contemporary spirituality, including aesthetic, ethical, and ontological emphases. The first conceives of spirituality and spiritual experiences as growing out of the beauty and presence of creation, or what we have made. The second offers sustainable and restorative perspectives and addresses the grand problems of the age – climate change, competing global cultures and states, economic and political disparities, warfare and displacement, and other contemporary imperatives that demand holistic solutions. The third seeks psychic reorientations where the world and one's place in it are revealed, and reverence is paired with inquiry to seek inner development and outer realization regarding the nature of being, purpose, and place in the cosmos.¹

Just as there are many impulses of contemporary spirituality, there are also several definitions. Phillip Sheldrake outlines four broad categories: spirituality as an *ascetical spirituality* of discipline, renunciation, and voluntary simplicity; as a *metaphysical spirituality* of self-development and realization; as an active, *practical spirituality* that aims to integrate spirituality into one's everyday life; and a prophetic, *critical spirituality* that applies spiritual perspectives and positions to social critique, action, and change.²

The engaged spirituality movements that emerged in the twentieth century provide relevant contexts. They emphasize developing one's character while also serving others for the common good, and comprise practices centered on addressing needs and effecting social change. According to Gregory Stanczak and Donald Miller, "in order to fully understand the relationship between spirituality and social change, we must discuss spirituality in ways that are more complex than the stereotypes of individual transcendence or reflection"³ Engaged Buddhism, Practical Theology, and the Liberation Theology movement in the Catholic Church, are contemporary examples. Contrary to popular spirituality, which typically focusses on personal development, in engaged spirituality personal development is the outcome of service. The Zen Priest Bernie Glassman described it as follows: "We commit ourselves to healing others at the same time that we heal ourselves."⁴ At its heart are compassionate actions, which cultivate empathy, love, and care for others, or other living beings, by offering our time, effort, or possessions to those in need.

In an increasingly globalized world shaped by technological and economic forces, the built environment has important spiritual roles to play, including fostering cultural, ethical, environmental, and transcendent perspectives and behaviors and inducing experiences of wholeness, connectedness, awe, and the sacred related to nature, self, other beings, and divinity. Scholar Alberto Pérez-Gómez insists that architecture's most important role is to "enhance our human values and capacities, which we might also term our spirituality."⁵ Transcendent is defined as those perceptions, behaviors, ideas, insights, and experiences that have been liberated from egocentric, ethnic, cultural, national, religious, scientific, or anthropocentric biases. A transcendent perspective is largely (but never fully) free from conventional, referential frameworks, a state that enables new opportunities of realizations, actions, and relationships (i.e., ways of being).

The built environment's lengthy history as a communicative and affective media employed for a diversity of religious, political, and ethical goals, and achieved by an adaptable formal and material language, portends its enduring capacity to serve the highest ideals and address the most vexing problems. Indeed, the built environment was often believed to provide portentous places for personal-improvement and, by extension,

the evolution of culture. It still has that promise and potential.⁶

Justice and Participation ⁷

The relationship between power and the built environment is an essential part of its history. As Deyan Sudjuk states, “Architecture is about power. The powerful build because that is what the powerful do.”⁸ The great Gothic cathedrals have been predominately celebrated for their spiritual qualities and devotional impulses – often neglected are their roles in validating political power and enforcing social hierarchies. According to one scholar, “Buildings... afford more than mere lip service to authority: they are an intrinsic part of authority itself.”⁹

The use of architecture as propaganda by repressive regimes is well documented – less so are the subtle ways the values of dominant cultures are materialized by the built environment. Histories of the ways the built environment supports power structures and social hegemonies reveal its negative, and positive, capacities. The power of the built environment can be applied to exclusive or egalitarian goals – to repressing or enabling – that is its peril and promise.

Studies on the power of the built environment generally focus on the affective and communicative capacities of singular buildings. The social, cultural, legal, and political determinants of the design of built environments, however, have arguably been more consequential. From hierarchically-organized traditional villages to European Jewish ghettos, the built environment has expressed and enforced the will of the powerful. In *The Production of Space*, Henri Lefebvre outlined spatial practices that often served to enforce and express social norms.¹⁰ The design of urban environments coupled with social norms have typically determined who has access to public space and in what manner.

In the Jim Crow South, the use of the public realm was explicitly dictated, but there are more subtle means by which the built environment creates hierarchies of access by gender, race, sexual orientation, and class. The privatization of public space, from malls to homeowner associations, limits the participatory agency of citizenry. The corporate branding of architecture can be insensitive to its contexts and insulting to some constituencies. The commodification of housing has produced unequal access to this essential need or, as some have insisted, human right. Transportation modalities, priorities, and accessibility determine the mobility of people and communities, and their ability to access jobs, schools, and services. Unequal distribution of services in disenfranchised, low-wealth communities results in missing, scarce, or inflated goods and services.

Racial and economic discrimination has often relegated oppressed populations to unhealthy or even toxic environments.

Ethics, often referred to as moral philosophy, is a branch of western philosophy concerned with whether human actions are beneficial or destructive in their personal and group contexts. Panelist Thomas Fisher defines ethics as a “way of seeing things from the perspective of those most affected by our decisions and of taking into account their interests and needs in every action we take.”¹¹ Ethics provokes reflections regarding who is most served by architectural and built environment projects, and who is ignored or harmed. Spiritual orientations can lead to assuming responsibility for what matters, and a practice of doing the most good for the greatest number. Like engaged spirituality, there is a commitment to serving those who have the most need, fighting injustice, and advocating for a more equitable future. In today’s world, a professional ethics of personal integrity, community responsiveness, commitment to doing the least harm regardless of personal or business interests is needed.

Globalization poses unprecedented issues regarding personal and professional ethics, especially in the case of high-profile projects (and architects) commissioned by repressive regimes and utilized as state propaganda.¹² However, similar vexing issues are present locally, such as projects set in gentrifying communities that provoke questions regarding who is best served (and not) by particular projects. Capitalism, and the control of capital by those who are most served by the status quo, too-often diminishes the public good of the built environment. Buildings and planned developments often effectively provide for private needs, but too-rarely significantly contribute to the public good. Modern planning methods promise the balancing of these complementary demands, but often default to serving those in power.

The history of racism in America includes a history of spatial injustice.¹³ Racist government policies and programs denied African Americans opportunities to build wealth through homeownership, which significantly contributed to generational economic disparity. Richard Rothstein has documented *de jure* racist government policies that controlled the built environment to suppress Black Americans and asserts that they were just as much civil rights violations as Jim Crow segregation.¹⁴ Today, African Americans are much less likely than whites to own their home. For those that do, exclusive zoning artificially suppresses property values in low wealth areas while inflating those in higher wealth ones.

The Civil Rights and Fair Housing Acts of the 1960s were designed to eliminate racism but did not address zoning

laws. Since then, these laws have been applied to accomplish what the acts made illegal – racial segregation and economic marginalization. Exclusive single-family zoning and minimum lot sizes erect economic barriers that prevent lower income people access to the schools, employment, and services of higher wealth areas.

Histories of architecture and the built environment can disclose social and political histories, at times exceeding textual records. By “reading” the form and organization of the built environment one can decipher the often hidden or suppressed motivations of its builders and enablers. The design professions have unique roles to play to address, mitigate, and solve problems such as spatial injustice. There is power and agency in design and design thinking that uniquely positions the design professions to effectively lead.

However, the design professions first need to honestly recognize their exclusive histories and complicity in supporting the dominant culture. For most of its history western architecture has been dominated by white men who either prohibited women and minorities to train or enter the profession or excised them from its histories.¹⁵ In America it has taken a couple of generations for women to substantially enter the profession of architecture, but leadership positions are still predominantly held by white men. African American architects have faced significant challenges and currently comprise just 2% of the membership of the American Institute of Architects (AIA). Consequently, architectural discourse remains stunted and its capacity to innovate truncated.

The exclusivity of the design professions is also reflected in their fee-based model that makes professional services economically inaccessible to many. Pro-bono services may serve some but do nothing to create structural changes to how the built environment gets designed, and who has a voice and influence, in the process. Instead, profound changes in design practices need to be made to create more diverse, relevant, and nimble professions. Alternative models, a diverse workforce, and inclusive histories need to be part of this. Non-profits, for example, serve a mission and can control the types of projects they do. There is also a need for expanded skills and services, and need to diversify the value we can offer to individuals, institutions, and communities.

Public interest design is one model of reframed priorities and expanded design processes and services. Inclusive processes that effectively engage communities, assess their strengths and challenges, and build social capital are often the most important outcomes. The inclusion of the public in the design process supports democracy and provides evidence of the worth and validity of civic engagement. It

is a process to find a confluence of interests that can reinforce a community’s shared goals, invite new members to join the community under a shared vision of success, and often results in feelings of ownership by those involved in decision making. In this manner, they also produce social wealth in communities that have been excluded from the resources controlled by a small segment of society. According to panelist Bryan Bell, the value of a building is often secondary, but is significantly increased if it serves as a reflection and materialization of the shared goals of communities.

There is also a growing call for unionization in the architectural profession. According to panelist Caitlin Watson, empowering the workers in practice could be a powerful means of reforming practice and changing what is often characterized as an overworked, underpaid, and often toxic culture. Unionization can also facilitate collective action to address issues such as the affordable housing crisis. There is a profound need for architects and the profession to be advocates for change in how architecture and the built environment is financed, planned, and legislated. Zoning reform, for example, is an area where architects have been largely silent, but where they could be effective advocates. Reform also includes architectural education. Students deserve an education that prepares them for a challenging future, teaches them to be collaborators, and empowers them to lead. Changes in education inevitably lead to changes in the profession.

The challenge of our time is to accomplish much more with much less. While resources are limited, social capital is not and can be capitalized through participatory processes that include finding the highest and best solutions to meet the priorities of the most stakeholders. Authentic participatory design processes and sustained efforts for justice and equity create conditions of reconciliation, generosity, fairness, patience, loving kindness, honesty, and receptivity towards others. The goal is the creation of shared goals through design – and community around design.

Environmental Adaptation and Ecotechnology

The developed, industrialized world has binged on carbon for the past one hundred years. This has produced remarkable advances in technology, science, and prosperity, and resulted in unprecedented degradation of the natural world and risks to human flourishing. During the Anthropocene humans have significantly affected, changed, and damaged the environment of which they are an intrinsic part. Global temperatures have risen resulting in greater frequency and severity of storms, sea level rise and storm surges, increased desertification, habitat, and species loss, impacts on food production and water, disease migrations, and economic, political, and social instability. The Paris

Agreement of 2016 sets the clear goal of holding the lower limit temperature rise to 1.5 degree Celsius and recognizes that rises above that will produce catastrophic impacts, but responses have been episodic and unevenly applied.

Fueling our predicament is the insatiable appetite for goods and services of our consumerist and materialist civilization. The result has been extractive, destructive, and polluting habits unfolding at an increasing geographical scale. In *Prosperity without Growth* the economist Tim Jackson argues that our material successes have resulted in significant moral and spiritual deficits.¹⁶ Implicit is the reclaiming of spiritual perspectives through reconsiderations and reform of dominant technological and economic systems. It also requires accepting responsibility for our actions and challenging dominant cultural and religious beliefs and forces. These include theist beliefs in a transcendent, creator god that oversees and controls the world, scientific hegemony that positions science as the preeminent solution, neo-liberalism's championing of individual and national autonomy and unfettered growth, power structures with vested interests in maintaining the status quo, and economic globalization that sacrifices local economies and global cooperation to competitive markets.

The antidote is rather simple yet difficult to conceive of implementing – we need a comprehensive cultural change. While this would seem an impossible task, the significant threat that climate change poses paradoxically provides a remarkable opportunity for human cooperation and spiritual development. The transition from the Anthropocene to an Ecocene or, as Thomas Berry stated, from the “scientific-technological” to an “ecological period,” depends on dramatic shifts in human consciousness.¹⁷ It will require compassion and care for all life on earth and respect for the interconnected web of existence – a deep biophilia and a profound ecopoiesis.¹⁸ It can be a pivotal period where dominant dysfunctional world views, patterns of production and consumption, priorities, and policies are transformed.

The Prologue to the 1992 *The Hannover Principles* simply states, “Human society needs to aspire to an integration of its material, spiritual and ecological elements.” Its arguments include: nature and humans are interdependent and have equal rights of co-existence; spiritual and material consciousness and environments, and health and well-being are interrelated; shortsighted planning, short-term products, and the concept of waste should be eliminated; energy should be solar; nature is a model to be emulated; and the sharing of knowledge is crucial to “link long term sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.”¹⁹

However, sustained efforts and substantive impacts, which until now have proved elusive, will be required. Capitalist economies and their dependent political structures have proven to be impediments and will need to transform. Energy production and use, food production, manufacturing, transportation modalities, along with settlement patterns and the built environment, will need to shift from carbon dependent to carbon positive. Global building is projected to double by 2060, providing a remarkable opportunity to create new, sustainable, and regenerative built environments. We need to prioritize the collective health of humans and other beings we share the earth with and establish a middle ground of care for our only home.

Specialized fields address the phenomena of human agency, motivations and priorities and the environment. Human Ecology is a multi- and inter-disciplinary branch of sociology that examines the interrelationship of the natural, social, political, economic, and built environments, and humans.²⁰ Cultural Anthropology includes the study of the organizations, worldviews, and practices of indigenous cultures. Spiritual Ecology is a philosophy that views the natural world as a living consciousness where animals and plants possess varying levels of sentience. It accepts that all beings are interconnected, and that the loss of any member of the natural world is a loss to us.²¹ Wisdom traditions of indigenous peoples often illustrate their beliefs in the interdependence of human and natural ecologies. As the Lakota Chief Luther Standing Bear eloquently stated, “The old Lakota was wise. He knew that man’s heart away from nature becomes hard; he knew that lack of respect for growing, living things soon led to a lack a respect for humans too.”²²

The architecture, landscape architecture, planning, and related professions have documented the high percentages of CO2 emissions attributable to built environments. They recognize the leadership roles professions need to play in creating a sustainable future for humans, other beings, and the earth. It demands re-thinking conventional priorities, relationships, power structures, and the design professions. Western culture, at least since the Enlightenment, has been dominated by extractive and consumptive economies, compartmentalized, instrumental, and technological methods, and unhealthy relationships with nature. Contemporary sustainable practices reflect this with its emphasis on technological fixes – active systems that may reduce resource consumption but do not address the structural changes that are required.

Passive systems are more aligned with reciprocal relationships between the built and natural environments, but we need expanded strategies that capitalize on new scientific and technological knowledge. According to panelist Rachel Armstrong, one emerging area derives from advances in

molecular biology in the late 20th century. The microbiome is a ubiquitous and fundamental component of natural systems. Researchers are discovering ways that it can be a component of healthy, regenerative environments, including healthy soils, waste management, and even power generation.

The path to decarbonization also includes rethinking settlement patterns and density, transportation modalities for people and goods, energy production, consumption, and regeneration, embodied energy in building materials, and the use, and reuse, of buildings. The *2030 Challenge*, founded by Ed Mazria in 2002, provides resources and strategies to address these issues. It has two primary objectives: “to achieve a dramatic reduction in the energy consumption and greenhouse gas (GHG) emissions of the built environment; and, to advance the development of sustainable, resilient, equitable, and carbon-neutral buildings and communities.” It has established the goal of zero emissions by 2040, and issued dire warnings if this is not achieved. Other initiatives address a broad range of issues and provide playbooks for creating carbon-neutral/positive, equitable, healthy, and beautiful built environments, including LEED, The Living Building Challenge, Green Globes, and the WELL Building Standard.

Urban planner Peter Calthorpe argues that for the past fifty years North America has pursued and supported decentralized, carbon-based energy and transportation systems and economically stratified settlement patterns. He observes that if the world adopted American lifestyles, it would quickly become unsustainable, and the alarming rates at which this is occurring. He proposes a “passive urbanism” of density as a sustainable alternative to dominant, land-intensive patterns. He cites New York City as a place with one of the world’s smallest per-capita carbon footprints and insists that compact urbanism, in conjunction with active energy-efficient technologies such as local energy cogeneration and distribution, is the most effective means to address the multiple issues of climate change.²³

Cities, urbanized environments, suburbs, and regions also need to be reimagined. Built environments need to give back and not take – buildings need to be energy producers not consumers. Regenerative built environments can actively rebuild and grow natural systems. This includes infrastructure, which is often hidden or on the periphery, to transform waste into useful products, reconstruct energy and water distribution systems, and provide natural places for communities. Marginalized urban systems such as back alleys can be transformed to provide diverse housing and natural systems for storm water management and other essential functions. Every designed place can serve to express spiritual values of care, compassion, reverence, and respect.

Public health research has established the benefits of connections and access to nature. Re-wilding cities can provide mental and physical health benefits, as well as places where awe and wonder can help us to reorient our relationships to others and the world. Re-wilding cities is also a means of passive carbon sequestration, supporting bio-diversity, and mitigating sea rise and storm surges through barrier natural habitats. *Biophilic Cities*, founded by Tim Beatley, proposes comprehensive ways to reintroduce natural habitats into urban environments – to support wild-life and, perhaps most importantly, reintroduce humans to their co-inhabitants on the planet. *The Living Building Challenge* and *WELL Building Standard* propose similar strategies and make analogous claims regarding their benefits. The systemic orientation of landscape urbanism and ecological urbanism provide other useful positions, as do indigenous wisdom traditions that describe integral and devotional attitudes to the natural environment.

Also useful are reverential attitudes conveyed by contemporary religions. Perhaps the most well-known is Pope Francis’s encyclical *Laudato-si*, a vision that has been warmly received by faith leaders of other world religions. Panelist Brigitte Shim and her firm Shim-Sutcliffe Architects, have designed buildings for different religious communities. All requested direct connections to the natural world as the original sacred space and source of knowledge. Many had the goal of the architecture materializing and expressing their values to future generations. Panelist Roberto Chiotti designed a church in Toronto that opened to a garden instead of the traditional orientation of churches to the altar and heavens. The everchanging landscape, as well as dynamic natural light in the sanctuary, provides the setting for connecting with, and learning from, the natural world. A sustainable future depends on these, and many other means, to engage our spirits and apply our collective intelligences.

The design professions also need to reinvent themselves and establish new priorities and methods of working. Multiple disciplines, from economists to public health experts, need to be part of the process. Coalitions of diverse communities must be engaged and empowered in shaping built environments. The scope of practices also needs to change. The designer-client construct should be reconsidered and reconstituted. Architects and other design professionals need to apply their skills and expertise to fundamentally changing public and environmental policies. All need to accept responsibility, consider the harms and benefits of projects, serve the public good, and envision and create a sustainable future.

Reorientations of this type are essential to creating the future we need for human flourishing. Spiritual perspectives

are congruent with reorienting human-nature relationships where the health of the earth is primary. Biophilia, love of nature, is catalytic of changing our relationship to nature. We can only care for what we love. Mutually-enhancing relationships between humans and the world, between built and natural environments, are part of the vision for sustainable, regenerative environments that support life on earth. As Roberto Chiotti observes, it is hubris to imagine healthy humans on an unhealthy world.

Transcendent Human Habitats

Emmanuel Kant created the term “transcendental idealism” to argue that only by transcending one’s experience of objects and ideas about them, can dependable perspectives be formulated. American Transcendentalists, drawing from Kant’s philosophy, believed that the human intellect unrestrained by preconceptions and cultural limitations had the ability to perceive, engage, and experience the world authentically. Ralph Waldo Emerson, in the 1842 essay “The Transcendentalist,” stated, “what is properly called Transcendentalism among us, is idealism.”²⁴

Transcendent human habitats are a necessary remedy for a world that faces many challenges. Their considerations include ineffable, unmeasurable, and ideal aspects that lie beyond the material and intellectual, with a particular emphasis on built environments that materialize and disclose the spiritual. Spiritually-informed design ethics and practices can be an effective means to address political divisions, global conflicts, economic disparity, environmental degradation, and other issues that define the times we live in.

The material and spatial presence of built environments are part of their power to engage us physically and emotionally. Similar to affective art and literature, if we are prepared to listen, they can speak to us in ways that change our lives for the better. Transcendent built environments are active places that engage our bodies and minds and inculcate wonder and awe. It is through the experience of these places that we can come to know more about ourselves, others, and the world, and move beyond our cultural limits and prejudices. Transcendent places can also support the spiritual quest for a connected and meaningful life. It has the capacity to slow us down, transcend ourselves, and connect us with others.

