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I remember it being a very hot day. I had traveled with friends and colleagues this past April on a pilgrimage to the ruins of Chichen Itza, Mexico, one of the places on my architect’s bucket list. Now I stood at the threshold of this monumental site, ready to sacrifice myself to the heat (and the occasional iguana) to learn some deep, sacred truth.

The anticipation of this adventure, which was organized by the Forum on Architecture, Culture and Spirituality (acsforum.org), was almost too much to bear. How would we receive these incredible religious ruins? What secrets would they admit to us as we wandered among them, immediately and over our next few days in their presence? What spiritual transcendence could we hope for, experiencing these mute stone structures of an ancient civilization, one whose primary traces were the mysterious, sacred buildings they left behind?

And then it all went...terribly wrong. As I drew closer to the ruins, making my way through a densely forested pathway, I was approached by a child, imploring, “Want to buy a handkerchief, mister? One peso, almost free!” A bit farther on, as I strained to see on my right the outline of the El Castillio—that dramatic flight of steps to the heavens—an alarming growl rose from just off to my left, the sound of a wounded, angry animal of the jungle. Was I about to be consumed before consummating my tryst with these sacred stones? No. It was just another vendor, his long table spread out with souvenirs, blowing into the carved wooden head of a jaguar, the cat that used to rule these ruins. Another vendor next to him hawked tee-shirts, and another beyond offered onyx paperweights carved in the likeness of a portion of the male anatomy, detailed in every way. And there was another vendor, and another, and another, as far as the eye could see. But I still hadn’t seen a blasted ruin!

We arrive at pivotal sacred sites around the world, our spirits ready to be lifted into communion with ancient truths, to dive into the deepest pools of transcendence, and someone is trying to sell us gee-gaws. Or we turn a corner in Paris, ready to be floored by the aura of Notre Dame, and it is covered with scaffolding. Or it is just closed for the day...no explanation at all. What is the pilgrim to do?

The next day in Chichen Itza, we came early. Really early—the ticket sellers hadn’t even yet arrived in their booths as we milled around, counting out exact change. I rushed with my ticket down the pathway, not a soul in sight. For a while, maybe only 15 minutes, it was just me and El Castillio, this mysterious mountain of stone that refused to tell me anything. I sketched in peace and scribbled notes. I then walked to the epic ball court nearby, with its rings of stone protruding as witnesses to the ghosts of gamers who might hope eternally in vain for the ultimate “do over.” I sat against a wall, the humidity beginning to rise, and looked for a long time at the two facing ball-court walls, silent in their secrets. More notes, more sketches. I was grateful for the silence.
A TRULY SPIRITUAL JOURNEY
Last year we began a renovation, restoration and expansion of St. James Cathedral in Orlando, FL, to conduct much-needed repairs to the infrastructure, enhance the liturgical art and original beauty, and expand the seating.

ST. JAMES CATHEDRAL.
All new liturgical furniture was sculpted from four varieties of polished Italian marble in a rich crimson hue to symbolize the blood of Christ, and complimented by dulcet tones of rose and mottled beige. The Baptismal Font, Altar, Ambo, Tabernacle and Bishop’s chair feature columns incorporated with a shell motif in honor of their namesake, as well as bas relief carvings of St. James, St. Peter and Paul, and the four Evangelists. Rolf R. Rohn

TRADITION. Over the past 58 years, we have assisted the Catholic Church by designing, budgeting and implementing liturgical spaces.

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SERVICES: Liturgical Design; Interior Design & Decorating; Sacred Artwork; Mosaics; Art Glass; Statuary; Liturgical Appointments; Liturgical Furniture; Metalwork.
‘The Joy Of Existence’ From the body of work titled ‘Majesty Within,’ this painting explores the sensation of one’s inner atmosphere when one becomes aware of the divine presence and feels aligned with divine intent. The exploration began with considering the first light of the day, the beginning of a new day full of possibility, as well as the feeling of Spring, when flowers are beginning to bloom.
Standing under the dome inside the Hagia Sophia in Istanbul, Turkey, one has a sense of eminence, of something greater than oneself. In the Hagia Sophia there are Byzantine mosaics depicting Christ and Mary alongside massive banners adorned with the names of Allah in Arabic calligraphy. How do different traditions exist in a way that allows respect and understanding for differing beliefs? The Hagia Sophia has been both a church and a mosque, yet now it is a museum rather than an official place of worship. Each visitor is able to be in relationship with the place beyond a particular label or affiliation. A visit to this architectural marvel is less about aligning with a particular religious tradition and more about the individual experience. This notion of individual experience is the foundation of my work.

The central concern of my art is the personal experience of the divine presence. The oil paintings integrate the visual vocabularies of European illuminated manuscripts, Islamic tile work, quantum physics, and forms found in the natural world. In particular, my fascination focuses on the decorative elements of these vocabularies. The forms and patterns found on the walls and adorning the domes of mosques and the borders of pages in illuminated manuscripts have a sense of rhythm and movement. These patterns reveal a sense of what moves beyond our physical senses, of what moves unseen through our lives. In being present to the worlds beyond the physical world, one becomes present to what transpires beyond what appears. Art, it has been said, is a way to make the invisible visible. To me, this awareness allows one to consider how the divine moves through one’s life. The paintings, then, become an exploration of the inner atmosphere of the individual when engaging with the divine, whether through prayer, contemplation, focused work, or other ways according to different traditions or one’s own discoveries.

Many cultures have had, and continue to have a tradition of religious or spiritual art. Within these traditions are developed visual vocabularies of specific symbols and aesthetics. Some of the patterns and forms found in 16th-century Islamic tile work interpret forms found in the natural world, moving into stylization rather than rendering from life. In the stylization the forms are enlivened with a sense of cultural tradition. This tradition can be found in medieval illuminated manuscripts as well. Similar design elements appear on page after page, revealing a sense of rhythm, a language of forms that enhances the experience of the text. My paintings might be considered to be a meeting place for different traditions. The work seeks to honor the many paths and traditions present in our world.

‘More Than Your Favorite Song,’ From the body of work “Cathedralesque.” This painting explores the rhythm and movement of the unseen moving in the physical realm. The work integrates the visual vocabulary of Persian carpets and tile work, tracings of electron movements in bubble chambers, medieval illuminated manuscripts, and abstracted forms from the natural world. By integrating this imagery the work aims to incite in the viewer the exploration of the mystic within, beyond the context of any particular tradition.
The visual vocabularies of sacred sites and sacred objects have fascinated me throughout my life. As a child traveling with my family in Ireland, Great Britain, and Germany, I visited churches and cathedrals from different eras. My attention was drawn then, as it continues to be, to the decorative aspects of these places of worship, to the intricately carved marble, the frescoes, and the stonework. This fascination extends to objects such as illuminated manuscripts and textiles. The intricate patterns evoke a sense of wonder in me, creating an awareness of the extraordinary.

Another realm that has prompted in me an awareness of the extraordinary is science. Quantum physics describes the universe as an ocean of particles in constant motion, informing the physical and subtle worlds. It provides one way to understand the unseen energies moving in and around us, using the language of particles and waves. For some people, science fits the framework of a belief system and works as a path of inquiry, of seeking the truth. For this reason, the field of science is considered in my work as a tradition alongside world religions.