In some cases, transcendent built environments may also precipitate awareness of realities beyond us. Research has demonstrated that experiences of this type occur in sacred places, often spontaneously saturating one with physical and emotional sensations and feelings. Religions have always realized the capacity of architecture to induce feelings of awe and wonder congruent with religious awakenings. However, research also shows that many

secular settings, if designed in potent ways, can also be places for extraordinary experiences and understandings. A study conducted by panelist Julio Bermudez documented how architecture may induce moments full of spiritual and existential signification, even spiritual awakening. Survey responses included descriptions of profound, and often spontaneous, experiences of insight, beauty, joy, peace, and satisfaction that elicited high levels of awareness, introspection, and silence, along with “strong body reactions” such as goose bumps, pounding hearts, shivers, and weeping. Respondents described experiences as beyond cognition, fundamentally emotional, perceptual, and timeless, and in some cases as the most meaningful moments of their lives. Not surprisingly, the buildings most reported to provoke such remarkable aesthetic states were originally (or continue to be) sacred spaces, but not all.²⁵

Some scholars, however, have argued that it is in the regular experience of ordinary built environments where the sacred and metaphysical are more readily available.²⁶ Juhani Pallasmaa stated, “More than ever before, the ethical and humane task of architecture and all art is to defend the authenticity and autonomy of human experience, and to reveal the existence of the transcendental realm, the domain of the sacred. This calls for the identification of the spiritual and holy, not only in deliberate devotional contexts, but in the ordinariness and humility of daily life.”²⁷ Gaston Bachelard valorized the spiritual and ontological qualities of the everyday, especially the domestic. Panelist Rumiko Handa reminds us that the often-undervalued conditions of our ordinary life and its incompleteness, imperfection, and impermanence, offer opportunities to consider our ontological condition.²⁸

The geographer Yi-Fu Tuan observed that religion either embeds a people in a specific place or frees them from it.²⁹ The philosopher Paul Ricoeur presented “manifestation” and “proclamation” as two complementary and, at times, congruent characteristics of religion. The former is typically place based, where the sacred is revealed or evoked as a manifestation of the orders of the cosmos, the latter a “theology of the Name is opposed to any hierophany of an idol,” where sacred nature “withdraws” before the “word and ethics.”³⁰ Casting existence as fundamentally and inevitably linked to inhabitation makes all spiritual considerations relatable to architecture, what Michael Benedikt calls “the social sacred.”³¹ There is no abstract ‘space’ or ideal living to be found but only concrete ‘places’ inhabited by real and rooted people.

Christian Norberg-Schulz argued that spirituality and architecture meet in the existential space that is continuously constructed by each of us playing our part in the larger sociocultural fabric of a place. Drawing from Heidegger, he suggested that human life is dwelling under the divinities,

among mortals, arising from nature, and responding to the cosmos.³² Since to be alive is to be in-the-world, spirituality shapes and is shaped by place. The central role of place in spiritual life is evident in indigenous peoples, but also presented in contemporary scholarship on “genius loci” and place attachment theory.³³ The latter theory validates what we know in our hearts: the place where we grew up, our homes and hometowns, are imprinted in our soul and being. Indeed, the attribution of spirituality to the domestic is longstanding, where cultural contexts and ontological roles are intrinsic to place making and the quotidian rituals of home.³⁴

The term “atmosphere” is often used to describe the ungraspable, ethereal, but nonetheless perceivable, emotional, and spiritual aspects of places and architecture. The contemporary architect Peter Zumthor is explicit about the emotional, sensual, and even spiritual experiences of the atmosphere of architecture. Walter Benjamin called “aura” the unique and irreproducible quality of presence that an object possesses, which was also present in architecture. Benjamin’s aura associated religious imagery with the barely perceived, but real, spiritual dimension of holy beings.³⁵ Sigurd Bergmann has argued for a deeper exploration of a synthesis of the atmosphere nurtured both by meteorology and phenomenology.³⁶ For Maurice Merleau-Ponty, mind and spirit are embodied in a unitary whole that cannot be separated – to be in-the-world as “flesh of the world,” is only encountered bodily.

There are connections between Merleau-Ponty’s postulations, and Christian beliefs in the incarnated divinity of Christ, and the non-duality of existence intrinsic to Buddhism and Taoism, where material embodiment is spirituality and vice-versa. The implications for architecture are obvious since buildings are fundamentally material artifacts that affect us through physical means. Juhani Pallasmaa suggests that waking up to the miracle of being alive and the experience of the transcendent is dependent on the physical dimension of architecture. Equally important is movement and dialogic encounters with architecture by our physical bodies. Each may produce heightened states of being through “entanglements” with place that are often deepened through ritual movements. Giambattista Vico argued that divine providence appears through the poetic objects we make.³⁷ This can range in scale from objects to urban environments to regions.

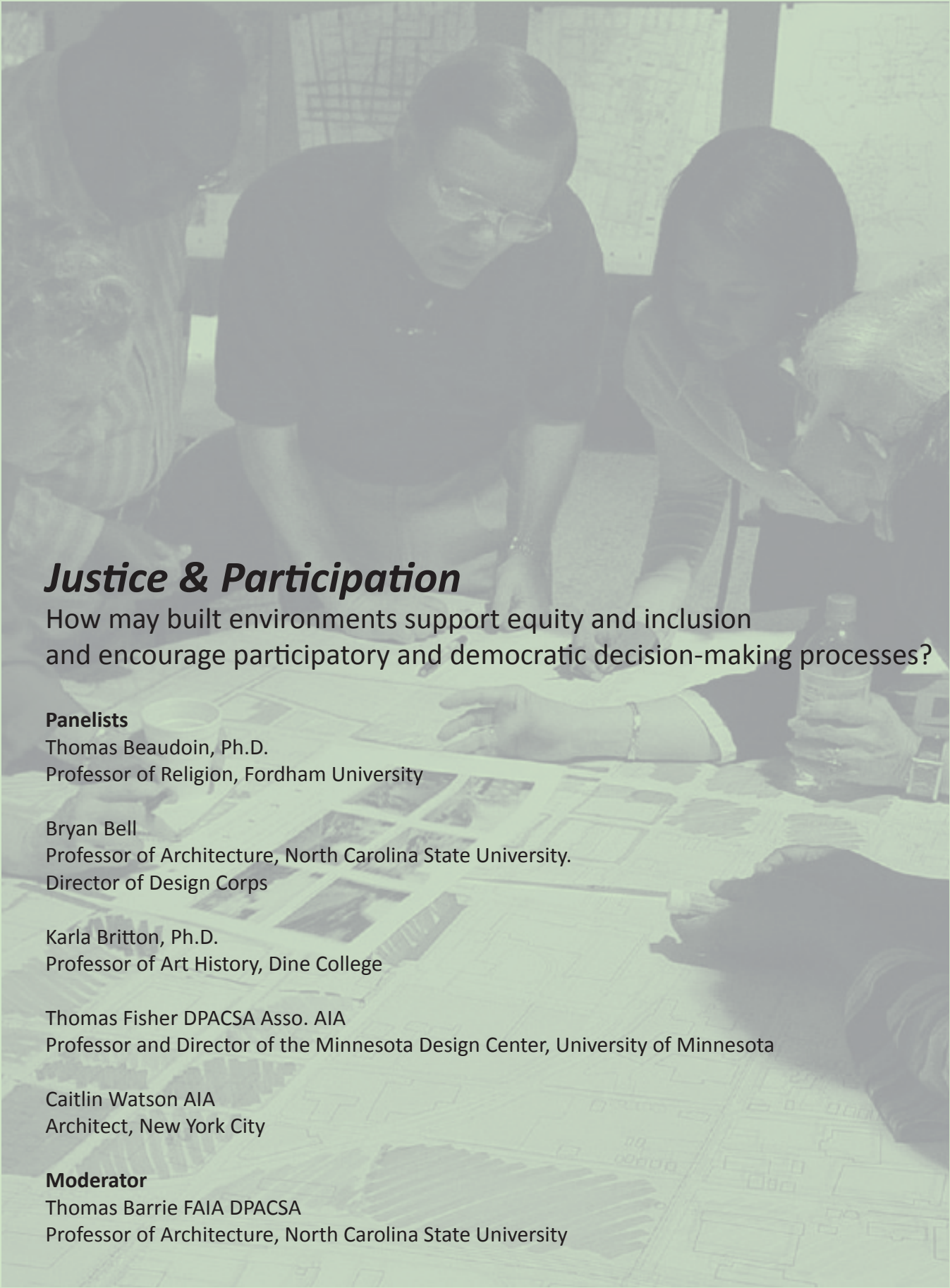
The transcending of conventional practices and processes depends on transcendent architects and designers. Panelist Trey Trahan argues that the craftsmen who construct our buildings also need to be engaged, and their skills and the sublimity of craft honored. Our roles should exceed the limitations of professional services and serve the higher mission of the design professions. We need to be visionary

leaders, serving the common good and building a more equitable, sustainable, meaningful world that supports human flourishing. There is also a profound need for more public engagement in planning and designing built environments. A revaluing of practice includes expanding design literacy so that the public and communities are informed partners in building a more hopeful future.

During this century we will build more than has ever been built in the past. This presents great risks, but also opportunities. It demands new and expanded ways of design and construction. A professional ethos can guide our search for truth and beauty. A professional ethics is committed to the design of built environments that raise the human spirit and support the spiritual development of humankind. This is the challenge of our time and the promise of transcendent human habitats.

Endnotes

1. Barrie, Thomas and Bermudez, Julio, "Spirituality and Architecture," in Laszlo Zsolnai and Bernadette Flanagan, eds., *The Routledge International Handbook of Spirituality in Society and the Professions*, London: Routledge, 2019, p. 346
2. Sheldrake, Phillip, *Spirituality: A Very Short Introduction*, Oxford, UK: Oxford University Press, 2012, p.25
3. Stanczak, Gregory and Miller, Donald, *Engaged Spirituality and Social Transformation in Mainstream American Religious Traditions*, Center for Religion and Civic Culture, USC College of Letters, Arts & Sciences, 2004, p. 5.
4. Glassman, Bernie, *Bearing Witness. A Zen Master's Lesson in Making Peace*, New York: Belltower, 1998, p. 84
5. Perez-Gomez, Alberto, *Built Upon Love: Architectural Longing after Ethics and Aesthetics*, Cambridge, MA: The MIT Press, 2006, p. 8
6. Barrie and Bermudez, 2019, pp. 352-53
7. Parts of this section were previously published in *How Does Spatial Justice Manifest in the Built Environment?*, Adnan Morshed, ed. Wiley, 2026, (Barrie, Beaudoin, Bermudez, "Spatial Justice and Spirituality," pp. 231-237)
8. Sudjuk, Deyan, *The Edifice Complex: How the Rich and Powerful – and their Architects – Shape the World*, New York: Penguin Books, 2005, p. 2
9. Coaldrake, William H., *Architecture and Authority in Japan*, London: Routledge, 1996, p.3
10. See, Lefebvre, Henri, Donald Nicholson Smith, trans., *The Production of Space*, Oxford, UK: Blackwell, 1991
11. Fisher, Thomas, *The Architecture of Ethics*, London: Routledge, 2019, p. xix
12. See, Owen, Graham, *Architecture, Ethics and Globalization*, London: Routledge, 2009
13. See, Soja, Edward W., *Seeking Spatial Justice*, Minneapolis: University of Minnesota Press 2010
14. See, Rothstein, Richard, *The Color of Law: A Forgotten History of How Our Government Segregated America*, New York: W.W. Norton & Company, 2017
15. In eighteenth-century England most architects were upper class "gentleman amateurs," a tradition continued in America, with Thomas Jefferson perhaps the most prominent example.
16. See, Jackson, Tim, *Prosperity without Growth: Economics for a Finite Planet*, London: Earthscan, 2009
17. Berry, Thomas, "Twelve Principles for Understanding the Universe and the Role of the Human in the Universe Process," 1984
18. Berry, Thomas, *Dream of the Earth*, San Francisco: The Sierra Club, 1988
18. The Hannover Principles, 1992, p.5
19. See, Levine, Norman D. ed., *Human Ecology*, North Scituate, MA: Duxbury Press, 1975
21. See, Nollman, Jim, *Spiritual Ecology: A Guide to Connecting with Nature*, New York: Bantam Books, 1990
22. McLuhan, T.C., ed., *Touch the Earth: A Self-portrait of Indian Existence*, New York: Simon and Schuster, Inc., 1971, p. 60
23. Calthorpe, Peter, *Urbanism in the Age of Climate Change*, Washington, DC: Island Press, 2010, pp. 8-24
24. See, Barrie, Thomas, *The Sacred In-between: The Mediating Roles of Architecture*, London: Routledge, 2010, p. 30
25. Barrie & Bermudez, 2019, pp. 349-50
26. See, Tesar, Paul, "Neophilia, Spirituality, and Architecture", in Barrie, Bermudez and Tabb, eds., *Architecture, Culture, and Spirituality*, New York: Routledge, 2015
27. S Pallasmaa, Juhani, "Light, Silence, and Spirituality in Architecture and Art," in Bermudez, Julio, ed., *Transcending Architecture*, Washington, DC: CUA Press, 2015, p. 32
28. Handa, Rumiko, *Allure of the Incomplete, Imperfect, and Impermanent*, London: Routledge, 2015
29. Tuan, Yi-Fu, *Space and Place: The Perspective of Experience*, Minneapolis: University of Minnesota, 1977, p. 152
30. Ricoeur, Paul, *Figuring the Sacred: Religion, Narrative, and Imagination*, David Pellaver, trans., Mark I Wallace, ed., Minneapolis: Fortress Press, 1995, p. 56; Barrie, 2020, pp. 11-12
31. Ricoeur, Paul, David Pellaver, trans., Mark I Wallace, ed., 1995, p. 56; Barrie, 2020, pp. 11-12
32. Barrie & Bermudez, 2019, pp. 349-50
33. See, Chang, Hyejung, "An Aesthetic and Ethical Account of Genius Loci", in Barrie, Bermudez and Tabb, eds., *Architecture, Culture and Spirituality*, New York: Routledge, 2015; See, Altman, Irwin and Low, Setha M., eds., *Place Attachment*, New York: Plenum Press, 1992, Manzo, Lynne C., and Devine-Patrick, Wright, eds.). *Place Attachment: Advances in Theory, Methods and Applications*, New York, Routledge, 2014
34. Barrie & Bermudez, 2019, p. 350
35. Barrie & Bermudez, 2019, p. 350
36. See, Bergmann, Sigurd, *Weather, Religion, and Climate Change*, Abingdon, Oxon, UK: Routledge, 2021
37. Perez-Gomez, 2006, pp. 23-24



Justice & Participation

How may built environments support equity and inclusion and encourage participatory and democratic decision-making processes?

Panelists

Thomas Beaudoin, Ph.D.
Professor of Religion, Fordham University

Bryan Bell
Professor of Architecture, North Carolina State University.
Director of Design Corps

Karla Britton, Ph.D.
Professor of Art History, Dine College

Thomas Fisher DPACSA Asso. AIA
Professor and Director of the Minnesota Design Center, University of Minnesota

Caitlin Watson AIA
Architect, New York City

Moderator

Thomas Barrie FAIA DPACSA
Professor of Architecture, North Carolina State University

Thomas Barrie

We have gathered around this table to talk about issues regarding justice and participation in the built environment and the design professions. I'm going to start off with a fundamental question – what contemporary problems do we identify that are particularly pertinent to the built environment and design professions?

Bryan Bell

We are at a moment of global challenges that need to be addressed. I think every profession, every person ought to be thinking, What can we do? because the status quo is leading us to climate destruction, injustices, and damaging democracy. So, in architecture, we need to say what can we do? And for social, economic, and environmental issues architecture has been quite irrelevant for quite some time and, in fact, has done damage. So, we need to reframe what we can do. I'm very optimistic, and think we have a very important role to play in addressing these great challenges. But it's got to be new models, creativity, and aspirational thinking. A lot has to do with collaborative models rather than the individual model, or collective action versus capitalist models. So how can we create power? How can we work together? How can we do new things as architects?

So that's our challenge and our opportunity as architects, because we can envision better futures and create a confluence of interest among different parties. Buildings are not the ends, they're the means to create change. It can be on a local scale, or it can be on a global scale. So, I think this is a moment for us to reassess the profession, to realize the value of it, but to also recognize where we have failed to make a difference.

Thomas Barrie

So, we have vexing, wicked problems, many of which are directly related to the built environment. Yet we find a profession that's moved into irrelevancy and the need to reclaim and rediscover the power of design – new methodologies, methods of engagement and design processes – to effectively address these problems.

Thomas Fisher

The paradox of the profession locked into a neoliberal capitalistic system is that it doesn't serve architects very well. Architects are underpaid, overworked, and not compensated for the risks they take. At the same time, vast percentages of the population can't afford architects. And so, the very people who need our services the most can't access us. So, the system isn't working either for architects or for the communities we are supposedly serving.

Thomas Barrie

We hear about the problems of affordable housing, or the need to reform zoning laws, and that poses the question, what do the design professions have to do with legislative changes? What can they do?



Lower Manhattan skyline

Caitlin Watson

I think that architecture reifies existing power structures, and it's really a reflection of the culture that produces it, which right now is largely a global, capitalist, extractive culture. And the built environment has historically contributed to perpetuating a lot of harm. If we look at the climate crisis, buildings are responsible for 40% of global greenhouse gas emissions, as well as devastating biodiversity loss caused by construction and extraction.

We could also look at the history of redlining and how the built environment has been a foundational component of racial injustice, or the role of speculative development and how the commodification of design has played into the housing affordability crisis. And so, the work that we're doing as architects really can't be separated from that: we are responsible for building power to work towards systemic change that can address these issues in solidarity with communities in solidarity with other groups of organized workers.

Thomas Barrie

So not only do we have the ability and skills to engage these problems, we have the responsibility to do so. We also have to recognize that we cannot do it alone. This is not the architect as hero anymore, this is architect as organizer and collaborator.

Caitlin Watson

We need to learn how to build solidarity with each other, but also with people outside of the design professions and work more closely with the people who are on the frontlines of a lot of the issues that we're facing right now.

Thomas Barrie

Before we can get to understanding problems and as well as formulating solutions to them, we need to find ways of defining our terms and assessing them. How do we go about doing that in a very complex world with interrelated issues, for example, with housing?

Thomas Beaudoin

There's a lot of research on how the deep motivations that get expressed in buildings, and that motivate architects, can be classified as spiritual motivations. But spirituality can either be marshaled in service of justice projects, or in service of injustice ones. Spiritualities can get marshaled for increased participation and partnership, or more exclusive forms of imagination and construction. But before we examine that in more detail, we need to ask, what do we mean when we talk about spirituality? There are many understandings of what spirituality is, and they are not simply and easily reconciled. Some people think of spirituality as having to do with adherence to a sacred center outside of oneself, a center of values, a transcendent vision or location, or maybe just something that is holy or worthy that exists beyond oneself. Others imagine spirituality as fidelity to what is sacred within oneself. And some imagine spirituality as having to do with the highest vision about what is worthy and dignified about being alive.

From my position as a theologian, it helps to work with a scratch definition that can honor all these diverse approaches to spirituality and still register the ambivalence about spirituality being able to marshal justice or injustice. The definition I often use is reckoning with claiming powers. Each of those definitions I mentioned are ways of reckoning with claiming powers regarding what matters. Some of those claiming powers might be understood in religious terms such as compassion, dignifying life, God, or the dignity of labor. But there are also other powers that end up claiming in a deep way architectural decisions, such as the powers of neoliberal capitalism, colonialism, colonization, and white supremacy, which are never that far from the positive powers that architects want to claim.

Thomas Barrie

So, you're saying we can understand spirituality, or the agency of spirituality, by defining our terms within contexts?

Thomas Beaudoin

Absolutely. Instead of fitting everyone into one mode of ultimate values, it's about being able to be clearer about the operative claiming powers. What are the aspirations of the architect and their community partners? What are the structuring forces that are also at play that might be influencing the architectural decision making?

Thomas Barrie

Is it related to ethics, or more importantly, ethical thinking, which traditionally is context bound?

Thomas Fisher

Yes, both justice and participation are fundamentally ethical questions. When you look at the history of ethics, you realize that we're constantly looking for what does justice mean today? How do we engage more people? How do we see the world from the point of view of others?

Ethics has looked at that in various ways. Virtue ethics, for example, asks, what does it mean to be honest and fair and just in our relationships with each other? And so, the architect has that responsibility not only to their clients, but to all the communities they serve. Social contract ethics asks, what's a good community? There is a responsibility to think about what is a just community, and how our actions benefit communities. In participatory processes we need to act with ethics in mind. Deontological or duty ethics claims that we should do the right thing regardless of its consequences on us. If we're participating in an unfair system that is harming other people, we have a responsibility as professionals to acknowledge that and not pretend we're not aware of the harm that we're doing. And finally, utilitarian, consequentialist ethics says to do the greatest good for the greatest number I would argue that means all of the people we're not serving; all the sentient beings; all the species we're harming. And when you begin to actually ask questions like this, you realize that the architectural community is ignoring the consequences of our actions. And so, this idea of justice and participation is fundamental to what it means to be an ethical practitioner.

Thomas Barrie

So, ethics, ethical thinking, and spiritually informed inquiry may not be the same thing, but they appear to occupy, if not parallel, somewhat intimate, intertwined worlds and we can recognize and understand them as relevant to our inquiry on justice and participation. Where else can we look? What else can help us take steps along the way?

Karla Britton

With respect to justice and participation, people are looking for alternative models beyond Western or Enlightenment traditions, looking beyond John Stuart Mills, Jeremy Bentham, and John Rawls. I think that one might start by looking outside of mainstream architectural education, the big schools and universities, where so much of architectural thought has been codified. I would suggest looking at historically black colleges and tribal colleges, places where people are very much immersed within their local communities and could thereby offer us alternative perspectives on the built environment.



Homeless camp, Eugene, Oregon

Thomas Barrie

So, it sounds like cultivating more inclusive realms of inquiry, certainly beyond what could be described as the canon of Western architecture, to benefit from traditions directly related or engaged in the built environment, such as native American architecture, which may have been well documented by some books and scholars but is far from being included in our dominant discourse. So how can we reclaim narratives like this? How can we expand and challenge the dominant taste cultures of architecture?

Thomas Fisher

There are two ways to answer that. One is by looking to other professions to see what they have done. For example, the medical profession gave birth to public health with the idea that we had to actually provide health to the whole population. I would argue that architects have a responsibility for sheltering the entire world's population. If we have homelessness, if we have people who are living in unsafe, unsanitary communities, we're not engaged in a fundamental responsibility that we have for sheltering people. There's also models from the legal profession, like legal aid, the idea of making services accessible to anybody whether they can pay for them or not. There's a whole structure in the legal profession that enables that to happen.

There's also parallels from our own history. For example, prior to Brunelleschi, prior to the idea of the modern architect, architects worked in guilds, which were interdisciplinary collaborations and cooperative communities that provided not only buildings but also food, health services, and a whole range of legal services to communities. And so, there's an example from earlier in the history of our field where we did organize ourselves differently. So, what would a high tech, 21st Century version of a guild cooperative structure look like for our profession?

Thomas Barrie

It sounds like today's dominant practices, which are more and more large multinational architectural practices, simply don't have the bandwidth or the organization to be able to address problems of this sort, the problems directly related to justice and participation – homelessness, economic discrimination, spatial and environmental injustices, and transportation disparities. Most firms aren't doing that kind of work. And so, it sounds like we need new models of practices, new approaches to how we practice as design professionals.

Bryan Bell

Certainly, the current state of practice has led us to our status quo situation. For us to change that, we need to be aspirational and think beyond current models. What I mean by aspirational is that architects need to challenge themselves to see how design can be part of addressing every challenge, every issue – housing, transportation, equity, and justice. We need to do projects and provide evidence that design is related to these issues. We become relevant when the public understands why they should care about what we can do. So, the burden is on us. But I'm thrilled to say that there's a lot of evidence, over the last 20 years we've gained a lot of momentum. Do we have a long way to go? Absolutely. One example is nonprofit architecture practices. Every nonprofit, in order to be approved by the IRS, has to have a mission, and some of their missions are incredibly aspirational, even utopian – they're not about form, but about change.



Memorial to Enslaved Laborers, University of Virginia, 2020 SEED Award

So, for example, the SEED certification program states that every person should be able to live in a socially, economically, and environmentally healthy community, and that we should design for the 98% without architects. These are aspirational big ideas and that's what we need. SEED positions design practices in a new way where their charge is to serve the public, which is also the purpose of a nonprofit, not to enrich partners or facilitate construction projects, but to actually make change.¹

Architects need to realize that buildings are not the ends, they are the means. We have to think about what change can happen through the process. I would assert that much of the change has nothing to do with the physical material of the building, but creating an equitable process. Who gets to sit at the design table and make decisions? Who gets to decide what the challenges are? Who gets to identify what the poetic character of the neighborhood is? The more people participate in the process, the more equity is created. So, it's not just the building itself, it's not the bricks and mortar, it's the process, the collaboration, establishing that confluence of interests where very diverse parties come together and create community; community being something that is shared.

Sergio Palleroni said that 90% of the impact of his buildings go beyond the bricks and mortar.² And so, when you think about the type of impacts we need to make, any building can have nine times the impact by addressing multiple stakeholders, interests, and parties. I think that's where we start to do more with less and establish how we can address some of these challenges. The public will care about architecture when we address the critical challenges in the world. Just like public health, we need to think about a new way of doing it rather than just the transactional model of current practice.

Thomas Beaudoin

What's interesting to me is how the arc of the conversation is going towards shifting the professional body mindset, the relationship to self and other that's part of the architectural habitus. And so, we as we know, architecture as a profession and its educational structures are not separate from other professions and educational structures, and we can all learn from each other. My own professional structure of theological education has been undergoing an analogous rethinking about our complicity in injustices, not just for decades, but for centuries. One thing we have learned in theological education is that we need to really rethink our origin stories. How did this whole profession begin? Who was included? Who was excluded? Who was centered? And who was made other from the very beginning? And how have those founding exclusivities been perpetuated in theological education right up to the present? That means not only getting a new story of the beginnings but telling a new narrative of the process of the profession, no longer from the primarily centered voices, but through the voices of those who have been othered and marginalized by the profession itself.

We're working on new intellectual ethics. For example, the American Academy of Religion, which is the primary professional organization for theologians and religious scholars, has a new set of responsible practices that are supposed to go into our research projects. One is foregrounding honesty in all of our projects, foregrounding just treatment of the participants and partners that actually do the work, foregrounding accountability to other professionals. In other words, making transparency and communality in the interest of justice the hallmark of the profession instead of just an option for those who want to be good in that way.

Caitlin Watson

I think we're really talking about new models for practice. The nonprofit model is certainly important and has already done a lot to change some things. And the cooperative model is still very active in the design disciplines. But I think we also need to acknowledge and be realistic about the fact that we are not going to turn away entirely from a for-profit practice model, especially within the next decade. So, we need a tool that will help us to transition out of that model. Unionization is actually one of the most important tools to achieve the collective action we're talking about. It provides a way for workers to begin claiming power over the conditions and the output of their labor, so that they can demand different things of practice – the types of projects that we're taking on and the ways we're approaching them. If those decisions come from the majority of architectural

workers instead of from the people who currently control practice, we could have a real bottom-up push for change within practice.

Thomas Barrie

So, in the context of justice and participation, you are reminding us about a significant component of the design professions, those who actually produce the projects, who are rarely in the conversation and have just now become part of this conversation. From your perspective, there's a reclaiming of power there.

Caitlin Watson

Unionization can also help open practice up to people who are currently excluded from it, because it will make for a more equitable practice in which workers have more control over the conditions of their labor. A major issue is that women and people of color often end up leaving the profession. Part of that is because of the toxic culture of practice. Through unionization we could really change that and have people from more diverse backgrounds who are able to contribute to developing this new vision of what architecture could be.

Thomas Barrie

Collective bargaining is participation. Addressing justice issues is making right the historic inequalities of the profession and creating a profession better positioned to address the wicked problems that we face. Traditional architectural firms are structured on the client-architect relationship: the client hires the architect to design the project and supplies the funding to build the building. But do non-profits and new models of practice actually help us to discover ways to expand or even completely subvert or invert those dominant practices?

Thomas Fisher

I think one of the interesting things about the pandemic was its profound impacts on the built environment. Historically that's true after every major pandemic. One of the outcomes is we have way more built space than we need. That's a kind of a paradox of the architecture profession and the neoliberal capitalist model, which is to just keep producing buildings when we already have too many.

We have ten times the amount of commercial space per capita than in Europe during a time when people are shopping online in massive amounts. And we have an incredible amount of office space at the very time that people are working more and more at home. And so, part of what the architectural profession needs to do is think about ourselves as strategists about space, that we don't only act when somebody commissions a building. What do we do with all of the excess space we have and how can we use that to also address other needs, like homelessness, climate change, or economic inequality? How can we also help clients utilize their space more efficiently? So, this in theory could be a win-win-win, and much more environmentally responsible and equitable.



Designing Justice + Designing Spaces, Mobile Refuge Room

Maybe we've built the last building we need to build for quite a while, which will not be a popular idea in the architectural community but may in fact be the reality.

Thomas Barrie

What we're finding is that some of these emerging nonprofit practices are specialized in many ways and clearly identify the areas in which they work. Diana Van Buren's nonprofit that she runs in Oakland, California focuses on the reform of the criminal justice system. The Mass Design Group had an initial and still ongoing focus on public health. Michael Murphy and his colleagues talk about how they have inverted the typical funding process. As a nonprofit they can actually raise the funds for the building while also being its designers, and thus are more in control of engaging the users in the process. The Butaro District Hospital in Rwanda is an example of not only creating the most appropriate healthcare facility for a part of the world that still has high rates of tuberculosis, but also creating job training for those who built the building.

An elephant in the room is the history of the profession as an exclusive profession, dominated by privileged, elite, white men. The AIA at its founding was only white, mostly New York men. It may have come a long way from then, but in terms of justice and participation we can certainly recognize that most of the profession is still dominated by white men who can afford to be architects. Do we have to find new models or create them out of whole cloth? Are there other places that we can look for models of long-term change?

Karla Britton

In terms of justice and participation, I want to offer the model of Indigenous design and planning from my colleague Ted Jojola. He talks about the seven generations model, an extended family that consists not only of oneself, but also those three generations that precede one as well as the three that come after.³ I think it's a different epistemological model than we're used to in the West. One's life experience includes getting to know and to be related to other members from the clan, from one's family, and that these intergenerational relationships then give credence to the collective notion that those who are yet unborn will somehow inherit a set of values that has already been learned or gained from elders.

I think that the cultural awareness that this kind of model builds requires a sense of indebtedness, that we are not our own masters, but heirs and stewards of the past as well as servants of those who are yet to come. It provides an epistemological shift if one begins to think about architectural practice, justice and participation in terms of this model.

Bryan Bell

If we think about a model based on public health, such as public interest design, I think Karla's example is a wonderful way of thinking about the broader picture of generations of the environment, of moving away from the cult of the individual, the star architect or the wealthy client. Tom (Fisher) mentioned a win-win-win before, and I think a good way to think about public interest design is how many wins can there be to actually be in the public interest. The name is very important – what is in the public interest? So, for future generations, for the environment, for animal species, the more wins you can have in my mind, the more successful and public the project is.

To move from a singular or dual model to this wonderful wisdom of the Navajos is a great way of reframing it. I think one of the benefits of this conversation that I am finding meaningful is that this is also a collective action. Collective action doesn't just happen in a project but can happen among networks and among ideas and cultures and opens up to a global scale of collaboration and collective action. I think that's really important because one of the things we're talking about here is, where does the power to make design decisions come from? At the moment, it's largely capital and physical resources that have power to make those decisions. So how do we come up with alternative powers? So as Caitlin was mentioning, this is the collective action of unionization. Collaboration is really intensifying a dispersed energy into a focused one, like a magnifying glass, actually like multiple magnifying glasses, concentrating on a specific goal.

I would also like to bring back into this wonderful conversation Tom Beaudoin's definitions and reckoning with claiming powers regarding what matters and the spirit of finding common ground and common purpose. And I think that describes what a lot of us are doing in our public design efforts. To me, this is one of the moments where these conversations overlap in a wonderful way. One of the wonderful things about it is that it's open to what matters; it's not a top down. This is an open framework, but we're all approaching it from the point of view of how to redirect, reframe, or change that power to accomplish what matters. I think that's one of the biggest changes we need to make right now, because the status quo isn't working. We need an alternative power system.

Thomas Fisher

Here we are at the edge of the Princeton campus with all of its neo-Gothic architecture, ironically built by wealthy capitalists in the 20th century. However, we forget that the Gothic of the Middle Ages was a very different kind of practice. Architects were part of guilds working hand-in-hand with contractors who were equally involved in the design. It was a collaborative process very tied to local resources where architecture was also an economic development strategy. It was about employing local skills, building up the skills of the local population, as well as having an environmental aspect. When the medieval universities were built, they planted a forest to provide the wood for the future replication of the buildings, the timber framing, windows, and so forth. There was a sense, which existed for almost a thousand years in Western society, of architects working much more collaboratively, building in an interdisciplinary, community based, environmentally responsible way. And so, as we talk about the need to do that, we actually have a model from our own history that I would argue we need to reexamine.

Thomas Beaudoin

I'd like to pick up on what Karla, Bryan and Tom (Fisher) have said, in terms of what attention to the entanglement of architectural practice in spiritualities might illuminate about the arc of this conversation, because I think refining our attention to the spiritualities operative in architectural practice problematizes what counts as the project itself. So, when we get away from thinking about the project as the job to accomplish, the building to be made, the space to be sculpted, the project can become an intervention in the larger powers in which we must live together. So, there's the communal, the global project, the human and the interspecies project, of which the particular building project is a subset. And it's only by including an analysis of the spiritualities at work that we can get an appreciation of the relationship between the penultimate project and the ultimate project. And Tom (Fisher), I was fascinated that you said maybe we don't need to build any more buildings, at least for the time being, which seems like an anti-architectural desideratum. I'm not saying it is but I'm actually very interested in the freedom it suggests.

So where does that freedom come from? In my own profession, we have an analogous development. For a long time we trained people to be ministers and to be professors in the study of religion. And for a long time we were promoting the idea of being religious, of religiousness as a natural good. And now what's happened in the last 20 years is many of us are rethinking that and saying maybe that's no longer what we should be promoting because it doesn't work for everyone in all situations. In the Jesuit theological tradition, in which I've been trained, Ignatian Spirituality is the capacity to gain freedom over what you presumed was most valuable. It's called spiritual indifference, and there are practices to cultivate it so you no longer become automatically invested in what your profession tells you to promote.

Thomas Barrie

So, it's less of an indoctrination and more of an invitation for students and schools of theology to find their own place, which certainly seems to fit with issues such as inclusion.

So, we've talked about practices that engage broader realms of inquiry to address our most vexing problems, we've talked about how practice itself can be reformed to be more aligned with issues of justice and participation. Where do we go next?

Caitlin Watson

I'd like to return to one of the things that Tom (Beaudoin) said earlier about claiming powers and claiming the power that white supremacy has had over our discipline and repositioning that narrative. It's important to acknowledge that we are a panel of white folks to understand the positions we're coming from as we move into what we do next. It can't be one of deference. We can't push the work of making this change off to the few people of color who are in the design professions right now. This has to be something that we do in solidarity with folks who are in the design disciplines, but also in solidarity with communities of color who have not had access to it yet. So, this work of changing the narrative really needs to be something that we are actively undertaking and in solidarity with these groups.

Bryan Bell

It's a eureka moment for me to consider, what if there was no building? If you think about Sergio Palleroni's statement that 90% of a project's benefits are beyond the building, well, what if you could remove the building and have that 90%? So, the meaning is beyond the material object. This is almost leaving behind what we think of as architecture, which is the buildings, and focusing on other actions and benefits.

Thomas Fisher

This is part of design, or the design of communities, the design of all of the programmatic activities in buildings, which we assume is for the client. Communities are also designed. How is the building just one piece of this continuum of human interaction and engagement, and how might we be participants in helping a just and equitable outcome?

Thomas Barrie

So, we've been focusing on the design professions, particularly the architectural profession, but what about design education? Certainly, in architectural education students are still, for the most part, traditionally educated to design buildings. What does this mean for architectural education?

Thomas Fisher

I call it the epistemological turn, which is a highfalutin way to say that we need to pay much more attention to our thought processes than on judging ourselves by some outcome. Because, right now, in architectural education you're judged entirely by your building. And yet in a world that probably has plenty of buildings, maybe all the buildings we need for a while, that's not a sustainable strategy for an educational outcome.

Meanwhile, the world is full of dysfunctional, inequitable, and unjust systems that are all in need of design thinking and design methods. And so, to me, the turn is to recognize that it is our way of thinking and working that is the real value. Buildings are one outcome, but maybe in the future only a relatively small part of what we end up doing, because there is great demand for the way we work and think in imagining a better future.



Collaborative Design Workshop, NC State University

We're essentially practical futurists, we think about what are the steps that can get us to alternative futures. And our ability to help visualize and vision that, and have very concrete ways to get there, is a very valuable set of skills that is underappreciated within our own field.

Thomas Barrie

So, is this about pedagogy? What we teach and value in the education of future design professionals? But what about the role of the university itself? Bryan, you've been instrumental in the creation of public interest design, and you now teach at North Carolina State University where you head a post professional degree and a concentration in public interest design. What's the role of what we tend to call the engaged university?

Bryan Bell

If we start with this idea that contributions may, or may not, involve creating a building, to me it is then about how best to use the creative ability of our profession. So how do we reach that? How do we become more relevant? How do we maximize our creative ability? One of the approaches I've learned about working with community is to talk with the community about their qualities, what they love about the community, what they have, what the poetry is, what the traditions are. Those are their assets. Then talk about their challenges, but not framing them as problems. That's a conversation that starts the process.

Designers bring to a community the ability of imagination, of creative vision. So, you said this was your challenge, well, would this building have anything to do with that? Could this building address that challenge or not? And here's seven other options. So just the ability to quickly iterate, listen, and regenerate, applies a wonderful skill set. But it is also unifying. The advantage of renderings of buildings is that they become physical manifestations not just of solutions, but of our collective efforts.

A community in New Orleans invited us to do a bus shelter after Katrina. They said, we don't really care about the bus shelter, we just want something built because nothing's happened after all these meetings, and they knew we could build a bus shelter in the summer. So, it was really interesting that it wasn't about the bus shelter itself, although that worked out well, it was about visioning, of actually realizing physical change that hopefully could represent much bigger changes.

One of the things I try and do with my students is get them out of the classroom and have them learn to talk to non-designers. I say, don't talk design, talk to them about themselves and their community. Your job is to understand what might be a design challenge or not. Then if you have an idea about a design solution you have to go back and ask stakeholders, ask people who would be impacted by that idea, to determine whether it's a good idea or not.

So, this participation and collaboration is a skill that I think people need to learn during their education. I had none of that. I never talked to a client throughout my education. I was just handed a program on a piece of paper. I think that participation, collaboration, talking to strangers, is very intimidating to students. What touches my heart the most is how much they end up enjoying it and having wonderful conversations with people, with non-designers, and find out amazing things about their unique communities.

In one project we teamed up with a fire station because the community trusted fireman and we were trying to address community health issues, such as getting free screenings and other services people were not getting because they didn't trust the health system. We met with the fire chief who pulled out a drawing of a new fire station. It wasn't to scale or anything, and clearly, he was in need of some design. We said, we'll work with you on a better firehouse, but would you also be willing to facilitate mobile clinics, or tele-psychiatry, or private consultation rooms here? How would you guys like a gym? Would you be willing to have the public access that gym? So, it became this win-win-win by relying on their assets, which was trust and 24-hour staffing. We had a conversation and found an ideal partner. So, I think that's critical in the education process.

Thomas Barrie

So working with populations that are directly affected regarding issues of justice and participation and the built environment reminds me of parallels in theology, such as liberation theology, engaged Buddhism, and contextual theology.