My fascination with these meeting places, where the ordinary becomes extraordinary, continues to inform my paintings. My research of the decorative elements of differing cultures is accompanied by a love of beauty in the natural world. Often the imagery that becomes source material for my paintings depicts botanical shapes. I appreciate the palettes unique to different cultures, and I enjoy the variety of forms. Yet I’ve also noticed the bridges between the visual vocabularies of different traditions. The designs bordering the text in a French 15th-century illuminated

‘The Gates Made of Light Swing Open (Midday/ Dhuhr)’ ‘Reorientation’ is a series referencing the idea of a daily schedule of prayer and contemplation in different traditions. The schedule provides a framework for the exploration of how individuals continually reorient themselves to what has meaning to them. This painting explores the hour of noon, when the sun is at its peak. ‘Reorientation’ was funded by a grant from The Regional Arts & Culture Council in Portland, Oregon.
manuscript evoke the Islamic designs found in the tile-work adorning the walls of the Blue Mosque in Istanbul. The electron traces from a bubble chamber revealing the swirling and spiraling paths of these particles echo the patterns on the painted walls of the Darga of a Sufi saint in Konya. Perhaps these visual languages have informed each other, or maybe there are only so many shapes to work with. Yet my attention in my exploration as an artist is drawn to the underlying intention of these designs. My curiosity has focused on the idea that these visual components offer something beyond their role as decorative elements. What if these patterns and forms found in sacred objects and sites invite the viewer to connect with a broader view than what is found in day-to-day life? Is there a bridge here to contemplation of the eternal? With these questions, my paintings become an exploration of the numinous.

In an essay about my most recent body of work, the art critic Richard Speer wrote the following:

*Beyond their material luxuriousness and immaculate compositions, the works pulse with ideological underpinnings, embedded in imagery referencing many of the world’s belief systems: Christianity, Islam, Judaism, and Buddhism, as well as polytheistic and pantheistic traditions from Europe and the Far East. There are also motifs from science’s parallel inquiry into the nature of existence and humankind’s place within it, particularly in scientific tables, graphs, and electron tracings. The works become a kind of melting pot, expressing the freedom of self-discovery and the choice to subscribe to whichever belief systems allow the individual to answer with a maximum of compassion and awareness the universal human question: What am I here to do in this life, and how does that relate to my personal inquiry into the nature of a divine awareness?*

I want my work to invite the viewer into a contemplative state. Each painting may be considered a world, offering the viewer entry into this place, leaving behind the mundane and allowing room to encounter the Mystery. This space is inside the viewer. Sufi philosophy speaks of the inner world as the macro world and the outer or physical world, consisting of the whole universe, the micro world. Indeed, our sense of wellbeing is most often generated from our internal perceptions and beliefs.

The history of art contains centuries of human creation of a religious nature across many cultures. Sculptures, mosaics, frescoes, altarpieces, textiles, books, and paintings of all shapes and sizes depict the various deities according to the culture of origin. Sacred texts and sacred places are adorned with figures referencing the beliefs and central figures of their given tradition. This art references the Creator and the created world. The language of symbols within each culture is revealed here. The focus of my own work is less about painting the figures and symbols of religious traditions, and more about making art that points toward the divine presence, to the remembrance of the One who sent me.

Tamara English lives and works in Portland, Oregon. In addition to exhibiting extensively in the Northwest, English’s oil paintings have been exhibited in London, New York, Chicago, Boston, Washington, and Atlanta.

*‘We Live In The Night Ocean Wondering What Are These Lights II’ This painting is part of the body of work ‘Majesty Within.’ This particular series explores the notion that one swims in the ocean of remembrance at all times. The central focus of this series is the idea the mystics speak of, that one is moving through the watery depths full of longing. The key is to allow oneself to realize this ocean is inside and around us, and that each of us is a drop in the ocean.*
Everyone should have a favorite word.
The word that crowns my linguistic pantheon begins with a growl, but ends with a delicate whisper. It carries layers of meaning which elude the most canny readings, but which touch us all. The word that sits atop my throne is: Grace.

It is a word that was forever on the lips of my grandfather, builder of boats and ships. The fluid lines he framed would touch one definition of the word, while the charismatic faith that sustained him would engage another. It has brought, to an array of languages now, a complex mosaic of meaning and hinted inference, and its cognates form a semantic family unrivaled, perhaps in any language, for depth and texture.

Among the several resonant shades of meaning conveyed by this delicate word is one used by contemporary Goethean scientists (yes, they are still around), who use the word to indicate a technical quality of plant growth, among other things. They use this word to describe the fact that, in the part – in the pine cone, in the maple leaf, in the pinnule of the fern – we see reflected the form of the whole plant, the entire pine or maple or fern. We see a kind of miniature expression of the whole plant in its fractal extremities. This phenomenon they call Grace.

In important ways, the obscure use of this word aligns with more conventional ones. We speak of states of Grace that, we could say,...
describe the sense that our life, or some segment of it, reflects the larger ordering of the universe. Our actions and experiences flesh out the larger pattern of things. We see the big picture in the little. And while a narrower reading of this term as favor or kindness or mercy can be seen to stem from somewhat prosaic social models of exchange, there are ways in which even this use can reach as widely as human language can to address the basic facts of creaturely existence. If you are reading this, then you are alive. The unfathomable improbability of that fact—or its equally unfathomable inevitability, depending on how you see it—should stagger each of us into silent gratitude over and over again. Clearly, unavoidably, regardless of our circumstances or beliefs, we are all being shown some measure of kindness. And we respond with that other cognate of Grace: Gratitude.

Further, “it is Grace, nothing but Grace, that we may live in community,” to borrow from Bonhoeffer. But what is community? What binds a collection of individuals to a common purpose and ethos? What commits them to share burdens and combine action, so that the whole truly becomes a distinct entity greater than the sum of the parts?

The question itself may not be the frequent focus of architects, designers, and artists, but it is a valuable consideration for the design and appointment of worship spaces. How often do we read in these pages what every pastor and rabbi knows: that the church or synagogue is not made of brick and mortar, but of people? (Perhaps not often enough.) The congregation is what the church is made of. The synagogue is composed of the people who worship there. So shouldn’t the actual bricks and mortar—and pigment and glass—reflect this? Shouldn’t the material expression of this dynamic social reality take seriously the question of who these people happen to be? Shouldn’t the worship environment be as much an expression of the worshippers as are the services that it shelters?

Surely community itself is this; that we see the whole reflected in each part. Surely it is that, in each member of a community, we see some portion, some image of the values, the goals, the sensibilities shared (to varying degrees) by the entire group. This is what makes a community. Grace, nothing but Grace, is what makes a community.

**Grace in an Image**

So how might an artist or a designer capture some sense of this Grace? Whether speaking of the social aspect of life-in-community, or of the existential aspect of our own individual lives, how might the artist show, in image or
ornament or the arrangement of a space, some sense of this glimpsing of the whole within the fragmentary? When we are engaging a community, how might that community become itself an active participant in this expression?

“Aldri vis dårer halvferdig arbeid,” my grandfather used to say. Never show fools half-work. Well, so it wasn’t the most generous way to express the sentiment, but I think we all know what he meant. Today, it seems to be all that I do. For one thing, the approach I am describing here has yet to find its full expression in a completed project, despite several promising starts and ongoing concerns.

For many years now, since long before I was aware that I was doing it, I have been using fragmentary sections of larger patterns to create visual art and develop ornamental motifs. This glimpse of larger patterns engages something essential about what art can do, what liturgical art should do. The partial glimpse does not expose the whole pattern, does not promise the full revelation. It invites the viewer to participate in the image by completing the hidden parts. Knitting together logic and imagination, the viewer completes or extends the form only partially shown, continuing the pattern past the boundaries of the image, indefinitely.

This is, by design, showing half-work. But it is also suggestive of what may be the cornerstone of the worship experience; why we gather to engage in these odd acts and orchestrate these peculiar experiences. We gather for worship to participate in the larger pattern of things, and to be made aware of this participation. In the artwork as in the liturgical tradition, we are not shown the whole pattern. Significantly, we do not have to see the whole pattern to participate in it meaningfully. Traditions that claim this or promise this do so tethered to vanity.