Thomas Beaudoin

Many of these religious movements, spiritual movements of the last century, increasingly found also in academic research, are focused on what Bryan is talking about, where the goal of the profession is serving the public good, which is understood as collaboratively and reciprocally derived, not imposed. I would connect that to what Tom (Fisher) described as practical futurism which is analogous to what theological studies calls practical theology. Practical theology says that theology should begin in the community, not in the mind of the theologian, but in the community, by asking what's happening, why is it happening, what should be happening, and what needs to happen next? That's a very practical approach to making theology more likely to be a public good.

We see some examples of that in the engaged spiritualities of the 20th century. I'll just mention two briefly. One is engaged Buddhism innovated by Thích Nhất Hạnh in Vietnam and inspired by humanistic Buddhism from China. Thích Nhất Hạnh was trying to encourage in his community a way of connecting the goods of meditation to the goods of the environment, the goods of meditation to the goods of women, to operationalize compassion as a political program. Something analogous happens in liberation theology, which began in Latin America and now is a global movement in Catholicism and Christianity where scriptures are read in such a way that bear on the contextually defined pressing problems of the community. So, in other words, these are examples of spirituality that is intentionally directed toward justice instead of misdirected toward injustice.

Karla Britton

So, if I understand correctly, what Bryan and Tom (Beaudoin) are saying is that it's in the community where the possibility of architecture's ethical influence is placed, and the more architecture embodies and at the same time is constrained by the fecundity and limitations of the community, the more potential it has to serve a need larger than its own self perpetuation. It seems to me that the power of the architect lies in the local and in the micro-cosm, rather than in more global systems.

Bryan Bell

I would only disagree to say that what works effectively locally, can also be a global system. For me, a fundamental question should be – Do you need a building or not for this? As we've pointed out, that's just a small part of what we can do.

Caitlin Watson

I would argue that a piece of architecture has less to contribute in this space than the power that we have as workers. And there's some really important examples in the labor movement of how we can help to fight for



Thích Nhất Hạnh

systemic change at the local level and beyond. The Chicago Teachers Union has been using a contract called Bargaining for the Common Good. As teachers they recognize that their working conditions are bound up in their students' wellbeing. And so, in their bargaining agreements, they've been including demands like reduced class sizes, funding for the arts, sanctuary school protections for students, and access to affordable housing, because they realized that these are the things that ultimately determine whether or not their students have the ability to come in and learn. By doing that, they've been able to work together with communities and community organizations that are also making these demands. They're supporting them, but those communities are in turn supporting the union when they go on strike to fight for change. So, we really start to see how we could exert our power as workers. Imagine if there's a union of architects in Chicago who could join in on the call for access to affordable housing as something that's essential. So, there's really a lot that we could do to enact some of these larger changes if we leveraged our power collectively as workers.

Thomas Barrie

So, it sounds like this is another area of how we can productively affect change or create brand new models regarding justice and participation in the built environment, and that's advocacy. In your example, Caitlin, it sounds like advocacy with some teeth. They've got power, they've got the power of numbers. Can we talk a little bit about advocacy within the design professions? Where is it most effective and how do we do it?

Caitlin Watson

Right now, our main advocacy body is the AIA. For as much good as it does, it's also highly subservient to the corporate, neoliberal model of contemporary practice and represents the priorities and the concerns of firm ownership. We don't really have many organizations representing all of the architects in the United States from the position of workers. We have groups like Architects, Designers and Planners for Social Responsibility who have been advocating for reform around spaces for incarceration for a long time. We have groups like the Planners Network who are advocating for reforms in planning, and we have groups like the Architecture Lobby who are working on building worker power. But I think that we need some kind of a scalable parallel to what the AIA is doing if we're going to be able to make meaningful change that's really from the bottom up.

Thomas Fisher

The irony of the AIA is that it does have a lot of members who are workers, but has this tilt toward the owners. The AIA needs to acknowledge the fact that within its ranks it has a lot of inequities. I think it is changing and recognizing some of that, but because they more represent owners there's a crisis of growing a more diverse organization. I also think that professional organizations need to find ways to talk about these broader issues. For example, we've talked about zoning. Zoning is a political act, a local act, where architects have a lot to offer but are amazingly silent about it. Others accept zoning as a given as opposed to making the argument that built into zoning is all kinds of inequities – segregation of communities, unfair prices of housing depending on old redlining strategies where the same house can be worth double in one zip code versus another in the same city. Zoning reinforces power, precludes participation, and creates a lot of injustice. So how do we, even at the local level, get



Chicago Teachers Union

active and raise questions about those policies? There are many things we can do individually as well as organizations like the AIA.

Thomas Barrie

So, we have we've covered a lot of territory. We've recognized some of the vexing, pressing problems directly related to the built environment when it comes to issues of justice and participation with the goal of creating a more just, inclusive, and equitable world in ways that are germane to the design professions. And, in doing so, we've talked about how to expand the profession and the types of services we provide, even with the provocative statement that maybe we don't need any more buildings. As part of that we have, at least briefly, shined the spotlight on the historic inequities of the professions, particularly the architectural profession. We then turned to the important areas of professional education, recognizing that what we train our students to do, what we educate them about, is directly related to how practices operate. Then lastly, we broadened the lens even more by saying, yes, act locally, but think globally, to get that expression on the table. We have roles to play when it comes to justice and participation – advocacy roles, political roles – that that have not been central to the architectural profession but have always been part of it, at least since the 1960s.

That brings us to some concluding remarks about what's next. What do we need to do to get to the point where we can start formulating clear plans with clear outcomes?

Thomas Fisher

Well, one of the things I also really value about this conversation is having Tom (Beaudoin) here from theology because I think one of the next steps is strong interdisciplinary conversations around these issues. We as a discipline have a lot to learn from theologians, philosophers, and other disciplines. We also have a lot to learn from indigenous communities. And so, the more we can have these kinds of conversations is an important next step for us.

Bryan Bell

It's the collaborative model, it's the coalition building, it's the learning from each other. The learning moments that have happened for me here have been very valuable for rethinking how to do a better job in public interest design. Also, to think about what ethics means and the roles ethics can play. There's so much value in collaboration. I wouldn't necessarily say act locally, think globally, but instead act locally, and if that works then scale it up.

A lot of what's happening right now is people are out there in the trenches figuring out what we need to do and what works. It's a very creative, entrepreneurial time. One of the things we can do in our positions is connect people. I love to promote public interest design successes. People say architects have always wanted to create social change, which I absolutely think is true, but there are three differences. First of all, we're not taking a top-down approach. I think that's been the failure in the past. We're realizing that our relevance has to be framed by the communities we work with. The second is thinking of public interest design as a career. I've done this work for 30 years and only knew what to call it when Tom (Fisher) came up with the term public interest design. I was very happy to know what to call my work. Howard Gardner, from the Harvard School of Education, has said that to be a profession is to profess a mission. Public interest design is a profession with the aspirational mission of justice for all. The third is the evidence of processes, methods, and projects that have happened over the last 20 years. The Rural Studio encouraged me to say – they've done it, they've done beautiful design for people who really needed it. Try and stop me now.

Karla Britton

I think looking for alternative voices and alternative perspectives. I mentioned the great resources one can find in the historically black colleges and tribal colleges in the United States. There, individuals who are deeply embedded in their communities can offer alternative models for how the built environment might work. Often architecture in tribal communities is associated with forced assimilation, whether that's churches, Spanish missions, or boarding schools. Instead, people like Rina Swentzell, who was very well known in New Mexico as a voice for the concepts of the pueblo in planning and design, talked about how building for the Pueblo people was traditionally

a way of strengthening bonds within the community. There are other places to look for alternate voices to fill the gaps in education and the professions.

Thomas Beaudoin

Because the harms in which architecture has been entangled are not only architecture's harms, they're harms that have also been perpetrated by other professions, the solutions cannot be architecture's alone. There's a need for the interdisciplinary conversation that has been raised here. There's a need for centering the claiming power of labor, as has been raised many times. And there is, most importantly, as you're saying Karla, intentionally centering invisibilized persons and communities in telling the story of architecture and charting the future of the profession. But also, to go back to something Caitlin said, it entails white professionals coming to terms with the whiteness of the profession and asking where that conversation is in architectural education right now. So, I think there's work to do on developing new professional narratives with these broader understandings of interlocutors, understanding better how the profession itself has changed in the past and how it might change in the future. Learning from ethical review processes across different professions, and then to come back to how we began servicing the spiritualities that are actually functioning in architectural practice.

Caitlin Watson

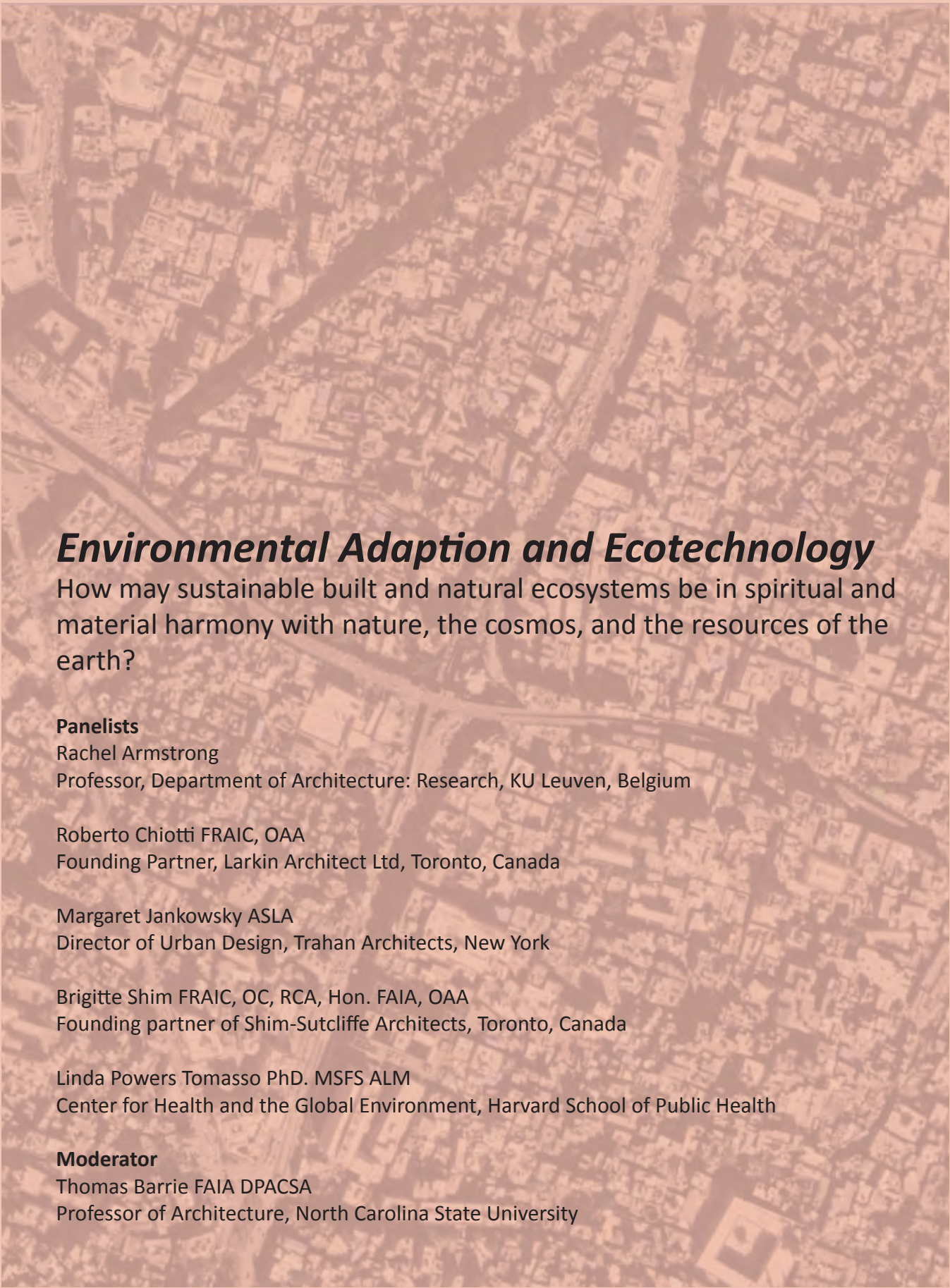
We need a larger plan to address the magnitude of the crises we're facing, a plan for a shared vision of the future that can build collective support and investment. I think that shared vision has to be something that happens through conversations that are interdisciplinary, that cross professional and professionalized circles, and include many voices. Without having that shared vision we're going to continue falling into the trap of incremental change and never take a series of steps that build on each other to create something that enough people want to make happen together. Lastly, there's a lot of this happening already, and a lot of examples and research that's been happening within and outside the design professions. We need to find better ways to share that information and build networks of collectivity because we need to change really quickly. And it's very big change.

Endnotes

1. The SEED Network certifies projects according to social, economic, and environmental design criteria.
2. Sergio Palleroni is a professor of architecture at Portland State University where he directs the Center for Public Interest Design.
3. This is an adaption of the Iroquois Seventh Generation Principle that all actions should consider the seven generations that follow.



Taos Pueblo

An aerial photograph of a city, likely New York City, showing a dense grid of buildings and streets. A river, possibly the Hudson River, flows through the city from the top left towards the bottom right. The image is overlaid with a semi-transparent orange filter.

Environmental Adaption and Ecotechnology

How may sustainable built and natural ecosystems be in spiritual and material harmony with nature, the cosmos, and the resources of the earth?

Panelists

Rachel Armstrong

Professor, Department of Architecture: Research, KU Leuven, Belgium

Roberto Chiotti FRAIC, OAA

Founding Partner, Larkin Architect Ltd, Toronto, Canada

Margaret Jankowsky ASLA

Director of Urban Design, Trahan Architects, New York

Brigitte Shim FRAIC, OC, RCA, Hon. FAIA, OAA

Founding partner of Shim-Sutcliffe Architects, Toronto, Canada

Linda Powers Tomasso PhD. MSFS ALM

Center for Health and the Global Environment, Harvard School of Public Health

Moderator

Thomas Barrie FAIA DPACSA

Professor of Architecture, North Carolina State University

Thomas Barrie

Let's start with sustainability. Sustainability is a ubiquitous word that means many things to many people. How can we redefine, re-envision what we mean by sustainability?

Roberto Chiotti

The problem with the current discourse around sustainability is that it remains grounded in the current dysfunctional Western worldview that's characterized by destructive patterns of production and consumption, and that's focused on making small incremental improvements to current outmoded methods and technologies that inevitably enable us to defer indefinitely the transformational change required to bring about a viable human future that's actually worth living. Although that conversation is now beginning to shift in some circles as we approach the deadline for achieving the goals of net positive energy and zero carbon buildings established by the AIA and, in Canada, the RAIC, I contend that the ways of achieving these goals seems to remain transfixed by the default premise that solutions can only come from technology itself.

I would suggest that we need to relinquish this mantra and quickly acknowledge that adequate solutions to the ecological crisis can only emerge if we allow ourselves to expand our empathetic horizon from one that is ego-centric or anthropocentric towards one that is bio-centric or earth-centric. In other words, we must immediately forfeit human exceptionalism as an apriori value in favor of an eco-centric perspective that, according to cultural historian Thomas Berry, recognizes the earth's needs as primary and those of the human community as derivative.

Margaret Jankowski

To achieve this viable future, as you mentioned, not only do we need to reprioritize the earth itself, but we need to pair that with an understanding of the lived experiences of the people who have been most affected by the environmental injustices that we've perpetuated in the past and continue to enact in the design and planning professions. And I think that underlying the fundamental change you propose is a second one, which requires us to prioritize our collective health and collective continuity over the individual.

Brigitte Shim

As architects, landscape architects, urban designers, our efforts related to sustainability at this point in time, photovoltaic panels, green roofs, and so forth, are just not enough. We need to reimagine our built environment as an active exchange with its immediate surroundings. Buildings need to operate as a piece of community infrastructure, to give back as opposed to always taking. And I think unless we actually think in these different terms, we actually won't make enough headway to make a difference.

Rachel Armstrong

I want to go back to Roberto's statement because I would not throw out the roles technology can play. While I don't see technology as a techno fix, the development of new technologies since the scientific revolution has provided us perspectives that have stretched both our experiences and our imaginations across multiple scales. We can now see subatomic activity or conceive of the universe right back to the origins of our world. So, I think technology can help us see in different ways, which is really important when we're thinking about new models for ecological living.



Earth Rise, Apollo 8

Linda Powers Tomasso

Margaret, you used the word collective a couple of times. This is a very visible and evident shift for a society that even commodifies people and where the focus on the individual separates us from this collectivity. We are also separated from contact with nature. Nature reminds us of our own humility, whether we're standing before a sunset or a canyon we can't help but feel positively diminished and that our sense of importance in the world doesn't revolve just around us.

We've forgotten the collectivity, the common good, and this is evident in the loss of a middle ground in our society. The idea of being able to meet in the middle, whether it's political discourse, science, or an economic middle class, is being eviscerated. Garrett Hardin in, *The Tragedy of the Commons*, foresaw this, and in a certain way heralded unsustainability.¹ If what is common and good erodes to an individual periphery, we lose that common ground that sustains everybody, and that common ground is the earth. We need to return to this middle ground so we can look from the middle toward the edge, not the edge toward a disappeared middle.

Margaret Jankowski

This idea of scale and changing our thinking so that we collectively understand big, long-term perspectives, and also very detailed minutia, is what we need to get to a viable future.

Rachel Armstrong

Changing our thinking is really difficult. While scientific insights and ways of seeing have offered glimpses of possibility, we're trapped in a very particular framework that has been culturally, technologically, and politically endorsed. One of the significant things that the enlightenment did was to rupture life from matter. It cleaved the soul or spirit and spirituality from the material realm, giving us very little agency to intervene or make a difference. It also created the classical frameworks that sorted and ordered the world.

"God's accountant," Carl Linnaeus, gave us permission to use the world's goods for our own ends. In the 19th century, vitalism positioned biology and the life world as just a more complex expression of chemistry. At the start of the 20th century physics discovered quantum mechanics and how weird matter actually is. Later in the 20th century, there is an amazing discourse between biochemistry, metabolism, and lifeforms. We now understand the mineral world of rocks and other things as not inert but catalytic and life promoting. Towards the middle of the 20th century we have the rise of molecular biology with new insights into the nature of life itself, and by its end the age of biotechnology. In the 21st century biology has technological potential, blurring the distinction between nature, technology, and the living world.

Thomas Barrie

So, is this scientists such as yourself challenging science?

Rachel Armstrong

I think we need to be in that space right now. We don't yet have the insights to bring these worlds together. We need new stories. We need design in this space. We need architects in this space to spatialize some of these concepts because they don't just exist in rarefied laboratories. New insights need to be brought into the living world, communities, and cities so that we can transform the way we live. It cannot remain a theory, or an abstract concept.

Brigitte Shim

What's been so amazing about these conversations is that we've gone from the scale of the microbial to the universe in order to conceptualize the major changes that are needed, that are so pressing and urgent in relation to climate change. I would also say that our professional definitions of what is an architect, what is a landscape architect, what is an urban designer, need to be redefined. All of us need to be activists and community organizers. We need to think about ways to engage with nonprofit groups, design panels, improvement agencies, and research universities to create powerful coalitions that can bring about real change from the bottom up. The traditional client-architect, or client-landscape architect relationship is maybe still there, but there's a whole set

of other conditions and dynamics that are needed for change to happen.

Thomas Barrie

I think we recognize how much our present conditions, our present situation, is really a result of the history of the West, in particular, the hegemonic of Western-centric views. Tim Jackson has insisted that our preoccupation with growth, especially economic growth, is at the core of our inability to envision more sustainable models. In other words, there's a big difference between growth and prosperity. Prosperity, in his definition is an inclusive term where everyone is prospering, not just those who are at the pinnacle of the economic pyramid.² So, what does that mean? Do we need to challenge neoliberal and consumptive economies, as well?

Rachel Armstrong

We need regenerative thinking, because what is missing from these models of growth is the natural cycles of decay and decline, which we view negatively. We have concepts like waste, goods that we cannot use and have no value. That concept doesn't exist in nature. Nature works by taking down and reconstructing the cycles of things. We really need to learn from these cyclical systems and value them differently so that we can think of economies not as perpetual growth, but as forms of transformations. We need to reorder our priorities.

Linda Powers Tomasso

I absolutely agree Rachel. In nature there's no such thing as waste. Everything is regenerated, recycled, reprocessed, and repurposed in order to create new life. In Western models of economics and growth, we do not account for the externalities of our economic processes. Pollution, wastewater, and other by-products are not accounted for in the cost of goods and services yet pass into the economy as clean-up costs. It's like the lack of preventative medicine and deferring care until there is a medical emergency.

Roberto Chiotti

From my perspective, this means reimagining cities, which actually require and expend a lot of resources – natural resources, energy resources, and human resources – and reimagine them as providing more resources than they consume. To do that we need to model our urban environments according to the way ecosystems work. Can we reimagine the distribution of goods and services more like nutrients and waste, as Rachel suggests, which evolve, interact, or exchange with each other within a healthy diverse ecosystem?

Thomas Barrie

There seems to be surplus of inertia and a deficit of creative thinking. There's a lot of talk about sustainability, but quite timid approaches and an inability to revision the problem at hand. The concept of waste is a perfect example. The concept of waste should be eliminated according to William McDonough and Michael Braungart in *The Hanover Principles*. Not rethink it, not redefine it, but eliminate it.

Rachel Armstrong

If we go back to new perspectives that life, technology, and nature are starting to converge, then we can actually think of platforms that can help us do this, instead of using the same methods again and again. In nature



Singapore

microbes are masters of metabolism, of repurposing space and environment. To a microbe, environment is everything because it has technologies inside itself that allow it to set up a persistent relationship with the spaces that it's in. What's interesting about the microbial platform is that they're everywhere, they are a commons. We're starting to develop insights into how we can use microbes as technologies that allow us to transform our waste and turn it into resources like clean water, biomass, high quality or high value nutrients, even antibiotics. We're only at the very start of this process, even though this is not a newfangled technology. The practices of composting and making soils is an ancient practice. What we are doing is adding new layers through which we can relate to these anabolic processes and think of new ways of socializing, sharing, and empowering them through the presence of a regenerative platform.

Thomas Barrie

Tim Jackson also said that we've been very successful materially, but our material success has led to a spiritual and moral bankruptcy. Rachel, I really appreciate your bringing to this conversation the microbial world. I hear you questioning the microbes, asking the innate intelligence of the microbial world, What can we do? To me, it offers one way of what I would call the way out. But what are some other ways out of our current crisis? Spiritually informed perspectives are central to these conversations. What spiritual perspectives, orientations, or reorientations, can help us to find the way out?

Brigitte Shim

Our firm designed several sacred spaces for several different religions –Judaism, Catholicism, Daoism, and First Nations Gathering. There was one common element in each of these very different projects, all wanted their place of worship to be open to nature. So, no matter what faith, there was a need and a desire to link sacred spaces to nature, to be able to come together as a community to reconnect with the sense of awe and wonder of the universe. It is a way of continually recontextualizing their faith. So, while the exploration of the microbe is critical, I feel like this is also an important dimension that we can't forget. Gathering together next to nature, being able to observe it, may be a longstanding role of the sacred space, but still needs to be reaffirmed and brought to our current condition.

Linda Powers Tomasso

Bridget, it sounds like the communities for whom you're designing these sacred spaces have the wisdom to listen to nature. That's something that indigenous peoples and the wisdom traditions of ancient faiths and sacred communities have always recognized and respected. They believe that nature is symbiotic with the human soul, a concept that we are so distant from. As we urbanize, except for remnant parcels here and there, or some type of aesthetic coverage for a building, the wildness, the creativity that is intrinsic in creation, has been distanced from our souls.



Wong Dai Sin Temple, Toronto, Shim Sutcliffe Architects

We have so much to listen to and learn from nature. Scientific research has discovered that when human beings are exposed to nature they have heightened attention and cognitive retention. We also become more compassionate, empathetic, and philanthropic. Children become more creative in their play and in socialization. If we lose what is good for the human character and retreat into a scientific, secular existence, we are certainly not headed on a correct path.

Roberto Chiotti

I agree Linda. What you're describing is expanding our empathetic horizon beyond the human and appreciating the intrinsic value of all living and non-living entities that we share this planet with, as opposed to appreciating them only for their instrumental or aesthetic value. Being in a relationship with nature is not always about a beautiful environment, but is stopping and being silent enough in order to appreciate and hear the voices of the earth tell their story and inform us how we need to restore right relationships with it.

Margaret Jankowski

I love that you brought up relationships. For me, a relationship with nature implies a foundational understanding and respect for nature, but also mutuality – nurture it as it nurtures us. That implies a societal re-emphasis on stewardship, thinking of ourselves as communities of people in community with nature, and asking ourselves, How do we steward our world and our cities? How do we care for ourselves and our environment? How do we cultivate life and the future? I think those values are very spiritual and can inform our everyday lives and guide us as designers.

Rachel Armstrong

In design that means creating inviting spaces for the natural world, understanding not what we want it to do, but to try to reach nature on its own terms through the scientific insights that the late 20th century and early 21st century have provided. Working with nature on its own terms, but also giving back, investing in that invitation consciously with an ethics and a quality of diplomacy that is not just about our needs, but creates space for active conversation.

Thomas Barrie

What I'm hearing is humility, a recultivating, a reclaiming of an innate human capacity for humility. The asking, the receptivity to learning from new sources, from a recognition of our relationship to our home, the earth. Spirituality, of course, is part of organized religions in the world. But it is also distinguished as trans-religious or trans-denominational and is deliberately inclusive in its approach to belief systems and ethical behavior. Some



Sisters of St. Joseph, Toronto, Shim Surcliffe Architects

have talked about recalibrating our relationship to nature as simply rediscovering the beauty that we find in our environment, of which we are a part. From the love, the biophilia of our world, emerges a sense of care. We can only care for what we know and have a relationship with. So, what are some of the ways that we might be able to expand on that?

Brigitte Shim

New forms of exchange and reciprocity are essential to defining a renewed relationship to nature. We worked with a group of Catholic nuns who wanted their new home to not just accommodate a program of X number of rooms, but to speak about who they are and what they value when they are no longer here. They wanted the greenest building they could afford. As architects, we helped them to make their values visible by realizing not only their spatial aspirations, but their spiritual aspirations and environmental agenda, and to also balance this with their requirements for fiscal responsibility.

This goes beyond the definition of what an architect is supposed to do. You're having to consider – How does a building actually express certain ethical values, and make those values visible to a whole group of people who have never met and engaged with these women, but through their building, their home, they actually understand, in effect, a set of beliefs that are embedded in who they are? So, an interesting and important question that needs to be asked of all our buildings, whether it's a school, a community center, or a house is, does it express what we value in a profound way through its physical presence?

Thomas Barrie

Sounds like in your practice the conventional client-architect relationship really dissolves in terms of expanding the design roles that you and your teams see, and the success of a project is not just serving the needs of the client but of contributing to the common good. Certainly, sustainable practices fall within that realm. We may provide a landscape design, a building, an urban planning document that satisfies those who hired us to do it, but really aim well beyond that so that we're exercising our ethical role to do the most good for the most. It's reclaiming our responsibility to do good.

Rachel Armstrong

I think we need to ask who our community is, because if we want ecological partners, we need an ethics that goes beyond the human to the more-than-human realm. So when we design something, who do we design for? If we are designing because we would like to increase flowers and trees and birds, then we need to think through the spaces that enable the communities to thrive. A more-than-human ethics, design, and sensibility is needed, and that becomes very interesting because we need to consider what is it that we are sharing together, where is the commons in this space and how do we organize ourselves around our values and desires that we want to share together.

Thomas Barrie

This seems like such an essential perspective. Thomas Berry talked about the repositioning of our viewpoints so that we see ourselves as expressions of nature, not observers of it. So, I'd like to hear more about what we can



Saint Gabriel's Church, Toronto, Larkin Architect

with humility, with love, with empathy, learn from what we conventionally call the natural world, but is really the world of which we are an intrinsic part.

Roberto Chiotti

I would like to return to what Bridget was saying, because what I'm hearing is we need to reframe or re-imagine traditional building typology. So, for example, our firm designed a worship space that embodied the eco-theology of Tom Berry and in doing so, we had to really rethink every design decision from first principles, to acknowledge that when we gather to worship we're doing so within the greater context of creation.

Unlike traditional Christian worship spaces that are focused and oriented towards the vertical realm or the *axis mundi* through the tower that allows the heavenly realm to come down and make sacred the earthly realm, St. Gabriel's church has relinquished that in favor of a horizontal orientation. There is a full width, full height, south-facing wall that overlooks the garden. The entire seating arrangement is focused on the natural world to remind us that the natural world is indeed the primary revelatory experience of the divine. The building also invites the sun to come into its spaces and serve as its interior decorator, as you will. The raw concrete walls of the worship space serve as a neutral canvas for this colorful display of light that is filtered through stained glass designed by glass artist David Pearl. It also reminds us to not only participate and embrace the liturgy, but of cosmic time, because the colors move down the walls at the rate at which the earth is rotating on its axis.

Linda Powers Tomasso

Roberto, you've described a building that inspires awe and wonder, and your very rich and detailed description made me feel it right here around the table. One of nature's great magical powers is inspiring awe and wonder. But if we remove it from its spiritual context we will be distanced from the awe and wonder you just described. In an age of religious disaffection people are not finding awe and wonder in sacred spaces and they're also not finding it in the remnants of urban nature. Perhaps just as architects need to shed building typologies according to function and how it should serve its users, we need to do the same with urban nature. Many urban green spaces are uni-functional. They're a softball field or a cemetery, or something that can't inspire that sense of, wow, here's an opportunity for creative play, here's an opportunity to discover some of the spiritual intricacies that are the hand of creation.

Margaret Jankowski

I think you're speaking directly about integrating nature into the public realm and thinking of the city's public realm as a foundation of the city. Not only can nature provide performative benefits of stormwater management, improving air quality, reducing pollution, providing access to recreation and mental health benefits, but just seeing and hearing leaves, light, sun, and birds has tremendous value.

But it also is critical to think of those spaces as cultural spaces. For me, part of sustainable cities is not only environmental sustainability, but cultural and social sustainability where communities can thrive and persist with access to meaningful, significant nature that is connected, multi-functional, and paired with transportation and other kinds of infrastructure. This can improve the quality of life for people and the function of our cities. But we can't do that with the mindsets that we've been designing cities with over the past many centuries. The reality of American cities is that they've been planned, designed, and managed by a small subset of people who do not share the experiences of the broader public.

Brigitte, you mentioned coalition building, which is so critical to charting a new path. We need to really welcome to the table diverse voices, to honor and understand the wisdom of indigenous cultures, the wisdom of minority cultures that have managed to persist despite severe disinvestment and discrimination, and to find a way to restructure the design processes to give true power and meaningful agency to the public.

Rachel Armstrong

Maybe a material way we could do that is by considering the microbial landscape. We could imagine spaces like playgrounds at many different levels including activating them like Linda was talking about. For example, The

Dirty Playground is a project proposal for the Bio-design Challenge.³ The idea is that urban soils are depleted of what is known as the microbiome. This is essentially ecologies of ground making microbes that make the soil and are specific for different places. We know that there are healthy microbiomes, ones that strengthen our immune systems and help us deal with things like pollution or allergies. In The Dirty Playground, depleted urban soils are replaced with native forest litter, which is much better for children's immune systems. The idea is not just thinking about the visual and experiential benefits of nature, but also the physical qualities and how healthy natural systems, using new technologies and given space and care in our cities, can create biologically diverse spaces.

Margaret Jankowski

I think there's something amazing about the idea of living soil that's not dirt, or dust, but is a whole ecosystem with living microbes. The foundation of healthy landscapes is thriving soil. And I love that you also mentioned that the microbiome is specific to each location, that there may be subtle or even big variations in soils. The hope is to build a varied public realm specific to their location speaking in conversation with the microbiome instead some generic green space.

Rachel Armstrong

I think it has a potential to build resilience from the bottom up. We seem to want the veneer of resilience by putting green things in place rather than cultivating the processes that enable a kind of material change to be curated or invited into the spaces we create.

Margaret Jankowski

There's also an element of the unknown and undefined. I think of Fresh Kills Park, which was the transformation of a very large dump on Staten Island into a park. The way that this was first envisioned and designed was to set up parameters and begin with creating forest edges, functional ecosystems, and plant communities that were embedded in healthy soils. It created frameworks to see where the soil can take us as it grows and evolves, then wove in recreation and different management practices with a light touch.

Linda Powers Tomasso

Rachel and Margaret, you help us so much to understand why we have this proliferation of chronic inflammatory diseases, because without this microbiota that educate their friendly fellows, that educate or seed the microbiome and help mitigate many of what now are considered urban diseases because they occur at higher rates in cities. Obesity, depression, and asthma, are all inflammatory diseases, as are a host of autoimmune diseases such as Crohn's, rheumatoid arthritis, and even Alzheimer's. If we're not able to fight off inflammation because we've lost access to nature and the microbiota that's in our soils, if children's playgrounds have lifeless dirt, it's no wonder what you're describing translates into an urban health crisis.

Thomas Barrie

So, it sounds like this is a rethinking, of inverting what we have previously defined as a good and healthy space, of transcending the compartmentalization that is the legacy of Western reductive and deductive thinking. So



Fresh Kills Park, Staten Island, NYC

now we say, no, we want a rich and diverse environment for our children to play in. It's not dangerous. Yes, we want our cities to be diverse environments that are both natural and built. In revisioning how we design and build our built environments do the design professions need to change? For example, Margaret, you mentioned we need a much more inclusive process of design.

Margaret Jankowski

I appreciate Bridget's redefining of who are spatial practitioners and expanding the definition of who is designing and building our cities. As I mentioned, it is critical to be in the communities that we're designing for, to make sure that their voices are in positions of power, not just interjecting at certain points but are guiding the whole process. It is rethinking our standard design process of concept through construction and advocating for not only more in-depth research and a community, coalition, and consensus building stage from the beginning, but also considering our responsibility to understand the impact of the spaces that we're designing and building, especially at an urban scale. For those who are working in urban design and landscape architecture, do they achieve the goals that we've asked them to? What are the health impacts? What are the management and economic impacts? How can we make sure that these projects are not perpetuating systems of injustice, but that any benefits are spread throughout the community? So, I think this is a fundamental call to design; to change the values that we're working with.

Thomas Barrie

It sounds like that's an example of scaling up our realm of responsibility, a long view that both transcends and exceeds a typical design, professional-client relationship, where once the building, the landscape, the urban design has been delivered, it's out of our hands.

Rachel Armstrong

I would like to invite architects to consider another proposition, which is that the architecture profession since Vitruvius has been committed to *venustas*, the aesthetics of buildings. I would like to invite designers to design dirty spaces. There is a kind of aesthetics that nature produces that is epic, breathtakingly gorgeous. There's another side of nature, which the Romantics noted is monstrous, grotesque, and difficult to comprehend. In this age of micros, we can transform those spaces.

These are not traditional themes for architectural practice. We are trying to develop prototypes for architects to use that might help stimulate design and interest in these spaces. For example, building homes for microbes that will allow us to remove pollution or take light and transform that into high density biomasses or organic molecules. If we design bio-processes instead of fossil fuel burners, we have little organs that can process inputs into the system, such as a waste stream, and then transform that into something we can use. The BIT building in Hamburg has a bio-reactive facade that is providing a type of thermal mass absorption of heat, and producing oxygen for the building.

The Living Architecture Project that I lead harnesses a series of bio-processes that take household waste, including urine, and processes it so that nothing toxic is excreted into the environment while producing 12-volt power.



The Living Architecture Project

We have envisioned buildings being powered in this way. The idea is that concentrations of microbial communities transform the things that we think are base and don't want to touch and change building impacts that way.

Thomas Barrie

This seems like a transformation of how we normally think about sustainable buildings. Conventional building is extraction and use of materials. Conventional concepts of sustainability are net zero or net positive. This seems to upend that whole proposition and falls within that larger realm of the built environment as a giver and not a taker.

Rachel Armstrong

In a building it can form its own resource economy. It can provide electricity for lighting, powering mobile phones and charging smaller appliances, and demonstrates good waste management. You just take your organic waste, put it in the bio-processor, and your grandmother can use the lights at night, or the neonatal ward can heat its incubators. The bio-processes can actually give gifts back if we know the steps of transformation that can be applied.

Brigitte Shim

As designers we need to see time as a material in our work, similar to how we work with masonry or steel or concrete. Can we, as Rachel said, think about buildings as a different kind of exchange? From the beginning can we build transformation over time into our architecture? Can we build the DNA, enabling adjustments and alterations to deal with programmatic change, which is inevitable in any building that we design? Can we design buildings that can be demountable and reconstructed in other places, as opposed to seeing them as fixed and monolithic and non-moving? Can we ensure that each and every building and built environment has the capacity to have many lives over time? Every time I see a 100-year-old building that's been used and loved, I really see a sustainable building. So, our definition of time needs to be more finely calibrated.

Also, we need to think about buildings being used 24 hours a day, maybe with different users, because if they are a resource we can use them in different ways. Our traditional typology – school, waste treatment facility, and other building types need to be thoroughly reexamined and recombined in totally different ways. So, through these new forms of dialog and coalitions between many groups beyond the traditional professional boundaries, we can re-imagine each and every building, its landscape, and its urban context as a piece of neighborhood infrastructure. And if we want to see them as givers and not takers, it really means that we must reconnect to nature, always enabling this kind of awe and wonder that we talked about, but also a different reciprocity, a different relationship than the status quo. We have the tools, and we have the examples. They may not be quite recombined in the right way, but I feel it's an amazing and exciting design problem that all of us must engage in meaningful ways to provide a way forward.

Thomas Barrie

If we start to look at buildings and landscapes as part of a built environment infrastructure, then we can easily move up and down the scale from the microbial to the regional. That opens up the subject of cities and the future of cities. We're very aware that the world population is becoming more and more urbanized, and more and more are living in megacities. Many have argued, such as the architect and urbanist Peter Calthorpe, that cities paradoxically can provide a potent antidote, or solution, to the problems of creating a sustainable future, and that density itself brings benefits.⁴ Can we talk about that?

Margaret Jankowski

I think that cities at their heart are efficient places, a commons where we share resources and utilize multifunctional spaces. There's waste, of course, but at their heart cities demonstrate a level of efficiency, vibrancy, and life, which is what attracts people to them.

What I find so exciting about what you were just talking about, Rachel, is the potential to make them even more efficient. I'm thinking about microgrids generating energy and reducing waste, the possibility that cities can be

continually efficient and also support landscapes that help them function. Energy generation, waste management, and food production for cities, are not usually located right in the center of the cities, but outside them. If we can consolidate those in a space that's more efficient, that opens new opportunities to reclaim nature and restore functioning ecosystems, I think that speaks to the inherent sustainability that cities can bring.

Rachel Armstrong

I think there's something wonderful here, which is about the merging of the green and the gray – the gray being industrial bones and the technical infrastructure of cities, and the green being the interface with nature, which also is a technology. For me, they all meet at the microbial level because, as I've mentioned, microbes can be producers of energy, they can use and produce electricity. So, imagine smart cities that are not only powered by microbes, but are also in conversation with them, whose own embodiment is an environmental intelligence. We now have a fabric for a city that could actually be an immune system for our communities, that is warning us about spaces that have changed negatively, that is remediating sites with toxins, and that is priming our bodies to deal with the inevitable changes that being in a dense space brings.

Bridget was talking earlier about a convergence of thinking, of disciplines merging, and I think that the areas we're discussing will start to merge. The idea that nature could be an integrated utility system with its own intelligence is not farfetched. It is a platform that we're standing on at this moment. We really need designers and architects to help us understand what aspects of the possibilities that exist are useful, what can be used now, and what is worth developing in the future.

Thomas Barrie

Sounds like a radical rethinking of what we consider to be good and healthy urbanism. Margaret, your comments about rethinking notions of specialization and centralization, envisioning an integration of all the necessary ingredients of life, really relates to what Rachel is saying about our urban environments. This shouldn't be confused with just a dense city, it's what constitutes the infrastructure of say a region, of whatever humans have modified and constructed at various scales. Bridget, I know you have done a marvelous series of projects in Toronto called the Laneway Projects. Could you speak about that?