The Path Already Known

I steal all of my best ideas from my children. It was in working with my daughter on some small collaborative project that I (we) first developed the idea of weaving stencils together to form a repeating pattern, which can then be shown partially. Opening the process further to collaboration with a community of people proved a natural progression, and began small enough. When friends would visit, we would corral them into spending ten minutes with paper and scissors. Still furtive, I coaxed my small worship group to snip away in prayerful silence. Later, I would assemble the resulting shapes into larger collages. These would then be arranged into still larger, often radial patterns. Radial patterns, even without the center shown, draw us to reflect instinctively, unconsciously, on the center, the focus.

Most parishioners, or members of most any gathered community, will usually be unversed in the disciplines of visual expression, which involve some ultimately fairly technical methods to suspend the critical mind, and thereby un-impede the creative faculties. How do we get them to free themselves from the constraints of self-consciousness, and commit themselves freely and fully to laying down a small glimpse of their soul onto paper?

Removing the pressure to do just that is critical. Play is one important approach. Children’s scissors and craft paper communicate that we are engaging in play. I will sometimes tell a group that the paper and scissors they are using have been engaged in a long conversation, that they know the shapes which want to be cut, and that it is the task of the participants to allow the scissors to travel the path that the scissors already know.

Doodles are another important resource for generating the materials for the artist to arrange. Have the participants doodle during a sermon. Seriously. Sunni Brown has done some fascinating work on the way doodling works on the brain. Contrary to standard classroom models, doodling actually helps listeners retain auditory information. It is as if we hear words more deeply when we answer them spontaneously with image. Now the pastor is involved as well, with crafting a sermon or selecting a reading that will activate the imagination. This may seem like anathema, but it doesn’t take much to create a service that is enjoyable—which is to say joyful—unexpected, and fully engaging.

Graphic items are not the only way congregants can contribute to the effort. Words—favorite words of the individuals in the group, ahem—can prove to be the stuff, the raw materials for the Workings of Grace. Let the visiting poet, the resident songwriter, craft these fragments into a larger whole.

In a recent service, two musicians, one playing flute and the other a ceramic gourd-like recorder, issued a kind of call and response variation from the left and right sides of the sanctuary while the congregants snipped away at craft paper. The left/right musical stimulus was intended to activate alternating hemispheres of the brain, firing up traffic in the corpus callosum, and initiating (as it is understood) a more full-brain engagement with the process.

While they might seem distracting or just silly, the intention with these approaches is to orchestrate a suspension of the critical faculties that can dominate and paralyze our creative capacity. Creativity is the product of surprising associations. Dispersed areas of the brain have to be interacting for this to come off well. Other exercises geared to activating the ontological imagination, to relinquishing the sense of control, to gently subverting the experience of individual identity, etc. (all activities usually worked in to the weekly service to some degree), are also fertile ground for exploration.

Pattern perception is a cornerstone of consciousness. We are creatures who seek patterns everywhere, find them nearly everywhere, and frequently see them where they don’t belong. Recent studies have shown fascinating correlations between pattern perception and loss of control. While these studies have been, to date, incomplete and flawed, they are highly suggestive for the adornment and arrangement of the worship space.

Given the prominence of pattern in liturgy—in the service, in the liturgical calendar—and in religious sensibility generally, it is curious that pattern is not featured more prominently and more frequently in the contemporary liturgical setting. But pattern, frankly, just isn’t what it used to be. Obvious patterns, easy-to-untangle patterns, which do not gently challenge the mind and unfold over time, will often come across as superficial graphic ornamentation, space filler, cliché. Barring other strategies to surprise the mind and awaken the senses (texture, color, etc.), facile patterns will read as background noise, subverting the larger sense of pattern we should be engaging.

The sanctuary is by definition a place of safety. But in our post-holocaust, pluralistic world, we should not be providing an environment that is easy to read, that resolves itself obviously. We should be providing one in which the members of that community see themselves reflected, see themselves as active parts of the larger pattern. We should be providing an environment that, on every level, witnesses the workings of Grace in a complex world.
Whether Nicholas of Cusa would have wished his theological meditations to be paired with those of a 20th-century Estonian Jew, or whether it is worth speculating on Louis Kahn’s reaction upon seeing his words written alongside those of a late Catholic mystic, nevertheless seeing the parallels between this spiritual writer and this architect is instructive.

However, in thinking about the proliferation of churches since the Second World War, and the corresponding large body of written works during this fertile time that attempt to define the nature of a house of God, perhaps these thinkers have something very important to tell us.

Light is used by each of them to express the sense of the infinite – God – or the immeasurable. From the sphere of the infinite, light, “is not seen or known in any other way than it reveals itself, since it is invisible, because it is higher than and antecedent to, everything visible.” The relation between light and perceptible things is exactly echoed by Louis Kahn when he writes that all material in nature, “…the mountains and the streams and the air and we, are made of Light which has been spent, and this crumpled mass called material casts a shadow, and the shadow belongs to Light. So Light is really the source of all being.”

This profound feeling and respect for that which is not visible and is manifested only through a less perfect medium of material is ultimately what makes Louis Kahn’s architecture so revered today. Clearly, this sensibility is manifested in every inch of the hallowed stone of the Gothic cathedrals. It exists in a less exalted but equally profound form in the Cistercian monasteries; the pilgrimage chapel at Ronchamp and the monastery of La Tourette in France; in the tiny nondenominational chapel in rural Arkansas by Fay Jones; and in the round chapel at MIT, designed by Eero Saarinen.
What is often disappointing and only naively surprising, was that out of the hundreds of churches constructed in this fertile post-Vatican II period, few are able to express, with like force, a similar expression of the transcendent. Perhaps not so surprisingly. For upon examination, much of the Vatican II literature focuses on the programmatic needs of the new religious spaces, the users, the communities the structures would house. While revolutionary in its focus on the great communities of faith--the people--the literature seems in retrospect, silent, too silent, on the most primordial function of sacred spaces. In response, it was a rare thinker or designer who attempted to acknowledge that a religious structure should aim to embody the sense of that which is beyond human grasp, beyond human reason, and beyond human will. Too many of these churches seemed weak and ineffectual and sometimes ill-suited to their larger purpose, and could only be explained in terms of what was left out, for the most part, by the writers of the Vatican II literature – the sense of transcendent humility endemic in the relation between our imperfect humanity and God, at least the Judeo-Christian God.

By broadly calling for a church to attempt to give “formal expression to the force of mystery and also something of the sense of wonder of the old cathedrals,” we are admitting to the potential of architecture to symbolize meaning through its form. But different levels of symbolism exist, making it the task of the contemporary architect to approach the problem carefully. One of the most often repeated arguments against the use of symbolism in Modern churches is that its imagery is outdated and no longer speaks to us. Perhaps these criticisms are pertinent to many of today’s religious communities. But it is a jump from this criticism to say that a work of art, to be Modern, must leave the expression of meaning-through-form to other artistic and cultural expressions.

One approach to symbolism in early post-Vatican II churches was to rely on the power of structural and material expressionism, especially in the use of concrete, in the case of Nervi, or brick, in the case of Eladio Dieste, to create churches which have inherently powerful forms of plasticity and sculpture. At times, in the hands of lesser masters than these, this symbolism is no less literal than traditional religious imagery – from praying hands to tents, to churches in the shape of a cross. The danger, of course, is that, like any art form that exploits merely the literal agency of a graphic symbol, they run the risk of being perceived as simple caricature. But when brought to life by Dieste or Nervi, these churches evoke the most profound feelings of the sacred. One of the most essential attributes of architecture is its ability to express a quality of light. In the 19th century, Schopenhauer characterized
the special relation that exists between light and architecture:

I am of the opinion that architecture is destined to reveal...the nature of light....The light is intercepted, impeded and reflected by the large, opaque, sharply contoured and variously formed masses of stone, and thus unfolds its nature and qualities in the purest and clearest way, to the great delight of the beholder; for light is the most agreeable to things as the condition and objective correlative of the most perfect kind of knowledge through perception.

The divinization of light is an ancient theme, one that reaches back far beyond Christianity, far beyond Hellenistic art and philosophy. The symbiotic relationship between architecture, the divinities, and light persist today, and continue to be seen in the most moving of our Modern sacred spaces. Within the Western tradition, the words of certain medieval thinkers resonate, even today. The great Cistercian abbot of the 12th century, St. Bernard of Clairvaux, was very influential in prescribing the form of the Cistercian monasteries and churches constructed during his lifetime, even of those constructed for several centuries afterwards. He held numerous strict injunctions against the use or ornamentation and decoration in his churches, and at times his dogmatic writings echo Modernist exhortations against the same. But his purpose was entirely different, though it relates in a far diluted form to our questions at hand. St. Bernard writes, "Remove what is superfluous, and thou shalt see an increase of what is good and necessary. What thou subtracted from superfluity, is added to utility."

His desire to create a holy place of purity was to aid the monk along his struggle to contemplate his God, and this struggle was often illuminated using the analogy of light: "The approach [to God] is not by a physical progression, but by flashes of succeeding light, and these are not corporal but spiritual....The soul must seek the light by following the light."

In François Cali's very beautiful book, Architecture of Truth, the above quote is paired with a photo by Lucien Hervé, which shows one wing of the medieval cloister of Le Thoronet, its heavy stone piers illuminated with bright stripes of light, the rhythm between shadow and light almost hypnotic against the rough grained porosity of the stone. The medieval cloister of Le Thoronet (images of which are shown in this article) commands a powerful unity of its materiality. The sense of the three-dimensional space as defined by a collection of two-dimensional planes is lost here. The stone of the floor, walls, piers and steps combine to create the impression that the place is a single vessel, a container for light. Light illuminates this container, and, one senses, changes the entire nature of it, as it moves throughout the day. But as
light shapes our perception of the space, there is the sense that the purpose of the container is to hold that light and bring us to notice it. The sense that light is a physical presence whose existence is to be pondered is heightened by the fact that the source of light is concealed from us. It enters the space through the thick spatial barrier of the outer stone colonnade, and as it moves through space as it softly illuminates the texture of the piers, then almost blindingly flashes on the pavement, practically erasing the delicate tracing of the ceramic tiles. It strikes the instep of the stairs, still differently, asking the observer to note yet another quality of itself as it again meets stone.

The interaction between light and texture point out another quality of the cloisters: within the unity of the hall there is great variety in the ways that stone and light reveal the nature of one another. This quality is also seen in the pilgrimage chapel at Ronchamp as well. There Le Corbusier has used two materials: light and stucco over concrete, and has captured the nature of each, by varying the interaction between the two, from the sharp blinding slit between roof and wall, to the softened glow against the cavity of the windows. The connection between the spirit of Le Corbusier and of Le Thoronet is well known. The preface of Cali’s book was written by Le Corbusier, and the monastery of Le Thoronet was suggested to him by his client as a precedent during the design process of the monastery of La Tourette. Corbusier’s very short preface echoes some of the above thoughts on the qualities of material and light: “The way stone is dressed takes into account every fragment of the quarry’s yield; economy coupled with skill; its form is always new and always different.… Light and shade are the loudspeakers of this architecture of truth, tranquility and strength. Nothing further could add to it.”

No verbal description of the qualities of a beautiful and holy place is ever adequate enough to inform the creation of such a place, but the above thought calls to mind two smaller, American chapels, the MIT chapel designed by Eero Saarinen, and in the hills of Arkansas, the nondenominational chapel designed by E. Fay Jones. Both of these churches have qualities similar to the above examples, though interpreted through entirely different materials. Saarinen’s chapel is inverted, with no direct reference to the source of light; it is mysteriously emanating from beneath the brick walls. The light is received softly here, and the interactions between light and brick are very subtle, and are interpreted brick by brick by brick. Each brick as a unit participates in the playing out of the theme as texture and light unite to create a perfect whole.

The quality of the enclosure is not duplicated in Jones’s Thorncrown Chapel. The structure is completely open and airy, and seems to merge invisibly with the young hardwood forest it is situated within. Here, the light is not calm, but perpetually moving from one thin strand of structure to the next. The light is not contained in the building, but is contained in the forest; the verticality of the structure pulls one’s view out beyond its walls, out through the trees and higher to the sky. There is the same quality of unity within the structure that we see in the stone cloister, the building is a three-dimensional volume, though this time it does not capture light in order to contain it, but instead, intensifies it through almost vibrational motion. The interaction between light and structure is equally unique, for the thinness of the many pieces of the structure intensify the feeling of light in motion, and that play of light seems to accentuate the thin, tensile qualities of the structure.

These two very different examples of powerful Modernist sacred spaces, especially in their interaction between light, materiality, and structure, point to the complexity of drawing specific functionalist conclusions. However, the symbolic power of a work of architecture, its power to evoke emotional responses through rendering light and materiality to create beauty, remain one of the most primal human experiences. For as the essential orientation of the sacred belief structure is to express what lies beyond finite understanding, then more than words, or figurative images, there is no better medium to employ than the very abstract and yet very concrete language of architecture. 

Susan Jones is the principal of atelierjones in Seattle, Washington.

NOTES
American Mosques and Islamic Spirituality

By Maryam Eskandari

I am in love with every church
And mosque
And temple
Because I know it is there
That people say the different names
Of the Divine

~ Hafiz

The author at the photo exhibit: ‘SACRED SPACE? Places and Spaces in Contemporary American Mosque’

After a decade of practicing Modern and contemporary architecture, I started to ponder the preconceived notions of “mosque architecture” and “Islamic architecture.” What defines Islamic architecture? What are the spiritual aspects of the architectural elements that define a mosque or a prayer space, and how does space become sacred? Why is a dome necessary for ideal Islamic architecture? Furthermore, if it is necessary, why wasn’t the Ka’ba built with a dome? The Hagia Sophia, originally a church with domes, later became a mosque, implementing architectural elements incorporated in Islamic culture and the spiritual aspects of the architecture. What defines Islamic architecture? Furthermore, if it is necessary, why wasn’t the Ka’ba built with a dome? The Hagia Sophia, originally a church with domes, later became a mosque, implementing architectural elements incorporated in Islamic culture and the spiritual aspects of the architecture.

I knew that there is an ever-present demand for mosques to accommodate the 8 percent Muslim population residing in the United States. Moreover, from the growth of the new generation of Muslim youth and American converts, I knew that new Islamic Centers are needed in American cities. Most of the discussions of mosque space take place after Muslims visit the Ka’ba in Mecca. The Ka’ba is the primordial temple, built, according to the Islamic tradition, by Adam and then rebuilt by Abraham as the earthly reflection of the celestial temple, which is reflected in the heart of man. As the worshippers circulate, making tawaf (pilgrimage) together, and fulfilling one of the five tenets of their faith, they are visually connected with the notion of spirituality in this holy site, a place of deeply meaningful ritual practice for Muslims.