Brigitte Shim

Laneways, or back alleys, exist in many cities in North America. Since they were first created, they were service oriented and not seen as part of the public realm. They are not unique to Toronto, which is just starting to re-imagine the potential of them as housing, as public spaces, as places for work and play, and even part of a storm-water solution. They have a huge potential that has been overlooked for a very long time. To move it forward has required university design studios, nonprofit groups, city councilors and a whole set of different advocacy groups who've worked to change the public thinking and imagination about what is possible with laneways and lobbied to change city bylaws.

It's a very good example of no one player being able to transform our cities. It requires coalitions of many different groups wearing different hats, but who see the community potential of these overlooked spaces. It's a tiny example within larger global issues, but I think it's where people coming together can make a difference, where something that was seen as left over becomes a resource. This kind of catalytic exchange is something that we all must be looking for, capitalizing on, and making happen. So, when we design, we're not just designing



Toronto laneway

a thing, but at the beginning of the design process are looking ahead to how it will be adjusted and transformed over time. It's never static and I think that's the bigger message.

Thomas Barrie

It seems this is a case of capitalizing on trends to diversify building types and housing in our urban environments, what gets called missing middle housing. Are there other emerging trends that we can recognize as potent generators or trajectories of the change that needs to happen?

Linda Powers Tomasso

One is the diversification of the hats we wear in contributing to a greater good. Each of you comes from such different professional perspectives, but everybody has described contributions to a healthier society. The lane-ways or green infrastructure possibilities Bridget just described not only improve the health of the environment, but also contribute to physical activity. Roberto has described his creation of beautiful spaces that contribute to mental and emotional health. Margaret outlined the inclusive, purposeful use of green space and how bringing people to the table maximizes, not only the utility, but also the functionality of these spaces. And Rachel re-envisioned how we consider the materials we use and the waste we produce. You're all basically public health practitioners. And it strikes me that you're all contributing to something that's been very siloed and exclusive to people in the medical or public health professions. But if we can look at health in all places, everybody has a role to play. That's what I see as an emerging trend.

Thomas Barrie

It's learning from a multifarious array of disciplines and, in fact, abandoning notions of disciplinary boundaries as a way to truly, creatively address the crisis that we find ourselves in.

Roberto Chiotti

We also need to rethink how we practice land use planning. Instead of urban planners deciding what land use should occur adjacent to other land uses, they need to be in conversation with different disciplines, which might include pediatricians who understand the health and wellbeing of children, and artists, or cultural providers, who can focus on joy, awe, wonder, and beauty. Maybe together they could develop some overriding guidelines that address the wellbeing and health of individuals and communities and then educate and empower individuals to have more agency in determining what will serve them best as a community.

Thomas Barrie

Would you describe this as a vision of the future of the design professions, how they work and who they work with?,

Roberto Chiotti

Absolutely. We've been focusing on levels of scale, and I'd like to consider the biggest possible context in which to frame this conversation, which is the universe. Acknowledging Rachel's idea of the contributions of technology, which I agree with, the 20th century scientific world has empirically been able to understand the modes of development of the universe in its 13 and a half billion years of cosmogenesis, and its self-education and self regulation.

It has been determined that there are three basic modes of expression, and one is always moving towards greater diversity. So, at the beginning of the great flaring forth of energy at the beginning of time, some people call it the big bang, we have helium and hydrogen and then the first generation of stars that coalesced, sacrificed themselves in order to bring about all the other elements of the periodic table. We've learned that the universe is always moving towards greater diversity, greater differentiation. And each diverse expression of cosmogenesis represents a subject. If we can shift our orientation from seeing the universe as a collection of objects to a community of subjects, as Thomas Berry has suggested, then we would begin to appreciate the intrinsic value and contribution each of those expressions makes to enable us to have a healthy life here on the planet. Finally,

each one of these subjects are deeply interconnected, as our DNA is deeply interconnected, and forms an integral community. So, I think all our wisdoms, all our institutions, whether they're economic, educational, political, or whatever, need to begin to recognize this dynamic, to bring about a more mutually enhancing human-earth relationship.

Thomas Barrie

And at this point in our conversation, I'd like to invite our panelists to share your visions of the future.

Brigitte Shim

The title of these conversations are critical conversations, which is appropriately named. This conversation really gives us so many lessons to think about and ways of moving forward. I've talked about considering time as a material as necessary to transform our understanding of sustainability. Time is running out. We need to act well, and we need to act now. There's no waiting around time. It's essential to address what is a very daunting and significant task of transformation.

Roberto Chiotti

I see the earth as inviting us into conversation with it and all living and non-living entities, from the electrons of stone to the microbes of the biosphere, and everything in between, to engage in what Thomas Berry would describe as the great work of relinquishing an exploitive relationship to the earth to one that is mutually enhancing. So, this is the role of humans at this point in history, this point of urgency, this point of threshold, at the terminal phase of the Cenozoic geological age of the earth into something that might be described as the ecozoic era or ecozoic age. And whether we're architects, health care providers, scientists, accountants, or lawyers, we need to participate in this great work of ensuring a viable human future that privileges or enables a healthy planet, because it's hubris to imagine a healthy human community on an unhealthy planet.

Margaret Jankowski

I also share the sense of urgency. I think underlying any vision for the future is the knowledge that fundamental change has already been set in motion and that we cannot stop. Part of our job is to adapt to the future, but also accept the responsibility, as we've all been talking about, to shift course, to change our mental models, approaches, and assumptions, and to actively work to design spaces that are rooted in community. This includes the understanding that our persistence on this earth is tied to each other, that whether we practice it or not we are a community of people living on the earth. We need to recognize our mutual relationship with each other and to honor our roots in the earth. And so, a sustainable city of the future is one where people's agency is recognized, people's humanity is honored, and the earth is not seen as something to subjugate or twist into something we can control and pull resources from, but is a respected partner and client, almost a beloved member of our community and existence, and to work together for that. This sounds very idealistic, but we can't keep continuing the way we have.

Linda Powers Tomasso

I'm thinking about the work of John Muir, who loved and lived within nature. We can't expect that everybody can be in mountains, however everybody deserves a place of beauty, a space to play and to pray in. Our sources of nature in cities are currently spatially patterned. They need to be socially patterned instead. So, it's not something that is real estate commodified by price, but something that is socially patterned so that people who want to access it have it at their disposal. And that seems to be a much more equitable communal way, to think about city design in the future.

Rachel Armstrong

Yes, absolutely, there's an urgency. What I get excited about with the conversations we've been having and new perspectives we've been exploring is the potential for us to act differently and really make a difference. So that cities are not just shelters, but life promoting spaces, becoming part of nature itself, with us in collaboration with nature. Microbes are so tiny we can't even see them with our naked eyes but are so powerful. And if a microbe has enhanced the biodiversity of the Earth over the last 3.5 billion years, then so can we. And if we can't learn

from maybe the greatest force in nature with the tools and the perspectives that we now have, then we're not half as smart as we think we are. And so, I really think that there are opportunities for new collaborations, to absolutely turn our impacts into a positive force for nature. It's not going to be easy. It's not going to be fast. It's going to require a lot of education and adjustment. But I really think this is possible and it's exciting.

Endnotes

1. Garrett Hardin, "The Tragedy of the Commons," Science magazine, December 13, 1968
2. See, Jackson, Tim, *Prosperity without Growth: Economics for a Finite Planet*, London: Earthscan, 2009
3. *The Bio-design Challenge* is an international education and competition program for high school and college students that focusses on biotechnology, art, and design.
4. See, Calthorpe, Peter, *Urbanism in the Age of Climate Change*, Washington, DC: Island Press, 2010

Transcendent Human Habitats

How may holistic approaches and designs foster human well-being and spiritual growth and help evoke transcendent experiences?

Panelists

Nader Ardalan
President, Ardalan Associates

Julio Bermudez, Ph.D., DPACSA
Former Director of the Sacred Space and Cultural Studies Program, Catholic University

Tammy Gaber
Associate Professor and Chair, Laurentian University

Rumiko Handa Ph.D.
Professor and Associate Dean of Architecture, University of Nebraska-Lincoln

Kevin Ladd, Ph.D.
Professor of Psychology and Director of the Social Psychology of Religion Lab
Department of Psychology, Indiana University South Bend

Suchi Reddy AIA
Principal, Reddymade Architecture and Design, New York City

Trey Trahan III FAIA
Founder and CEO, Trahan Architects, New Orleans and New York

Moderator

Thomas Barrie FAIA DPACSA
Professor of Architecture, North Carolina State University

Thomas Barrie

Let's start with defining our terms. How can we define transcendent human habitats? What are some of the ways we can describe it?

Nader Ardalan

I believe that transcendent human habitats profess a courageous and radical revolt against the material determinism that dominates all life today.

Suchi Reddy

I would define the experience of transcendence in architecture as transcendence through architecture. And I think that extends to a range of emotions and feelings that architecture has the agency to amplify and could include wonder, unity, feelings of community and all those things that help us know more about ourselves and the world in which we live.

Thomas Barrie

So, in your definition, the built environment might not intrinsically embody transcendence but is a means that through emotions, connection and so forth one can have transcendent experiences and come to know transcendence?

Suchi Reddy

Absolutely. I firmly believe that architecture is not passive but acts on us. As practicing architects it's our duty to calibrate all those elements of architecture, to create these kinds of spaces and feelings. The built environment has the ability to calibrate consciousness. That's not a small claim, but I sincerely believe it.

Tammy Gaber

I fully agree with Suchi and believe that what we're searching for is the transcendent through the built environment, to transcend the mundane, the banal, and the routine. And in that transcendence returning to the body and the experiential, whether as an individual through contemplation or as a group through worship.

Thomas Barrie

So, is the trans in transcendent a type of moving beyond, or extending experience?



Alhambra, Cordoba, Spain

Tammy Gaber

Yes, moving through, moving beyond, and reaching an opportunity for a very embodied experience.

Thomas Barrie

So, we might even say it's not ascending but is descending into a more authentic, embodied, experience.

Tammy Gaber

Yes, individually and as a group. And I think that's the challenge for design professions.

Rumiko Handa

I do agree with the idea that transcendence is a reciprocal relationship between ourselves and the world that we live in. In other words, no buildings, either object or space, has an inherent quality of being transcendent, but rather there must be somebody who is prepared enough, either witting or unwitting, to experience transcendence through the built environment. We need to understand the properties and qualities that can invite us, induce us, or assist us, to have transcendent experiences.

Now, what do we transcend, that is, go beyond when we have such experience? It could be the mainstay system of valuation that we readily, conveniently use in our daily life, be it modern sciences, capitalism, positivism, or others we consider trustworthy. I also think that when we have a transcendent experience we go beyond our immediate self, our immediate interests, purposes, or imagined benefits.

Thomas Barrie

So, there's this reciprocity and even participation, with the built environment. The scholar of comparative religion and sacred architecture Lindsey Jones described how rituals complete the space. The spaces are incomplete without this ritual engagement, often in a discursive manner, with sacred spaces. Tammy, does that relate to your sense of community in transcendent human habitats?

Tammy Gaber

For the community it takes on a whole other meaning. Today more than ever sacred spaces need to function in more than one manner. It's not just about worship, but about being active in that space, activating the principles of collective belief. And so, these spaces can start to become much more than a container, but a catalyst. This poses questions such as: can the community do activities? Can they do charity? Can they do fundraising? Can they gather together for their shared ideals? Is the space conducive, a catalyst, for the change they seek?



PATH Station, NYC, Santiago Calatrava

Suchi Reddy

I think it is incredibly important that we think about supporting community through the built environment. I'm inspired by movements that arise, things that happen, that move us forward – places where we come together to realize what our responsibility is to ourselves and others. I think architecture has serious roles to play because we mostly live our lives in built environments. If we don't take this role seriously, which I believe most don't, we're missing something essential in the environments we design.

Nader Ardalan

I certainly agree with my colleagues, but also feel that the predominant discussion has been about the lower realm. There is also very specific aspects of transcendent human habitats and sacred architecture that have to do with a climb, an ontological climb toward the absolute. If that aspect is not a part of transcendent human habitats, then we are just helping the lower realm get along with life.

Thomas Barrie

So, in addition to definitions of transcendence and transcendent human habitats as embodied experience of going inward, of discursive exchanges between us, or the group, and built environments, your definition actually talks more about a related word, which is ascending.

Nader Ardalan

There is the act of ascent. There is the act of descent. There is the inward and there is the outward. I believe that there is the absolute that lies within and there is the absolute that lies without. Both dimensions are key. Also, hidden in that lower realm is a golden thread, a golden string, a golden dust. And there is a golden dust floating in the air. This is the famous, observation by Louis Kahn, the great metaphysical American architect of the 20th century, who said traditions are like golden dust in the air. If you can reach out and grasp some of that golden dust you touch the anticipation of the future. So, I'm also interested in relating to this dimension in our conversations about transcendent human habitats because they also deal with a perennial area of thought and belief that we need to regasp. There's an eternal truth in transcendent places.

Thomas Barrie

So, in all cases there's a movement of crossing over – trans – a movement from one place to another, from one consciousness to another. In some definitions there's an attainment of the prize, a familiar theme in world religions. In others, it's more a rediscovery of our own true nature, or a more expanded experience of our embodied consciousness in this world. This is all good, but why do we need this? We've got very competent architects and builders building our built environment out there. What are the problems that we're trying to remedy here? What needs to be addressed? And how can transcendent human habitats do that?

Julio Bermudez

I think the world is in a desperate situation right now. Clearly, we are not the best world that we could hope for. Division, separateness, hatred, war, environmental destruction, little respect for other living beings, materialism, nationalism, racism, there is a whole list of ills that affect us. By and large we face these challenges because in many ways we have lost contact with something larger than either our own selves or our spirituality. We need reminders, we need to be pointed back to what really matters, which the built environment has fundamental roles to play because we live our lives in it. Statistics show that, at least in the urban world, people spend over 95% of their time in designed and constructed environments. If we can calibrate these environments to remind, induce, invite, or assist us to return to the fundamental, perennial, aesthetic, and ethical roles of the built environment we'll go a long way. I believe that that's the role of transcendent environments.

Trey Trahan

I think transcendent environments are needed in the search for meaningful existence, for a significant and purposeful life – to simply understand the nature of our existence.

Kevin Ladd

From a psychological perspective, there are two primary features, scale, and novelty, that are really important in terms of capturing our attention. Transcendent environments capture our attention. Whether the scale is tiny or very large, they remind us that there is something beyond ourselves. We are not the measure of everything. There's a balance that I think transcendent places achieve. They neither try too hard and become demanding, or demand too little and become purely utilitarian. What we're looking for in transcendent habitats is a middle ground that's just right – that pulls us out and offers us the opportunity to reflect that our own being is not everything.

Thomas Barrie

So, it's neither too garrulous or taciturn, but invites us to engage and reflect.

Kevin Ladd

Yes, and I think we can also relate this to the idea that we all live at a speed that is so fast. Architecture has the ability to arrest that for a moment and change the tempo of our lives.

Thomas Barrie

What I'm hearing is that there is a lack of places that can extend the invitation to slow down, to reconnect, to consider more authentic ways of being. Is that one of the problems we're seeking to remedy?

Nader Ardalan

I think this deals with the need for a middle ground, a balanced view of existence. From around the 17th century a metaphysical way of interpreting life supplanted a more physical one. Descartes' "I think therefore I am," has brought us to a point where we feel the center of the universe is us. Instead, within what I conceive as me there is a transcendent Me, with a capital M. Descartes's me is superficial, but within and outside of me there is a transcendent spirit. To gain a balance between these two is also an aspect of transcendent human habitats.

Kevin Ladd

The Senegalese writer Leopold Senghor wrote about African epistemology and offered a modification to Descartes' famous statement. For Senghor, it was We are, therefore, I am. For me that is an elegant way of bringing a different sensibility that takes one out of the center and says, I come from the collective.



Temple, Chongqing, China

Julio Bermudez

I think all of us are saying that, paradoxically, it is through incarnation in the body, through the physicality of being, that we arrive at the highest levels of being. Architecture has a remarkable power because it's a very physical thing. You could argue it is the most physical of all the arts. So, I think this is a powerful opportunity for architecture as an embodied civic art to catapult, to calibrate consciousness, to move us into larger transcendent awareness.

Tammy Gaber

When I think about spaces that allow for transcendence through the built environment, what I'm looking for, even when I'm looking for a connection with a higher being, is to transcend myself. I think these spaces have the capacity to invite us to transcend our ego, our everyday modes of being and reach a level of humility. A lot of religions practice this. Humility isn't in the I, or the individual, it's in the we and the collective good we do. To act collectively, humbly, without the ego, without the I, I believe is a huge part of transcendence. It is not hierarchical. It is not lower, middle, or higher. In many traditions to reach that collective humble state is considered to be a final state.

Thomas Barrie

Clearly, spirituality is part of this conversation, and there's a lot of definitions of spirituality. Philip Sheldrake set out four – two that are the inner work of the spiritual search and self-development, and two that are outer directed toward a spirituality of the everyday and social critique and action.

Suchi Reddy

I think that what we really need to think about when we create transcendent places, as many have mentioned, is to bring it back to body-mind traditions. In Buddhism, enlightenment is a body-mind state. So is the experience of architecture. To me it is a huge calling to bring that to people. So, everything I do, whether it's a small space, or a big space, a building, or artwork, what I'm looking for is how people engage with it and how it improves their self-awareness. Because, if they are self-aware, if they are better connected to themselves and their community, they're going to do better and the world is going to get better. It's not a small goal, but I think it happens every day at lots of scales, and that's the power of it.

Trey Trahan

I also think it is at various scales because it's not just a singular room or building, it's public space, communities, and also infrastructure. Historically in our country infrastructure has severed neighborhoods and diminished the transcendent. Instead, we should think in terms of how infrastructure can play a role in transcendent habitats.

Thomas Barrie

So, it sounds like this isn't just about religious spaces. Are we talking about a broad range of built environments beyond function and use?



High Line, NYC

Trey Trahan

I think we're speaking of all building programs and types, even interstitial spaces, even those little slivers of space can elevate the built environment. Some can even take us to a place where we move to a different place that's far beyond the ordinary.

Nader Ardalan

I like this conversation very much because it's dealing with the purpose of existence. There's a wonderful Islamic metaphor called the hidden treasure that says God is a hidden treasure who created the world to know itself. The noble purpose of human nature and existence is coming to know itself. Transcendent built environments all express existence coming to know itself. It's very open and expansive and a treasure that we wish to achieve in our creative process.

Rumiko Handa

I would like to add to our discussion of going beyond one's immediate self and being part of a community, the "We are, therefore I am," quote Kevin shared. I would also add that being humble depends on recognizing we are part of nature and time. I only get a very short smidge of the time continuum. To express that through a piece of architecture is a humbling experience. We also need to go beyond the dichotomy of the natural and the man-made. To understand they are both environments of which I am only a minuscule part is a humbling experience. It's been said that a bird builds a nest, and a bird is nature, a nest is nature and part of nature. Human beings build buildings, human beings are a minuscule part of nature, and buildings are a minuscule part of nature as a whole.

Trey Trahan

I think architects have been granted too much control and that is potentially limiting. If we begin to think about being more of a participant in design, and that the process isn't under the control of one individual or entity, we could create spaces that are far more transcendent. I also think we need to include technology and how it can create shape and sculpt space and transcend ordinary systems to utilize the earth's resources in more creative and economical ways. At the Alliance Theater at the Woodruff Arts Center in Atlanta, we chose to use reclaimed white oak, which were bent to shape the hall and dissolve the separation between the orchestral level and the balcony. Each equally performed, not only from a visual perspective, but also an acoustical one. The ribbons of wood, like strings of an instrument, created an acoustic environment that directed sound to each person, each member of the community, elevating the experience to a holistic, community one.

Thomas Barrie

I'd like to know more about how you arrived at what is clearly a success story. You run a busy international practice in New York and New Orleans that also includes urban design and elements of landscape design. What are some of the challenges of working within what I'll call the design professions? Do the design professions need to change? Are they actually impediments to this? Is there a collective professional acceptance of responsibility in the areas that we're discussing?

Trey Trahan

Part of the problem is a system of selecting contractors to build something based on low bid. Until we elevate the construction, the contractor, the subcontractors, to a place where they're equal participants, where they're also recognized as sculptors of space, we diminish their participation. They also take on most of the risk, and risk equates to elevated construction costs, which results in less exciting, sculpted spaces to elevate the human experience. We need to change that relationship. They need to be part of the conversation about quality of space and experience.