Even with such a remarkable archetype of sacred space, the 2,106 American mosques or Islamic centers built throughout the United States have been struggling with the issue of space. Oftentimes these retrofit buildings raise specific questions about the Muslim-American identity. Thus, we set out to experience and investigate firsthand, coast to coast over a span of three months during the summer of 2010, the American mosques throughout the United States. The traveling exhibition, “SACRED SPACE? Places and Spaces in Contemporary American Mosque,” exhibits 150 American mosques. Since March 2011, the photo exhibition has been on display in various cities: Boston, Washington, and San Francisco, with forthcoming exhibits in London, England, and a rescheduled display in Damascus, Syria. The traveling exhibition is derived from the concept of the cube, inspired by the shape of the Ka’ba; because the Ka’ba is a primordial temple built by Adam and then rebuilt by Abraham according to a pluralistic architecture, and because it is the center of the Islamic cosmos, it is the sacred architecture of the whole Islamic world. The cube in the exhibition mirrors this, except that it is taken apart and separated to create three interior spaces, a reflection on the three Abrahamic faiths.

One can conclude that through the 150 case studies, the American mosque is a new type of building that is being developed in the urban context of American society. This new building lacks any historical literature and often finds itself in the absence of the discourse of originality and aesthetic development as it weaves itself into the American context. To understand this new building type – the emergence of a new theological design vocabulary and programmatic space that is articulated in the architecture – is to first understand the human expression, cultural integration, and Islamic jurisprudence that are derived from the users to erect a form. The American mosque comprises users from various backgrounds: immigrant Muslims, converts, and American-born. Thus, it is a challenge to integrate this syntactical hybrid design and to satisfy all demands.

The word mosque is derived by the Arabic word masjid, which literally means a place to make sujud or to prostrate oneself. Mosque spaces in America are often designed as a direct reproduction of similar templates found in Muslim countries from Muslim immigrants’ homelands, creating a space that is often nostalgic. However, the more profound and the most beautiful mosques built in our nation have focused on the spiritual aspect of creating an “extension of the space of virgin nature.” Documenting all these Islamic centers and mosques, I found four specific mosques to be very singular, particularly in trying to respond to their surroundings, whether historical or in creating an architectural design that resonates in the context of its surroundings.

For example, the Islamic Cultural Center of Washington, commissioned in 1949 and designed by Mario Rossi, plays on the notion of memory “by recalling the past. Rossi’s design for the mosque makes a statement about memory and image…using traditional crafts and calligraphy that were imported from Turkey, Iran, and Egypt, along with the craftsmen whose skills were engaged in the decoration of the mosque.” This mosque was to be a precedent for others in the United States, representing all the Muslim countries. Upon its
completion in 1957, at the grand opening in June, President Dwight D. Eisenhower stated: “Indeed, America would fight with her whole strength for your right to have here your own church and worship according to your own conscience,” and praised the mosque and the Islamic world, stating, “traditions of learning and rich culture... for centuries contributed to the building of civilization.”\(^6\) The Islamic Center of Washington, D.C. became the icon of the American-Muslims, particularly the Mamluk-Egyptian minaret, to be the “beacon of light,” and the node for the embassies on Massachusetts Avenue.

“God is the Light of the Heaven and the Earth” (Qur’an 25:35). Building on the holy books, the Torah and the Bible, the Qur’an reiterates that “God is the Light”; thus in mosque architecture, the minaret was to be the “beacon of light,” and the node for the embassies on Massachusetts Avenue.

In fact the word minaret derives from the Arabic \(\text{al-manarah}\), which literally means the place of light; this is “the Light which defines the spaces of Islamic architecture and brings out its geometric clarity and intellectual lucidity...and creates a sense of presence of the One...”\(^7\) However, three decades later, Skidmore, Owings & Merrill (SOM) virtually eliminated the minaret and focused primarily on the dome.

SOM was commissioned in 1987 to build the Islamic Cultural Center of New York. SOM decided to redefine the American-Muslim identity, departing from “cultural nostalgia” and instead embracing the American-Muslim identity through a Postmodern design. Mimicking Yamasaki’s “weaving” of Islamic architecture of the World Trade Center,\(^9\) through a Modern approach, SOM often found itself developing a Modern mosque design as they had to meet the requirements of 46 Muslim countries, particularly the main sponsor, Kuwait, who had demanded that the 96th Street mosque be the “iconic mosque” of America. In response to this, SOM designed a Postmodernist mosque with a prominent geometric dome, also allowing only one-fifth of the main prayer-hall for women worshippers, which set the precedent for future mosques in the U.S. to allocate only a minimal separated zone for women worshippers, rather than one grand space similar to Mecca. The Postmodernist dome created a new architectural vocabulary in Islamic architecture. Similar to church architecture, the dome symbolizes the One, and the base of the dome represents the angelic order, while the four-sided base represents the earth. One is able to witness the vitality of domes in both Christian and Islamic architecture through the work of 16th-century artists and architects, such as Michelangelo’s St. Peter’s Basilica and Sheikh Baha’s Friday Mosque of Isfahan.

The other 100-plus Muslim prayer spaces in New York City are unique on their own. Each "storefront mosque" exemplifies Delirious New York.\(^10\) Moreover, the other 2,000 mosques throughout the U.S. are just as singular. Whether they are under the category of

NOTES
1 Hafiz and Daniel Ladinsky, \textit{I heard God Laughing: Poems of Hope and Joy} Renderings of Hafiz p. 15
7 Grabar, Oleg, \textit{The Formation of Islamic Art}, 1973, pp. 43-44
9 http://slate.me/ff-mtc
11 Sahih Muslim, Vol. 1, p. 199, Mishkat, p. 512
12 Qur’an, 38:71-72
“storefront mosques,” “garage-mosques,” or “retrofit and box mosques,” each center across the country is challenged with design problems to meet the needs and demands of the users and to accommodate the American-Muslim community; but each building should also have the ability to serve the community, practice sustainability, celebrate the American culture that surrounds it, and be a design solution that can be easily fabricated in American urban context. Granted, the Islamic Cultural Center of Manhattan by SOM and the Islamic Cultural Center of Washington, D.C. differ in design and form from one another, as is apparent in the Dar Al Islam mosque in Abiquiu, New Mexico. In the early 1980s Egyptian architect Hassan Fathy designed one of the most sustainable buildings and Islamic Centers in America, prior to sustainability becoming an initiative. The Dar Al Islam design resonates in the desert landscape and truly redefines the concept of “the whole earth as a mosque” or masjid, place of sujud, reminding worshippers of their responsibility to take care of our planet. Just as we were created from mud and water, we return to our primordial condition once the soul returns to the Divine and the body is returned to earth.

Three preferential Islamic Centers in the San Francisco Bay Area are the infamous garage mosque otherwise known as the “lighthouse mosque,” and the two retrofit and box mosques, the Islamic Society of San Francisco and the Islamic Cultural Center of Northern California. The lighthouse mosque has produced some of the brightest American Islamic scholars, such as Zaid Salim Shakir, who has been praised by Georgetown Professor of International Affairs John Esposito as one of the “most influential” American Muslims and has been working with Professor Cornel West to develop the “Martin and Malcolm Slide Show,” a project that celebrates the lives of Martin Luther King and Malcolm X. The Islamic Society of San Francisco was originally the infamous 19th-century Prager’s Department Store on Jones Street. Under the guidance of the San Francisco Architectural Heritage, it has now been renovated into a mosque with one large prayer space, emulating Mecca’s setting and accommodating all worshippers. Lastly, the Islamic Cultural Center of Northern California (ICCNC) was built in 1908 as a Scottish Rite Temple and is part of the Mission Revival Style Architecture Preservation. In 1995 the Temple was purchased, renovated, and retrofitted to meet the needs of Muslim worshippers. The most beautiful space in ICCNC is the main lecture hall, the main nave of the church, which is illuminated with Biblical stained-glass windows, which glisten all around the perimeters of the walls and illuminate the floors with rich and vibrant colors, drawing the eye to the focal point of the nave where “God,” the only Islamic architectural feature, is written in Arabic calligraphy. The rest of the building reminds me of the importance of pluralism: that in order to be a Muslim and to understand the philosophical and metaphysics of Islamic architecture, one has to first believe in Judaism, then Christianity, and lastly Islam. The vitality of understanding the Abrahamic faith is of the utmost importance in creating Islamic architecture; the spaces that we create should remind us all of the One God that is the Divine. As the great Persian Muslim Sufi poet, Jalal ad-Din Rumi once wrote:

I am neither a Moslem nor a Hindu
I am not Christian, Zoroastrian, nor Jew
I am neither of the West nor the East
Not of the ocean, nor an earthly beast
Neither the progeny of Adam, nor Eve
Nor of the world of heavenly make-believe
My place is the no-place
My image is without face
Neither of body nor the soul
I am of the Divine Whole.

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A reflection:

I had crossed this ground – a dusty, worn patch of dry grass on the path from the girls’ cabins to Chuckwagon, the camp dining hall – many times, often with fellow campers, sometimes alone. But this moment was different. In the quiet breeze of a perfect Colorado day, on this bit of path overlooking the vast valley nestled at the base of the Rocky Mountains, I felt God with me for the first time. Unexpectedly, unbidden, I had been visited by – connected with – the feeling of a benevolent presence who loved and cared for me. I was in the presence of the divine.

In the decades since, I have traversed the same spot thousands of times. Whether I am mindful or not, that ground has changed permanently for me. It draws me into a consciousness of the holy and propels me into the next step, and the next, more aware, grateful, and humbled, and tempered by love.

Is this spot a sacred space? If it is, then is not every place and space potentially sacred? And if so, then where is the profane: where is the dividing line that lets us designate and agree upon the spaces that we traditionally call ‘sacred’? Perhaps it was the contrast between my life growing up in the street noise and grime of New York and my summer experience in the vast valley and sky of Colorado that led me over time to want to understand the nature of sacred space and answer these questions. And as I studied and observed, I couldn’t help noticing the difference between the importance of sacred form and building, and my experience on an ordinary day, on an ordinary path.

The binary construct of gender assigns certain characteristics, domains, and activities to men and their opposites to women, like heaven-earth, intellect-feeling, public-private, built-natural, sacred-profane; so the binary, which has men as active builders and leaders of traditional worship space, relegates women to the role of passive occupants. “Architecture…is a record of deeds done by those who had the power to build” (Weisman, 2).

Yet women have active religious and spiritual lives, and as creators and shapers of an alternative and richly varied architecture of the sacred they have found abundant ways and places in which to encounter the divine. Since women have been subordinated in, and even excluded from, many traditional religious worship places, they seek the divine in other, less proscribed spaces to which they might have freer access and where they have freedom to experience the sacred in broader ways, and they have paved the way to a greater variety of spatial design and experience. Viewing sacred experience through a gender lens moves the discussion of sacred architecture from “place,” the tangible, physical, and perceptibly bounded, to the more conceptual and abstract “space,” “constructed from the imagination” (Gold, 24). Welcoming the “feminine” can release the equation of sacred space with religious architecture into a vaster realm of environments for experiencing the divine, especially environments anchored directly in the heart of the profane. Or as Ursula King describes it: “Women seek and find the Ultimate within the midst of life.” (King, 190).

Women employ several distinguishable strategies to make a home for the spirit, and these sacred spaces – like my patch of Colorado grass – are different from traditional worship space. In many cases this sacred space not only expresses the ineffable, it is ineffable. These conditions occur in a range of spaces: physical – personal ones such as gardens, household rooms, studios, women’s bodies, home altars, and shrines as well as public ones like roadside memorials, untamed land, and Earth; relational spaces in families, friendships, support groups, peace-making, reading and literature; temporal spaces, or sacred moments in the midst or outside of the routine; and other intangible spaces – words, ideas, inner space, heaven, and life.

Many of these spaces share a significant quality of women’s sacred spaces: like my camp path they are sacred to the person who names or designates them, but not necessarily to others. In this sense they have an element of “contestedness.” Roadside memorials, for example, impromptu shrines established at places connected with tragic events, are deeply personal, but they are nonetheless usually constructed on
public land and vulnerable to mowing down, removal, or legal restrictions. On the other hand, while not everyone entering a mosque or a chapel – a space built for a sacred purpose – will experience it as a sacred space, most everyone will likely agree that it is one.

In addition to subjectivity and contest, there are several other characteristics of women’s sacred spaces. Traditional, “masculine” worship space is constructed; it has a physical location and borders that distinguish it from the surrounding space; it accommodates a gathering, and so it is built at large scale; it often has a special marker such as a steeple, dome, or large entry; it typically contains limited entry and exit points and is made from materials that give it an air of permanence and fortification, and it is intended to outlive its creators and be invulnerable to attack. All these also serve as metaphors for how the creators of these spaces portray their religion in their communities – important, enduring, and superordinate over the individual. This depiction by no means encompasses all religious traditions. Quaker meeting houses or the early Christian home churches and catacombs, for example, are simpler and less distinguishable from their surroundings, but nonetheless sacred. However, such spaces express a different theology and practice, one that might be cursorily described as having a more “feminine” aspect as well as more equal participation by women.

Women’s sacred spaces conform to no singular model. Unfettered (or excluded) by religious doctrines and traditions, though in many cases still informed and inspired by them, women rely freely on experience, reflection, and intuition to “know” where the sacred is. Women’s sacred space can vary widely from traditional religious architecture in several ways: scale ranging from the infinitesimal to the universal; from the physical, like a home altar, to the nonphysical, like the qualities or values of a loved one; boundaries distinct or indistinct; and borders generally more permeable. Women’s conceptions of sacred space tend to embrace sacred time as well, with the two often even conflated, as in the expression, “I need some space,” a buffer zone of both space and time around the speaker. A sacred moment on a Colorado afternoon melded with the surrounding physical or ephemeral space and in my memory the space and the time are inseparable. An enduring religious monument often stands on its own in consciousness, independent of the sacred events that take place there.

Finally, women’s sacred space is characterized by an ongoing tension between retreat and resistance. Women go to their sacred places and spaces to regenerate spiritually, yet because these spaces are subjective and contested, they contain an opposing element as well, requiring women to resist in some way. This characteristic, to be clear, is not a variable “either-or” but rather this role of space as retreat is held in tension with its function as a place where vigilance is necessary and strengthened.

And how do women create sacred space? From looking at many examples, I have found four strategies:

- Re-appropriating profane space for sacred purpose. With this strategy, women actively produce a new purpose for an existing profane space.

The journey of the labyrinth represents interior spiritual reflection.

In the Plaza de Mayo, women create sacred space from the profane.
space that marks it as sacred, via an act that has sacred meaning. The *madres de la Plaza de Mayo* in Buenos Aires turned the plaza where they marched into sacred space by appropriating it for a political protest, but one with a deeply sacred element: the memorialization of their “disappeared” children.

With renaming, women simply claim it as sacred and thereby give it a new identity. Women who name Earth, bodies, literature, or a journey as sacred designate its sacred nature, and acknowledge its significance and connectedness with the divine, but the object does not change intrinsically.

With re-appropriation, the use of a space changes; with renaming, its identity changes.

With the third strategy, re-experiencing the ordinary and routine as sacred, neither the use nor the identity changes, but how we respond to an ordinary space does. A house is an ordinary, profane space, but some women have found the opportunity to connect with the sacred while engaged in ordinary routines and chores like sweeping and folding laundry. Politics, relationships, inner space, the world, and light, all ordinary “spaces” on the one hand, can become sacred spaces through a shift of perception or a mystical experience.