Thomas Barrie

So, the trans in this case is making connections between more of the players who construct our built environments?

Trey Trahan

Early on in a project in New Orleans, for example, we reached out to members of the black community who have been sculpting plaster for years and learned how a historical material and craft can shape space in a way that elevates experience. We've learned applications of parametric design that applies the material in a less co-planer way that has a dialog with the dynamic movement of space.

Thomas Barrie

Sounds also like the trans in this case is a connection with historical ways of making and finishing materials.

Suchi Reddy

This brings to mind the idea in practice of the sublimity of craft. I would agree we've been given too much control, but also the idea of ego in society has not been balanced enough for our collective benefit. Our work is only as good as the hands that build it. I work with builders very closely to define materials and details. Whether it's a building, 3-D printing, or a digital space I'm designing, I always think "there's a hand behind all of this." And it's the empowerment of that hand that can bring us to the experience of transcendence because it doesn't happen just because we think of it, craftspeople need to make it.

Thomas Barrie

The hand of the craftsman is evident in the space, which encourages connection to the beautiful human beings who have made it.

Kevin Ladd

What I am hearing is not just about transcendent architecture but also about transcendent architects working respectfully with craftspeople who are usually not part of the conversation.

Thomas Barrie

Suchi, could you speak about one of your projects that illustrate what you've described?

Suchi Reddy

We did a collective installation, a community-based project in Prospect Park, Brooklyn. It covered two and a half acres and became a vehicle for the community to express their feelings about the park. We took a disused part of the park, turned it into galleries, and created 7000 pinwheels that were placed very carefully to create feelings of awe and wonder when people entered. For me it demonstrated the power of bringing people to a space where they can feel connected, which can happen in many different designed environments.

Nader Ardalan

The idea of craftsmanship reminds me of the alchemical context of craftsmanship. Craftsmanship was directly related to the alchemical transmutation of matter from heaviness to lightness. Craftsmen take a great bulk of stone and then carve it until it comes almost to the point where you can't take or add anything to it. It's also the inner self the craftsperson is carving.

For about ten years now, I've been helping design a cenotaph for a great mystical poet Shams who was the tutor of Rumi. One goal is to bring back the great craftsmanship of Persia, such as adobe and the mosaic surfaces of mirror work. Bringing the hand and natural material into the work puts us in touch with the earth, with the necessity of building with nature, a complement to our highly specialized, advanced technological world.

Julio Bermudez

I think we haven't dedicated enough discussion to beauty, something most design schools and practices don't want to talk about. Beauty is censored as much as spirituality is. It is fundamental to this conversation because beauty is one of the paths to the transcendent. Now somebody in the profession could say, well, we do this, we do sustainability, we do parametric design, we do wellbeing. We have all these new words and certifications to

support that, but too often they are either more instrumental methods or marketing tools. They lack a larger transcendental view of the world in which you do sustainability because you understand the connectedness to all beings, and you want to respect and affirm life. Or you do parametrics, not because you want to make some cool sculpture but because of the reasons Trey was talking about. Wellbeing is not just affirming an individual's egocentric good feeling, but is the wellbeing of a whole community, human dignity, and so on. Transcending architecture and also transcending through architecture, encompasses a larger vision.

Tammy Gaber

We also need to talk about how we're educating young people in the design disciplines. It is really important to teach students how to understand the experiential, how to design the experiential and its components, such as beauty, material, sequence, and threshold. Communicating that requires new methods and pedagogy. I've described places and buildings to students using slides and words, but it is an entirely different experience being in a transcendent space with them. Transcendent environments and experiences, as Trey mentioned, can be everyday places. Good design can create a better world, a better built environment, a better quality of life. That kind of agency happens at every level. Giving young people the knowledge that they have so much agency to shape the environment, I think is really powerful.

Thomas Barrie

So, for you, one of the avenues to learning more about and ultimately building more transcendent human habitats is in education. It is through pedagogy, but also not just telling students about it, but helping them to experience it through projects that you can move through and around.

Tammy Gaber

To give a powerful example, one time my students and I were touring a church with the architect and he's telling us about the process of design. He not only designed the church but had also designed the organ. And then he walks away, rips the cover off the organ, and just starts playing, and he is an accomplished musician. That moment was such an overwhelming emotional experience, not just for myself, but for my students. We stopped taking photos, sketching, or walking and just sat down and openly wept. That was a moment that cannot be adequately described but can only be felt. Phenomenology is so much more than the five senses! It is everything all at once. That moment in the church allowed for something more open, humble, compassionate, and vulnerable. That moment was a touchstone for my entire student group.

Trey Trahan

We need to talk about our definitions of beauty. Most people think about it as a shape, space, surface, or decor. I think there's no beauty without selflessness, humility, dignity, kindness, or the spatializing of equity. All these things are part of beauty. It's not about the design process or the architectural profession, but how we work with the construction. The elephant in the room is this almost combative relationship between architects, engineer, and the construction industry. Until we reframe that construct we're limiting the potential for transcendent spaces.



Laguna Gloria Sculpture Park, Austin, Texas, Trahan Architects

Thomas Barrie

Elaine Scarry's argument in *On Beauty and Being Just*, is that we need to go beyond western-centric notions of objecthood and what gets deemed beautiful, and that true beauty is learning from experience as a way to understand more authentic ways of being, individually and as a group.

Nader Ardalan

Beauty is part of the quest for transcendent places. It is not merely subjective. *The Critical Conversations Project* emerged from the *ACSF Declaration of Transcendent Human Habitat*, where we enumerated six practices. One is to be conscious of your own culture and world cultures to create a sense of identity. The second is to employ ethical means to achieve equity and spiritual freedom. The third incorporates democratic and inclusive design processes. The fourth is to be environmentally adaptive to your contexts in spiritual and material harmony with nature. The fifth is to use technology but within natural and urban systems, what we termed eco-technology. The last is essential simplicity, an economy of means to achieve spiritual vitality and beauty in built environments. Many of the buildings that we deeply appreciate are ones that are very simple, such as the work of the great Egyptian architect Hassan Fathy. All relate to beauty. If we don't seek beauty in our practice, we will never gain beauty. Within that is an important rule – you must see beauty within yourself to be able to express beauty outward.

Thomas Barrie

Hermann Hertzberger wrote that when we view a beautiful painting, we understand how the artist saw the world. We also see the world through the eyes of the artist, a kind of reciprocal, trans-experience.

Suchi Reddy

Well-designed creative works, whether it's art, landscape, or buildings, should be designed with intention, but that intention doesn't always have to be literal. According to Umberto Eco, a well-designed space will remain open and can be reinterpreted and reexamined. It is hermeneutical because there is an inter-relationship between people and place. When something is beautiful, it becomes co-creative and is read in an infinite number of ways.

Thomas Barrie

It's like David Leatherbarrow's observation that building completes construction, weathering completes the building. It takes on a life of its own.

Rumiko Handa

After construction ends, the very life of the building begins.

Thomas Barrie

That's when it becomes alive.

Rumiko Handa

Yes. I talked about time continuum and how little time each of us has. I especially feel this when I am in a building where the user has changed, new users have changed the building, or where materials have changed, even deteriorated, or broken. I find meaning in that insufficiency. When I see all those layers of makers, users, and observers in a building, I feel that I am very small but also part of a big thing.

Julio Bermudez

I worry some will think this as just an esoteric conversation, but I would posit that it is an urgent matter. There is an urgency in what's happening on earth because of humanity. This is not esoteric but fundamental work, a fundamental practice that needs to happen as soon as possible. By the end of the century the world's population will be 10 billion for sure, and probably 11 billion. That means we're going to build more than we have ever built. The power of the built environment could either lead us out of the conundrums we face or sink us deeper

into trouble. Matters of the transcendent are not esoteric or impractical, they are fundamental, practical, and important. They need to be presented in this way.

Thomas Barrie

So, we've been talking about remedies for real problems and a sense of urgency. We've also talked about some means – through education, through building, through shifting consciousness and so forth. We've also talked about the repositioning of aesthetics and changes to the dominant culture. Ethics is present in this sense of urgency and responsibility. So, are we talking about recognizing a certain ethos of how we engage with the built environment, how we build?

Trey Trahan

In our practice we talk about the need for rewilding the planet, rewilding our buildings, rewilding ourselves, an almost primitive attitude of simplicity. The complex systems that are supposed to take us to simplicity have really taken us to a place of tremendous complexity where we've lost the soulfulness in our spaces.

Nader Ardalan

There are many countries, some that are extremely wealthy, that are looking for how to build new cities and communities. For example, the Persian Gulf, often called the cradle of civilization, has a long history of building. For five or six thousand years they built very simply within an extreme environment with few resources. Then suddenly oil occurred, and what they have been building since then is totally un-ecological, unsustainable, with hardly any aspect of the spiritual in the architecture. A Harvard research project I led documented how historical Persian Gulf civilizations built sustainably. Its 900 pages includes a wealth of examples of regions, cities, and neighborhoods. I think we need to learn from what has been built in the past that was culturally and ecologically sustainable, and also develop new ideas about transcendent human habitats. I also believe it's important that we demonstrate this with actual built examples, perhaps similar to the prototypical housing competitions conducted by European modernists after the first World War. We need demonstration projects to be examples of how to build the future.

Thomas Barrie

So, a means, a method of encouraging or being catalytic of change, would be in two parts. It is quantifiable research, which is then applied in direct ways in demonstration projects. It's a very precise term – we are demonstrating our knowledge. We've also talked about education as a means of effecting change. Not passing responsibility to the next generation but including students in the work that we are committed to. And as Suchi has mentioned, building places that shift consciousness and encourage people, either individually or communally, to shift the way they experience the world. Lastly, Tammy has talked about an ethos of care, compassion, and generosity that go beyond professional services. Instead, there's a simple public service aspect of the design professions.

Suchi Reddy

Another important aspect is bridging science and design, which Julio does in his work, and I do in Neuro-ethics and neuroscience. We live in both physical and digital worlds right now, and we need to think about what transcendence is in a digital world because we are inhabiting digital architecture whether we like to think about it that way or not. It's a hybrid space that's physical and metaphysical with the digital bridge in the middle. We don't want to be an echo chamber for architects entranced with the tools at our disposal. We can work with data scientists and consider all the lenses through which to look at data because we are a data-centric society now. We must think about how data can affect our understanding of transcendent habitats.

We also need to change the valuation of architecture. Trey and I fight this battle every day. I get a feeling of being a snake oil salesperson at times because I'm telling the client that this building is going to change you. They must trust you – they have to go on the journey with you. And when you're validated, it's amazing, especially when it reaches many people. We did an installation in Milan for Google where we tested people's bodily metrics in reaction to three different types of spaces and explained it to them to demonstrate why design matters. It was

not purely subjective, or about style, or aesthetics. It was about equity, politics, and design as a political act. We need to recognize the spheres in which we work and not limit ourselves to them.

Julio Bermudez

In order for us to make a case and hopefully move the needle, we must talk to the unconvinced, not to the choir – talk to the people that are not sure or in disbelief, or skeptical of all this. The language most respond to, whether we like it or not, is science. The power of science well utilized is an incredible rhetorical tool. There are case studies that illustrate the effects we are talking about. I have been employing neuroscience to produce evidence-based data that demonstrates the capacity of the built environment to induce transcendent experiences. My research illustrates that this is not an esoteric conversation but a reality that effects people and communities.

Thomas Barrie

So, evidence-based research is not only a means to understand and apply to design of human habitats that support transcendence, but also a media to communicate to those that we might not normally be able to reach. So, Suchi, when you say to a client, trust me, they're going to trust you the way we trust our doctors because they know there's science behind it.

Kevin Ladd

I think it's also critical to keep in mind that using science can also be very intimidating. For instance, if you're doing vocal coaching with a singer that includes audio equipment it can become an intimidating process. There are different ways in which science can be practiced. Some of them are, without question, reductionistic, but not all. There are many ways in which the core of science is not about total explanation, but about curiosity. It's about asking questions and trying to discern the most effective path forward, as opposed to dictating a particular path. It requires an openness to new perspectives and a willingness to put biases and pre-conceptions on hold.

Thomas Barrie

So, we've identified subject areas. We've identified means and audiences, different platforms for not only exploring and explaining transcendent human habitats, and the sense of urgency and responsibility to address these pressing issues through developing an ethos that can communicate exactly what we mean by transcendent human habitats. I'd like to end with some reflections about what we envision. What future do we envision that more lives up to the ethos of transcendent human habitats?

Nader Ardalan

To envision the future let's look at the trends of where things are going. One of these that has great possibilities is artificial intelligence and machine learning. At the same time, it is also one of the great threats because it is rapidly transforming humanity and shaping the future of how all human knowledge is being quantitatively and deterministically digitized, automated, archived, and retrieved. This excludes more qualitative, holistic, sustainable, socially inclusive, culturally intangible, and spiritually inspired urban planning and architecture because many are conventionally non-measurable – and in science if you can't measure it, it doesn't exist. This is a false way. We need effective communication so that the principles, design, and outcomes of transcendent habitats are digitized and not forgotten. Otherwise, if this urgent action for transcendence in built environments is not archived and readily searchable on digital platforms it won't exist.

Thomas Barrie

So, a vision of the future for you is that through utilizing these emerging leading-edge technologies so the research and examples of transcendent human habitats will not only be accessible, but will come up as a first search, so to speak.

Tammy Gaber

This suggests a vision about agency, not just of designers and people involved in the production of the built environment, but those who use it. It's also about the agency of young people, the so-called digital natives. What I would like to see is design literacy, an appreciation and understanding of the value of built environments. This is

urgent because there is already so much media that is full of design values and yet not rooted in the design ethos we have outlined.

Suchi Reddy

One hears a lot lately about living your best life and how someone does that. If we effectively communicate the knowledge that architecture is a way for us to live our best life, then I think we have a potent tool.

Kevin Ladd

Often the idea of the best life and flourishing humanity is conflated with some sort of utopia or wonderful transcendent spaces in which we live. It's often thought of in a very simplistic fashion where the transcendent becomes pure happiness or joy at all moments. I think that we must understand that flourishing is not a simplistic, unidimensional, affective state of perfect peace and harmony, but it also includes challenge and suffering. When we look forward to this change in our awareness, we should not be trying to eradicate all those sorts of human challenges and experiences that awaken us to a diversity of experience. We know psychologically that what often brings us to this point of awareness is some sort of a challenge, some sort of a threat that calls us to notice things around us in expanded ways.

Coming from the scientist side of things, one vision is to rigorously research and communicate examples. For instance, UNESCO sites have a very long heritage, and yet we haven't had systematic scientific investigations of what these spaces are about. Technology has advanced to such a point that we have the opportunity to make those kinds of investigations on the affective agency of these places and the experiences they facilitate. However, we also know that experiences are transient and not reliable or predictable. Suchi and Tammy talked about design and the craft of the person making the things. There can be tiny little elements that you think make no difference to anyone and yet, at a particular moment you turn a corner and see this small little joinery or this very minute piece, and it changes your whole experience. It's not a big thing, it's a very small thing, but it is also an important part of the inquiry.

Nader Ardalan

Some of the research that we've been carrying out on traditional transcendent architecture is the development of outstanding case studies. Similar to UNESCO world regions and Intangible Cultural Heritage, what we're trying to do is demonstrate proof of concept and searchable terms of reference as part of a world-wide database.

Thomas Barrie

Tammy, is this related to a design literacy language to communicate and build understanding and value?

Tammy Gaber

If it's communicable and understandable then it will be expected. Once you have design literacy there will be an expectation for quality in built environments, for qualities of space that transcend the banal.

Thomas Barrie

Suchi, you're saying that in the future rediscovered, new, and advanced ways of creating built environments will have a new position in the world and an understanding of their inherent value.

Suchi Reddy

The pandemic was useful for people to understand what their spaces lack, what their cities and their connectivity lack. I think that's an opportunity for us to mine, to establish, the importance of experiences, of the inability to be in a transcendent state because of their environments. I think this is rich time to get this message out and engage people with it.

Trey Trahan

I'm optimistic that the past few years have also elevated issues of diversity, equity, and equality and the value of

creating spaces for our diverse culture where many voices contribute to something beyond what mostly white males created for so long. I find that exciting about the future – to sit at the table with such diversity is profound.

Thomas Barrie

So, the future is increased access to, and participation in the design of built environments, an ethos of transcendent human habitats that can become the norm and not the exception.

Julio Bermudez

I think it would be a disservice to younger generations and ourselves to think of the future negatively. Instead, we should look at the future with optimism. When I was young, I always saw the future as better, but I can see my students looking at the future with trepidation and fear because of all the problems we are facing. I think what this conversation demonstrates is that we believe in a future that is worth living and look forward to it. We want to change the world for the better and are confident it will happen.



Typical Schedule | The Princeton Sessions

Thursday

Arrivals and check in to the Nassau Inn

6.00 pm | Meet in lobby of the Nassau Inn

Dinner at Mediterra restaurant in Princeton

Friday

- 9.00 Breakfast at hotel
Convene at the Einstein meeting room
Orientation and review of schedule
- 9.30 Briefing document review
5 minute presentations from each panelist
Whiteboarding of primary subject and topics
- 11.00 Break
- 11.15 Conversation 1: identifying major topics
Defining and refining subject and topics | establishing values, practices, and perspectives.
- 12.30 Lunch at meeting room with informal conversations
Free time
- 2.00 Conversation 2: specific topics or break out work
- 3.30 Break
- 3.45 Conversation 3: clarifying major topics
Storyboarding of roundtable and panelist interviews
- 7.00 Dinner at Director of CTI Will Storrar's residence

Saturday

- 9.00 Breakfast at hotel
Set up and orientation
- 9.30 – 11.00 Roundtable discussion | Filmed
- 11.00 - 12.30 Individual panelist interviews | Filmed
- 12.30 Lunch
Departures



Panelist Biographies



Nader Ardalan is President of Ardalan Associates, Architecture & Planning. He co-authored, *The Sense of Unity*, *The Sufi Tradition in Persian Architecture*, (Chicago University Press) and led the Persian Gulf Sustainable Urbanism project, (Harvard/Qatar Foundation). He is a former Harvard Senior Research Associate, and Visiting Professor at Harvard, Yale, MIT, and Tehran University, was a founding member of the Steering Committee of Aga Khan Award for Architecture, and is a former member of the Board of Directors of the Forum for Architecture, Culture & Spirituality.



Rachel Armstrong is a Professor in the Department of Architecture: Research, at the Catholic University of Leuven, Belgium. She is a sustainability innovator who investigates a new approach to building materials called ‘living architecture,’ which suggests it is possible for our buildings to share some of the properties of living systems. She collaboratively works across disciplines to build and develop prototypes that embody her approach. Rachel has been frequently recognized as a pioneer and has been extensively covered in academic and popular presses. She was also a 2010 Senior TED Fellow.



Thomas Barrie, FAIA DPACSA is a Professor of Architecture at North Carolina State University. His scholarship focuses on the symbolism, ritual use, and cultural significance of architecture and he has published and lectured extensively in his subject areas. Professor Barrie’s most recent book is *Architecture of the World’s Major Religions: An Essay on Themes, Differences, and Similarities* (Brill 2020). Professor Barrie is a member of the ACSA College of Distinguished Professors and the NC State Academy of Faculty Engaged in Extension. He is the Chair of the Architecture, Culture and Spirituality Forum, which he co-founded in 2007.



Julio Bermudez, Ph.D. DPACSA directed the Sacred Space and Cultural Studies graduate program at the Catholic University of America School of Architecture and Planning. Dr. Bermudez’s interests focus on the relationship between architecture, culture, and spirituality through the lens of phenomenology and neuroscience. He has lectured widely, led symposia, and published in these areas, including two books: *Transcending Architecture. Contemporary Views on Sacred Space* (CUA Press 2015), and *Architecture, Culture and Spirituality* (Routledge 2015). His current scholarship covers extraordinary architectural experiences enabling access to the transcendent. Bermudez is the President of the Architecture, Culture and Spirituality Forum, which he co-founded in 2007.