Finally, women also experience the sacred by creating exclusively female space. In *A Room of One’s Own* Virginia Woolf famously contends, “it is necessary to have five hundred a year and a room with a lock on the door if you are to write fiction or poetry” (Woolf, 115). To have “a state of mind … most propitious for creative work” requires that one become free of obstacles at least for a time (Woolf, 61). Women who lack control over the “door,” possessing no room of their own where they can insist on having sacred time, as well as space, Woolf tells us, cannot fulfill their potential as creators. Nor can they fulfill their potential as human beings in relation to each other, according to feminist philosopher Luce Irigaray. In her essay “The Intimate Requires Separate Dwellings,” she explains: “To open to the other, we need to preserve proximity within ourselves […]. The dwelling places to which one returns […] are made of our flesh, our heart, our thinking and our words and they are not always visible, but they exist.” (Irigaray, 6-7)

Surely it is in the realm of “inner space” that time and space blend most fully and women have the opportunity to create the most autonomous sacred space. Women explore inner space through prayer, meditation, and the creation of expressive or contemplative objects such as journals and mandalas. It is a space where women may actively undertake the process of self-germination and creation. This discovery and re-creation of the self can happen anywhere, at any time, making it possible for inner space to sacralize any external space. Women’s experiences in inner space, in turn, can provide the new perspectives and the inspiration and impetus to transform external places and their uses.

Increasing recognition of women’s agency and voices has permeated and inspired mainstream culture and in recent decades has caused designers of traditional worship space to become more receptive to alternate conceptions of sacred space. Not incidentally, the inclusion of myriad voices has also contributed to releasing theory from the constraints of the binary.

We are already seeing a transformation in the “architecture of the ineffable” in the Postmodern era with the design of worship space that more deeply invites the experience of the subjective within the collective religious experience. Further implications of this reconception might include:

- Broadening the idea of what and where sacred space is.
- Creating more non-traditional spaces that vary in scale, permeability, borderedness, temporality, and ephemerality.
- Incorporating more horizontality (the immanent and ordinary) and circularity into sacred space.
- Integrating women-centered rituals, experiences, and imagery.
- Engaging women in creating space that is exclusively female but not subordinate, within a larger worship space.
- Making more profound connections with the site and the surrounding environment, the community, and nature.
- Celebrating the sacred experience (time) at least as much as the form (space).
- Inviting the worshipper to a personal connection between the immanent and the transcendent.
- Being comfortable with allowing the experience of ambivalence to occur in worship space.
- At the same time, reflecting and accommodating the desire for healing.
- Above all, on a very practical level, asking a whole spectrum of worshippers and others to reconceive of their sacred worship space, through questions that lead them beyond traditional concepts.

Women are pioneers of spiritual space. As pioneers, women have bypassed the dichotomy of sacred and profane and taught that everything important and real is sacred. Women have redefined time and space. Rather than being the victims of the hegemony of finite, external place, women are free, to a much greater extent, to inhabit inner space, a space for inspiration, growth, change, and redemption. Ultimately and primarily, women’s sacred space is inner space, and it is thus unbounded and unconstrained. In fact, it is infinite. It is infinity. Rather than the straight lines of the axis, the obelisk, and the grid, women’s imprint on space is the circle, all-inclusive, like a round table without hierarchy, like the circle the *madres* left permanently, invisibly etched on the Plaza de Mayo.

Grounded in a connection to self, first, in a journey of creativity, self-discovery, and on-going self-creation and re-creation, women find the sacred in connecting with all of life. The sacred experience and message that women bring back to all humanity is that the “City of God” is not a man-made creation, but heaven within.

**Nancy Alexander** is interested in the contribution of women to the evolution of humanity, particularly through spirituality and the shaping of the spiritual and built environments.

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The internal walls of the Scrovegni Chapel in Padua, Italy, are decorated with an astonishing cycle of frescoes by Giotto, a masterpiece of the Gothic period as well as a masterpiece for the Western art, second only to the Sistine Chapel by Michelangelo. The frescoes, which narrate events in the lives of the Virgin Mary and Christ, cover the entire walls and were frescoed by Giotto at the beginning of the 14th century. On the wall opposite the altar is the grandiose "The Last Judgement," which concludes the story of human salvation. A recent restoration of the chapel highlighted the importance of the preservation aspects of this work, and specifically the importance of the historical stained-glass windows that date from the 17th century, which not only function as a filter between the inside and the outside, but are the eyes of the chapel onto the world.

The restoration team of the Council of Padua, the University of Padua, and Progetto Arte Poli carried out the preservation and restoration work of the stained-glass windows, blending together the knowledge of history and a restoration intervention which responded to the various aesthetic requirements of this sacred space, such as the existing relationship with the recently restored Giotto's frescoes.

The condition of the windows was severe: the lead came was weak and there were many panels warped towards the outside due to the excess pressure and detached from the support metal rods. Many roundels were broken or missing, the apse and the sacristy stained-glass windows had no external protection glass and were particularly deteriorated, while the stained-glass windows of the nave were particularly dusty. Frames were not perfectly sealed; in fact there were no gaskets, which allowed...
generous air infiltration, making it virtually impossible to control the microclimate.

The restoration work focussed on beauty and strength. Each panel was restored by strengthening the lead came and gluing or replacing all the tesserae (small square tiles of glass) that had deteriorated. Iron frames were restored, considerably improving the barrier between the inside and the outside. The restoration and preservation intervention enhanced the temporal qualities of the windows and their aesthetics: the stained-glass windows exude history; the breaks were fixed but still visible; the ancient binding lead components (which harmoniously match with Giotto’s frescoes without interfering with them) enhance the entire architectural space; a renewed brightness enlivens the interior and the artwork.

Dismantling, Shipping, and Documentation

Before the windows were removed for restoration, in-situ graphic and metric survey of the sections of the stained-glass windows were carried out. A wood and polystyrene container for each glass section was fabricated to easily transport it. After removing the sections, they were packed into boxes wrapped in rice paper sheets and bubble wrap and transported to the workshop. After securing the boxes, each was opened and the windows carefully removed, handled in such a way as to not further stress the panels or damage them. Then a photo was taken of each section under transmitted and reflected light to highlight the deterioration status of the roundels and the lead came.

A graphic survey of each section was then digitized in AutoCAD, and the technical characteristics were listed, as well as the composition of the drawing. A complete mapping of the preservation status of each window was carried out, which contained the deterioration status of the lead came, the strength of the anchoring elements, the warped areas, the breaks, the missing Venetian roundels and crosses, the differences in the dimensions, and the colors of these elements.

Samples from the already deteriorated glass elements were taken, and analyses were carried out by the scientific group. As for the stained-glass windows in the apse, the nave, and the mullioned window with three lights, both the sampling operations and the analyses were carried out directly at the laboratories of the University of Padua. Progetto Arte Poli’s analyses were carried out by R&C Lab.
Cleaning

Analyses revealed that welded lead was particularly deteriorated; indeed its ends were covered by a reddish oxidation product. Although the cause of the rust could not be pinpointed, we believe it is probably due to the fact that lead was not cleaned after being welded and there was acid in the welding. The components were cleaned with White Spirit to remove the oxidation from the surface, which did not allow the natural oxidation of the lead underneath. The cleaning trial with isopropyl alcohol was particularly successful, since it was possible to remove both the upper dusty patina and the stains of biological origin. White Spirit was also used to remove the stains of black varnish (used to coat the external grids) and the brown stains (a product similar to Fidoil).

Restoring the Tesserae and Lead-Sealing

Gluing trials were next carried out, which highlighted the validity of the intervention project. A UV-hardening acrylic resin was used to make the glass stiffer and stronger over time. The glass used for integrations was mouth-blown, made in the same way as the ancient techniques, fabricated by the German company Glashutte Lamberts. Each roundel was made up of a circular glass tessera, obtained by processing fused glass without cutting slabs. Skilled master glassmakers created them one at a time, precisely shaping each to a desired thickness. The gaps between the roundels in the lead came were filled by transparent flat glass stars, in this case with four points because of the position of the roundels. The copper wires were removed with the help of a welding machine and a specific product for welding. The lead and the glass tesserae were then cleaned using solvents and some absorbent cotton.

Where possible, the glass tesserae were glued without removing them from their original position. This operation was particularly useful in those areas where re-handling the whole lead came ear was a too invasive intervention to be carried out. However, this operation was not particularly precise in terms of gluing. Instead, the glass tesserae were removed to obtain a better result. In the areas where lead components were not overly deteriorated, skilled operators lifted up the came ear and placed it back to its original position without further damaging the section. In the areas where lead components were particularly deteriorated, the ear was integrated with lead laminas (this operation was not carried out for

Restored apse windows.
the stained-glass window of the sacristy, since it was not needed). All the lifting and integration operations were carried out outside the chapel to reduce the impact on the aesthetic result as much as possible.

Strengthening
Glass fiber was used to remove the upper oxidation layer from the welding points, which provided a better control during the removal phase compared to the use of a scalpel (proposed in the intervention specifications) to remove the upper oxidation layer and to weld thin support copper wires. New, thin support copper wires were installed with the help of a welding machine, and soldering water was applied only in the tin alloy welding points. The new welds were burnished with a low concentration welding acid to foster the formation of the passivating upper patina. Finally, Silirain 50 protective treatment was applied with a sprayer.

Positive Pressure for a Unique Chapel
After the restoration work and re-installation of the stained-glass windows, an artificial pressure system that puts the chapel interior under positive air pressure was introduced to prevent outside dust from entering through the architectural lights. This groundbreaking solution designed by the stained-glass restoration team uses sophisticated air-handling equipment to help preserve the interior, considering various factors such as the number of visitors and the corresponding levels of humidity.

The restoration thus represents a balance of glass restoration and preservation that takes into consideration the magnificent Giotto frescoes, with an in-depth study of the history of this landmark chapel—a UNESCO World Heritage site.

Michele Trevisanello is a master restorer at Progetto Arte Poli, an atelier of architecture and liturgical art based in Verona, Italy.
The inaugural symposium “On Christ and Architecture” took place at Judson University on March 15-16, 2012. The symposium provided a venue for discussing the intersections of Christian faith and practice in architecture. Guests described the event as an intellectual and experiential sanctuary. Many noted the unique nature of Judson University and its ability to host such a program and discussion. Among the many objectives of the new departmental symposia, one seemed particularly well met: refining the relevance and importance of the unique work of faculty in the larger context of contemporary architecture education and practice.

The keynote address, “For the Shalom of the City: Architecture Through the Eyes of Faith,” was delivered by Noah Porter Emeritus Professor of Philosophical Theology at Yale University, Dr. Nicholas Wolterstorff. An expert in aesthetics, politics, and justice, Wolterstorff advocated a perspective on architecture parallel to some of his earlier works Worlds and Works of Art and Art in Action. The latter served as a community-building reader for the faculty of architecture at Judson prior to the symposium.

Faculty from the department contributed invited essays to the event, as did faculty and practitioners from around the country. Some titles included: Moral Architecture: An impact on Creation and an Objective Vocation; Transforming Spaces and Architecture Control Issues; Justice and Missions: A Call to Public Interest Architecture; Room for a View: A Short List of Contemporary Arguments for the Other Modern Architecture; and Exploring Relationships in Theology, Ecology and Architecture. Selected presentations will be available through the department Vimeo site later this summer.

The symposium series is scheduled annually during the spring semester at Judson University in celebration of the unique mission and context of the faith-based university. A call for participation and essays for the 2013 James Didier Symposium on Christ and Architecture will be released in August, 2013. Follow the department website for more information: arch.judsonu.edu.

—Keelan P. Kaiser

The writer is chair of the architecture department at Judson University in Elgin, Illinois.
Notes & Comments

MIT Chapel, Cambridge, Massachusetts; Eero Saarinen

Annunciation Greek Orthodox Church, Wauwatosa, Wisconsin; Frank Lloyd Wright

First Presbyterian Church of Stamford, Stamford, Connecticut; Wallace K. Harrison
PROSPECT
Thomas R. Schiff (Damiani, $80)

Thomas Schiff, a Cincinnati-based photographer, has for nearly 20 years used a 360-degree panoramic camera to capture parklands, cityscapes, and architecture. This book, weighing nearly eight pounds and containing more than 200 panoramic photographs of some of the great architectural landmarks of the U.S., is his most ambitious book to date. Although Schiff captures a variety of building types, religious structures make up a large share of this current volume. Among the sacred landmarks Schiff presents in PROSPECT are works by Frank Lloyd Wright, Louis Kahn, Victor Lundy, Marcel Breuer, Eero Saarinen, Rafael Moneo, Pietro Belluschi, Pier Luigi Nervi, and Philip Johnson. A feast for the eyes and the spirit!

—Michael J. Crosbie
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“Can an atheist make great sacred art and architecture?” This was the question posed on Faith & Form’s Linked-In discussion group. A lively dialogue ensued. It was a quiet Sunday and although I am neither an architect nor a religious person, I leapt into the fray. I cited two people who believed strongly in a link between art and the divine: Father Marie-Alain Couturier and the art collector and philanthropist Dominique de Menil.

Both believed deeply in God but also believed that nonbelievers could create sacred art and architecture. That implies that they accepted the nonbeliever as part of a larger order. Couturier felt that mediocrity had taken over the design and adornment of the 19th century and that Modern art created by artists of the highest caliber, existing independently of the academy, would create the most appropriate art. It was the artist’s humanity and skill, not his or her devotion to Christian stories, that could produce the most spiritual art.

The work he directed or influenced suggests the validity of his approach. He became close to the great architect Le Corbusier and was instrumental in the commissions for Ronchamp and La Tourette, France, two of the most important pieces of 20th-century architecture commissioned by the Catholic Church. For the church of Notre-Dame de Toute Grâce du Plateau d’Assy in the Haute Savoie, France, Couturier worked with many of his favorite artists, among them Matisse, Chagall, Braque, Léger, Rouault, Lipchitz, and Richier. They were Catholic, Jewish, atheist, and communist artists. While the architecture was not as distinguished as that of Ronchamp, the church stands as a testament to his approach. Couturier wrote that it “…would be safer to turn to geniuses without faith than to believers without talent."

Dominique de Menil’s most controversial project remains the Rothko Chapel for the University of Saint Thomas in Houston. It would eventually become a nondenominational chapel rather than a Catholic place of worship. When Rothko painted the 14 canvases in the octagonal building, he believed they were intended for a Catholic university, although he was aware of the change in plans before his death.

Rothko grew up in an Orthodox family and had studied his Jewish faith intensely in Russia. He was well versed in the Bible and interested in mythology and philosophy. He was agnostic yet very spiritual. In conversations with Katharine Kuh, a curator from the Art Institute of Chicago, he said that his paintings were of a spiritual and contemplative nature.

The Rothko Chapel feels more like a sacred space than many of the cathedrals I have visited in Europe. Instead of invoking a specific narrative, Rothko was seeking a more universal one; the conflict between faith and despair was at the center of his work. According to the writer Susan Barnes, Rothko spoke to de Menil about his experience of the paintings at a church at Torcello, Italy: “He said that he had sought to create, between the chapel’s entrance and its apse, the same tension he had felt at Torcello—that between doom and promise.”

Rothko wanted to reduce painting to the extent that it could be a catalyst for the individual to be alone with his or her soul. Someone without any spiritual connection probably won’t create great sacred art or architecture. They just don’t need to believe in God.

The author is a writer based in the Bay Area, California. You can read more at his blog: designfaith.blogspot.com

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