Tom Beaudoin is Professor of Religion at Fordham University in New York City. The author of numerous publications on theology and cultural practices, he is currently researching the Pantheon in Rome with a grant from the Templeton Religion Trust. the research focuses on developing a theological account of the significance of the Pantheon’s architecture and artworks informed by the experience of the Pantheon’s visitors.



Bryan Bell is a public interest designer, writer, and former Professor at NC State University. In 1991 he founded the nonprofit organization Design Corps with the mission “to serve the 98% without architects.” His current work includes the SEED Network which he co-founded. He has co-written and co-edited five books, organized nineteen Structures for Inclusion international conferences, and held thirty-three Public Interest Design Institutes.



Karla Britton is Professor of Art at Dine College of the Navaho Nation. Her research and writing focusses on regional identities, art and architectural culture, and sacred buildings and landscapes. She has taught at the Yale School of Architecture, Columbia University School of Architecture & Planning, and the University of New Mexico.



Roberto Chiotti is a Fellow of the Royal Architectural Institute of Canada and Founding Principal of Larkin Architect Limited, an award-winning firm specializing in the design of sustainable sacred space. He completed graduate studies in Theology and Ecology through the Elliott Allen Institute at the University of St. Michael's College, University of Toronto, currently serves on the Board of ACSF, and co-authored the ACSF Declaration of Transcendent Human Habitat with fellow ACSF board members Tammy Gabor, Julio Bermudez, and Nader Ardalan.



Thomas Fisher is a Professor, Director of the Minnesota Design Center, and former Dean of the College of Design at the University of Minnesota. A graduate of Cornell University in architecture and Case Western Reserve University in intellectual history, he was the Editorial Director of *Progressive Architecture* magazine and was recognized in 2005 as one of nation's most published architecture writers, having written 12 books, over 60 book chapters, and over 450 journal articles.



Tammy Gabor is Director and Associate Professor at the McEwen School of Architecture, where she teaches architecture design and theory courses. She joined MSoA as a founding faculty in 2013 and previously taught at University of Waterloo, American University in Cairo, and the British University in Egypt. Dr. Gabor has written extensively on gender and architecture, and vernacular and regional architecture. Her book, *Beyond the Divide: A Century of Canadian Mosque Design*, was published by McGill Queen's Press in 2021. In 2019 she won the Women Who Inspire Award from the Canadian Council of Muslim Women and in 2020 she was awarded Laurentian University's Teaching Excellence Award.



Rumiko Handa Ph.D. is Professor of Architecture at the University of Nebraska-Lincoln. She is a registered architect and holds in Ph.D. in Architectural Theory from the University of Pennsylvania and a B.Arch. from the University of Tokyo. She received the American Institute of Architecture Students' 2001-02 National Educator Honor Award. She is the author of *Allure of the Incomplete, Imperfect, and Impermanent: Designing and Appreciating Architecture as Nature* (Routledge, 2015).



Kevin Ladd is a psychology professor at Indiana University South Bend. Using quantitative and qualitative methods ranging from eye tracking to movie making, he explores the origins of religious beliefs and their contextual embodiment. Current research interests include labyrinths as well as the art of performance magic, both considered in global settings.



Margaret Jankowsky ASLA Is Director of Urban Design at Trahan Architects, New York, with interests in public space and how large-scale environmental, social, and infrastructural systems interact and impact with one another. She was one of the Urban Design Forum's 2018 Forefront Fellows where her work on homelessness led the city to create an Office of the Public Realm. She is the co-editor of *The High Line* (Phaidon, 2015), and has been a visiting critic at the University of Pennsylvania School of Design, Rhode Island School of Design, Columbia University's GSAPP, and others. She earned a Master of Landscape Architecture at the University of Pennsylvania.



Suchi Reddy, FAIA is a founding Principal of Reddymade Architecture and Design, an award-winning New York City practice that focusses on large-scale cultural, educational, healthcare, retail, commercial, and residential projects. The firm's human-centric approach to design is dedicated to celebrating diversity and equality, as well as addressing the economic, social, environmental, and cultural impacts of her work on both the user and the planet. Suchi sits on the boards of the Design Trust for Public Space, Storefront for Art and Architecture, and Madame Architect; and lectures widely on her firms' work.



Brigitte Shim FRAIC, OC, RCA, Hon. FAIA, OAA is a Professor of Architecture at the University of Toronto. She, along with her partner A. Howard Sutcliffe, formed Shim-Sutcliffe Architects in 1994. Their critical design practice focusses on the integration and interrelated scales of architecture, landscape, and interior and industrial design. Shim and Sutcliffe have received fourteen Governor General's Medals and Awards and an American Institute of Architects National Honor Award, and has been published internationally. Brigitte has lectured and participated in invited international symposia extensively and has also served on numerous international, national, and local design juries. She is a Fellow of the Royal Architectural Institute of Canada (FRAIC), and an Honorary Fellow of the American Institute of Architects (Hon FAIA),



Linda Powers Tomasso, MSFS, ALM is an environmental policy researcher at the Center for Health and the Global Environment, Harvard University School of Public Health. Her research areas include sustainable land use in urban expansion and standards for incorporating healthy materials into rapidly growing built environments to southeastern China. Linda has consulted on sustainable international development projects for the development banks and international NGOs, notably in the Andean countries and China. She holds master's degrees from Harvard Extension School's Program in Sustainability and Environmental Management and the Georgetown School of Foreign Service. Trained in international policy, she worked as a U.S. Foreign Service Officer with postings in Costa Rica, Rome, Milan, and the U.S. State Department's Central American Desk.



Trey Trahan III FAIA is the founder and CEO of Trahan Architects with offices in New Orleans and New York City. The firm was established in 1992 in the belief that bringing humility and awareness into the design process helps create authentic spaces that elevate our lives. Trey received the Architecture Review Emerging Architecture Award in London in 2005, and in 2006 was elected to the AIA College of Fellows. He has been a visiting critic at the School of Architecture at Carnegie Mellon University, the University of Southern California, the MIT School of Architecture and Planning, and was the Walton Critic at the Catholic University of America. Trey served as a member of the International Council of the Van Allen Institute in New York, and he is currently a board member of The Cultural Landscape Foundation.



Caitlin Watson AIA is an Associate at Sage and Coombs Architects, New York. She is an active writer and researcher on sacred-public space with a focus on the relationship between public art and architecture. Caitlin has presented her research at scholarly and professional conferences, including the Society of Architectural Historians and the Association of Collegiate Schools of Architecture, and her writing has been published in *Faith & Form Journal*. She is also a member of the Steering Committee for US Architects Declare—an organization working to transform architectural practice to confront the crises of carbon emissions, biodiversity loss, and social and environmental justice.



Project Sponsor **William Storrar** is Director of the Center of Theological Inquiry in Princeton, NJ, an independent research center with an interdisciplinary program for visiting scholars and practitioners. The common thread of his work is the practice of cross-disciplinary collaboration in the academy and society. He held the Edinburgh University Chair in applied theology and is a Visiting Professor in Global Civics at Glasgow Caledonian University. His publications include edited volumes on public theology, global civil society, and faith-based organizing in America; and articles on the theology of Scottish architect Alexander Thomson and on a spatial approach to the study of congregations.



Videography and Film Production
Telequest, Princeton, NJ
Dan Preston and Maggie Rose, Producers

The Critical Conversations Project / Briefing Book

A Briefing Report was shared with all panelists prior to the discussions. It included the following questions as prompts for topics and dialog.

Justice and Participation

- How do we serve the entire world's population as our clients and how might we reorganize our practices in order to achieve that?
- Does justice and participation apply to other sentient beings on the planet, the many animal species that we are rapidly extinguishing and that we also depend on?
- What does it mean to have a "calling" as a profession and what would it take for us to recover that sense of higher purpose?
- How should the profession of architecture confront and seek to redress its history of exclusion?
- How does the profession of architecture support, discourage or deny justice and participation?
- What is the role of architecture's cultural brokerage in securing and stifling justice and participation?
- What do religious and theological discourses contribute to, or veil from, these questions?
- How can design education most substantially incorporate ethical considerations?
- Can ethics from wisdom traditions productively inform contemporary ethical practices?
- Should architects provide progressive responses to changing political and economic forces, or reappraisals regarding the roles of architecture to legitimize and promote exploitation and oppression?
- Can the built environment act as a subversive agent or is it inevitably co-opted by the regimes and corporations that commission it?
- What participatory design methodologies are best suited to justice and participation?
- What examples of engaged spirituality are particularly relevant?

Environmental Adaptation and Eco-technology

- What are the underlying principles that initiate and support the current sustainability discourse, what technologies are available, what can they achieve, and what organizations are at the forefront.?
- What further implications, both positive and negative, will the COVID-19 pandemic have on our collective consciousness, efforts, and hopes of achieving a more mutually-enhancing, human-earth relationship?
- How would a culture change that considers the earth as sacred affect the way in which we come to understand the term “Eco-technology” and respond to its implications?
- As the “ASCF Declaration on Transcendent Human Habitat” challenges, what role will “spirituality” play in the development of “Eco-Technologies”?
- How will a spiritually centered approach assist us in achieving a more benign, less exploitive human presence on the planet?
- What are the contributions and limitations of initiatives such as the Hannover Principles, 2030 Challenge, Biomimicry Institute, or other third-party sustainable design accreditation organizations such as the Living Building Challenge, the World Green Building Council LEED, WELL, Green Globes, etc.?
- What are the contributions from urban planning, urban design, landscape urbanism, jurisprudence/public policy, human ecology, cultural anthropology, spiritual ecology, indigenous wisdom traditions, biophilic cities, and other related disciplines?
- What dominant cultural, political, and religious beliefs and structures impede progress?
- What particular issues does biophilic cities bring to the table?

Transcendent Human Habitats

- What may be common grounds to organize discussions of transcendent human habitats?
- Can ineffable experiences be measured or structurally defined? If yes, what may be the indicators of such experiences?
- Artificial Intelligence (Ai) and Genetic Algorithms (GAs), a computational technique based on the principles of evolution, have been recently introduced in architecture to address problems of complexity in the function and the form of architectural projects. What can their role be in the exploration of our topic?
- Is architecture a verb and, if so, how do built environments support human action?
- Is this a counter-project to the Western conflation of beauty and the sublime (as Elaine Scarry argued)? Or, to the dominant culture of instrumental aesthetics? Does it challenge the term “transcendent” itself, and argue for environments of “manifestation?” (Paul Ricoeur) Does it concern the capacity of environments to “disclose” (per Heidegger), or exceed their objecthood?
- Is “the architect’s job to make you feel at home in the city, to intensify your sense of purpose and belonging...?” (as Alberto Perez Gomez argues in his most recent book).
- What constitutes the principles and criteria for achieving Transcendent Human Habitats related to neighborhoods, communities, urban design, city planning and regional development?
- What constitutes the principles and criteria for achieving Transcendent Architecture related to individual buildings and sites?
- What roles do intuition, contemplation, compassion, and moderation play in transcendent design?
- How can architecture’s lost cultural authority and autonomy be revitalized?
- Is the current quantifying approach to architectural issues acceptable?
- How can complementary perspectives of proclamation and manifestation inform our inquiry?
- Can place attachment theory as it relates to the everyday sacred expand the boundaries of the subject?

Select Bibliography

ACSF Declaration of Transcendent Human Habitat

<http://www.acsforum.org/acsf-declaration-of-transcendent-human-habitat/>

Altman, Irwin and Low, Setha M., eds., *Place Attachment*, New York: Plenum Press, 1992

Apostolos-Cappadona, Diane, ed., *Religion: Material Religion*, Farmington Hills, MI: Macmillian Reference USA, 2016

ARCHITECT, Volume 108, Number 1, January 2020, "The Carbon Issue"

Architecture 2030, URL: <https://architecture2030.org>

Ardalan, Nader and Bakhtiar, Laleh, *The Sense of Unity, the Sufi Tradition in Persian Architecture*, Chicago: University of Chicago, 1973

Barrie, Thomas and Bermudez, Julio, "Spirituality and Architecture," in Laszlo Zsolnai and Bernadette Flanagan, eds., *The Routledge International Handbook of Spirituality in Society and the Professions*, London: Routledge, 2019

Barrie, Thomas, Bermudez, Julio, and Tabb, Philip Eds., *Architecture, Culture, and Spirituality*, New York: Routledge, 2015

Barrie, Thomas, *The Sacred In-between: The Mediating Roles of Architecture*, London: Routledge, 2010

— *House and Home: Cultural Contexts, Ontological Roles*, London: Routledge, 2017

— *Architecture of the World's Major Religions: Themes, Similarities and Differences*, Leiden: Brill, 2020

Beatley, Timothy, *Biophilic Cities: Integrating Nature into Urban Design and Planning*, Washington, DC: Island Press, 2011

Benedikt, Michael. *God is the Good We Do: Theology of Theopraxy*, New York: Bottino Books, 2007

— "Shiva, Luria, Kahn," in Renata Hejduk and Jim Williamson, eds., *The Religious Imagination in Modern and Contemporary Architecture, A Reader*, London: Routledge, 2011

Benjamin, Walter, "The Work of Art in the Age of Mechanical Reproduction," *Illuminations*, trans. Harry Zohn, New York: Schocken, 1968

Bergmann, Sigurd, *Theology in Built Environments. Exploring Religion, Architecture and Design*, New Brunswick, NJ: Transactions Publishers, 2009

— *Weather, Religion, and Climate Change*, Abingdon, Oxon, UK: Routledge, 2021

Bermudez, Julio, "The Extraordinary in Architecture. Studying and Acknowledging the Reality of the Spiritual", in 2A – Architecture and Art Magazine 2009, No.12

— "Amazing Grace. New Research into 'Extraordinary Architectural Experiences' Reveals the Central Role of Sacred Places", in Faith & Form, 2009

— "Phenomenology of the Architectural Extraordinary and Merleau-Ponty Philosophy," in Barrie, Bermudez and Tabb, eds., *Architecture, Culture and Spirituality*, London: Routledge, 2015

— ed., *Transcending Architecture*, Washington, DC: CUA Press, 2015

- Berry, Thomas, *Dream of the Earth*, San Francisco: The Sierra Club, 1988
 – “Twelve Principles for Understanding the Universe and the Role of the Human in the Universe Process,” 1984. , <http://thomasberry.org/publications-and-media/thomas-berry-the-twelve-principles>
- Calthorpe, Peter, *Urbanism in the Age of Climate Change*, Washington, DC: Island Press, 2010
- Chang, Hyejung, “An Aesthetic and Ethical Account of Genius Loci”, in Barrie, Bermudez and Tabb, eds., *Architecture, Culture and Spirituality*, New York: Routledge, 2015
- Coaldrake, William H., *Architecture and Authority in Japan*, London: Routledge, 1996
- Dreyfus, H., and Kelly, H.D., *All Things Shining: Reading Western Classics to Find Meaning in a Secular Age*, New York: Free Press, 2011
- Farson, Ricard, *The Power of Design, A Force for Transforming Everything*, Greenway Communications, 2008
- Fisher, Thomas, *The Architecture of Ethics*, London: Routledge, 2019
- Glassman, Bernie, *Bearing Witness. A Zen Master’s Lesson in Making Peace*, New York: Belltower, 1998
- Handa, Rumiko, “Experiencing the Architecture of the Incomplete, Imperfect, and Impermanent”, in Barrie, Bermudez, and Tabb, eds., *Architecture, Culture and Spirituality*, New York: Routledge, 2015
- Harries, Karsten, *The Ethical Function of Architecture*, Cambridge, MA: MIT Press, 1997
- Holy Father Francis, Encyclical ‘Laudato Si’, “On Care for Our Common Home,” The Vatican Press, 2015
- Jackson, Tim, *Prosperity without Growth: Economics for a Finite Planet*, London: Earthscan, 2009
- Johnson, Mark, *The Meaning of the Body, Aesthetics of Human Understanding*, Chicago: University of Chicago Press, 2007
- Latour, B., *On the Modern Cult of the Factish Gods*. Durham: Duke University Press, 2010
- Lefebvre, Henri, Donald Nicholson Smith, trans., *The Production of Space*, Oxford, UK: Blackwell, 1991
- Levine, Norman D. ed., *Human Ecology*, North Scituate, MA: Duxbury Press, 1975
- Manzo, Lynne C., and Devine-Patrick, Wright, eds.). *Place Attachment: Advances in Theory, Methods and Applications*, New York, Routledge, 2014
- Marcus, Clare Cooper, *House as a Mirror of the Self: Exploring the Deep Meaning of Home*, Lake Worth, FL: Nicolas-Hays, 2006
- McDonaugh, William, “The Hannover Principles,” 1992
- Nollman, Jim, *Spiritual Ecology: A Guide to Connecting with Nature*, New York: Bantam Books, 1990
- Norberg-Schulz, Christian. *Space, Existence and Architecture* (New York: Praeger Publishers, 1971)
 – *The Concept of Dwelling*, New York: Rizzoli, 1985
- Owen, Graham, *Architecture, Ethics and Globalization*, London: Routledge, 2009

- Pallasmaa, Juhani, "Light, Silence, and Spirituality in Architecture and Art," in Bermudez, Julio, ed., *Transcending Architecture*, Washington, DC: CUA Press, 2015
- Perez-Gomez, Alberto, *Built Upon Love: Architectural Longing after Ethics and Aesthetics*, Cambridge, MA: The MIT Press, 2006
- Attunement: Architectural Meaning after the Crisis of Modern Science, Cambridge, MA: MIT Press, 2016
- Promey, Sally M., *Sensational Religion: Sensory Cultures in Material Practice*, New Haven, CT: Yale University Press, 2014.
- Ray, Nicholas, ed., *Architecture and Its Ethical Dilemmas*, London: Routledge, 2005
- Ricoeur, Paul, *Figuring the Sacred: Religion, Narrative, and Imagination*, David Pellaver, trans., Mark I Wallace, ed., Minneapolis: Fortress Press, 1995
- Rothstein, Richard, *The Color of Law: A Forgotten History of How Our Government Segregated America*, New York: W.W. Norton & Company, 2017
- Seamon, David and Mugerauer, Robert, *Dwelling, Place, and Environment*, Malabar, FL: Krieger Publishing, 1985
- Sedjuk, Deyan, *The Edifice Complex: How the Rich and Powerful – and their Architects – Shape the World*, New York: Penguin Books, 2005
- Shapiro, Thomas, *Toxic Inequality: How America's Wealth Gap Destroys Mobility, Deepens the Social Divide, and Threatens Our Future*, New York: Basic Books, 2017
- Sheldrake, Phillip, *Spirituality: A Very Short Introduction*, Oxford, UK: Oxford University Press, 2012
- *The Spiritual City: Theology, Spirituality, and the Urban*, Chichester, UK: John Wiley & Sons, 2014
- Soja, Edward W., *Seeking Spatial Justice*, Minneapolis: University of Minnesota Press 2010
- Stanczak, Gregory and Miller, Donald, *Engaged Spirituality and Social Transformation in Mainstream American Religious Traditions*, Center for Religion and Civic Culture, USC College of Letters, Arts & Sciences, 2004
- Tesar, Paul, "Neophilia, Spirituality, and Architecture", in Barrie, Bermudez and Tabb, eds., *Architecture, Culture, and Spirituality*, New York: Routledge, 2015
- Tuan, Yi-Fu, *Space and Place: The Perspective of Experience*, Minneapolis: University of Minnesota, 1977
- Zumthor, Peter, *Atmospheres*, Berlin: Birkhauser, 2006

About ACSF

The Architecture, Culture, and Spirituality Forum is an international organization that supports research, practice, education, and advocacy on the significance, experience, and meaning of the built environment. It is the only organization of its type that addresses the spiritual and cultural aspects of the built environment. We believe that the design and experience of the built environment can assist the spiritual development of humanity in service of addressing the world's most pressing issues.

ACSF was founded in 2007 as a multidisciplinary, international, and multi-faith community of academics and practitioners interested in intersections between spirituality and the built environment. Today its membership represents over 70 countries and a diverse range of disciplines.

ACSF hosts annual symposia at places with spiritual significance, maintains a website that serves as an open-source scholarly archive, and produces a bi-monthly newsletter. It also supports scholars, practitioners, and students through annual awards and scholarships.

Mission

The *Mission* of the Architecture, Culture and Spirituality Forum is to provide an international forum for scholarship, education, practice, and advocacy regarding the cultural and spiritual significance of the built environment.

