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COVER
Designed as a simple backdrop for the historic Octagon, the seven-story headquarters of The American Institute of Architects proves that old and new architecture styles can be harmoniously juxtaposed. The AIA headquarters—designed by The Architects Collaborative, Cambridge, Mass. and completed in 1973—recently underwent an extensive energy conscious redesign aimed to cut energy consumption almost in half. The building's north and east wings unite in a strong, continuous curve that skirts a courtyard and garden behind the Octagon. The wings enfold and frame the 180-year-old restored house, now a museum and the headquarters of the American Institute of Architects Foundation. The structure, completed in 1800 for Col. John Tayloe, served as the temporary residence for President James Madison after the British burned the White House during the War of 1812.

The AIA headquarters is the setting for the Interfaith Forum's "Art for Sacred Space" exhibit, April 5-May 3. Located in the lobby and the second floor gallery, the display will include photographs of churches and other religious facilities, and examples of sculpture, stained glass, communion ware, vestments, wall hangings and other religious artworks. The exhibit is being held in conjunction with the 41st National Interfaith Conference on Religion, Art and Architecture, April 28-May 1, Washington, D.C.
Kansas City Regional Conference—
A Participant’s Comment

I congratulate IFRAA and members of the Kansas City Conference Planning Committee on an outstanding experience. I particularly appreciated efforts to design the event to meet the needs of local building committees. Participation by faculty and students from Unity College provided a stimulating injection of ideas and enthusiasm. I spoke with excited and appreciative students who said they had not previously been exposed to anything of this nature and found it very helpful.

Robert Rambusch’s presentation at the opening plenary session was refreshing and really set the tone for the theme “Faith and Form in the ‘80’s.”

Because of my own job responsibilities for the National Board of Church Extension and Home Missions of the Church of God (Anderson, Indiana) I chose to attend the workshop on “Coping with Costs.” The topic and resource leaders were challenging. I wish we could have devoted more time to this major problem which is currently being accentuated by the inflationary spiral and rising interest rates.

The workshop “From the Ground Up” very effectively dealt with the process one church group uses in starting new congregations. I appreciated the review of their three to five year process which detailed every step through community survey, site selection, calling the pastor, developer, temporary housing for the developing congregation, fund raising, defining the building program, selecting the architect, developing the congregation’s financial ability, securing financing and finally construction of the first unit.

The session on “Faith and Design” offered a pleasant change of pace with visual insights on how to reflect our faith in the architectural form we produce.

I personally felt the conference was as important for the questions it caused us to ask as for the questions it answered. It stimulated my mind through exposure to new ideas and possibilities. If it affected other participants as it did me we will be asking more probing questions and searching for more relevant and practical answers in the future. I came away wishing that members of every local church building committee could participate in such a regional conference. Cordially, George Blackwell, Director, Building Advisory Services, Department of Church Building of the Board of Church Extension and Home Missions, Church of God, Anderson, Indiana.

Our last issue paid tribute to Walton, Madden, Cooper, Inc., Riverdale, Maryland for their award winning Julia Bindeman Suburban Center in Potomac, Maryland. We did not say that the Center is a part of the Washington Hebrew Congregation in the District of Columbia which serves the entire Metropolitan area. Congratulations to this congregation.

Pourri

Under auspices of the Department of Energy, National Bureau of Standards researchers are in the process of developing thermal performance measurements for passive solar storage walls. When completed the new system of standards will permit a solar designer to make comparisons between various marketed products—NBS also announces availability of a 20-minute slide audio program entitled "Noise Control for Designers." The program
Through form and function, light and darkness, color and texture, symbols and sound, the worshipper becomes aware of the mysteries of God, of life here on earth, eternal life, the finite and the infinite, the reality of today and the hope of tomorrow.

It was out of the Judeo-Christian tradition that the Guild for Religious Architecture, the American Society for Church Architecture and the Commission on Church Planning and Architecture were organized in this country. Now it is history that each organization has merged its achievements and talents to form the Interfaith Forum on Religion, Art and Architecture with the purpose of preserving historical appreciation and achieving excellence in the design of art and architecture.

Through regional and national conferences, publication of FAITH AND FORM, and audio visual materials available from the IFRAA library, we hope to educate and contribute to what is worthy of the house of the Lord. In one way or another our membership has been called out of the Judeo-Christian tradition to use our individual talents to God's glory.

The penciled line, the color from the artist's brush, the light through a stained glass window can transform stone and wood into an environment for worship.

IFRAA shares a sacred historical trust, because we know that the church is not a building but the people of God. With God's help, in our busy desert world of burning issues and chilling events, our members strive to achieve excellence in creating a space where an individual can relate to God, to others and where God in His house can speak to you.

IFRAA SERVICES by Judith A. Miller Administrative Assistant

Persons and institutions are paramount in the everyday schedule of Interfaith Forum on Religion, Art and Architecture. Providing a forum for the constituency is a major service of IFRAA. Although the journal Faith and Form and the Regional and National Conferences frequently contribute to this context, this National Association works every day on behalf of its constituency.

The Permanent Slide Library is one of the most popular resources of IFRAA which is used by members and the public. Approximately 5,000 slides are in the library's catalogue. A wide variety of outstanding pictures of architecture, stained glass and art work in the field of American religion are available on loan at a nominal cost. Award winning designs are included in the catalogue.

Thousands of persons have viewed the 1979 Architectural and Art designs which received awards at the 40th Annual National Interfaith Conference on Religion, Art and Architecture, held at Phoenix, Arizona. IFRAA's Traveling Exhibit has been shipped across the United States many times since the last National Conference. It has been seen at national assemblies, synods, and judgmental bodies of religious groups, by professors and students of architectural and Art Departments at major universities, etc. There are sixteen 22" x 28" panels making up the unique display. Photo panels of previous years awards can also be ordered. Plans have been made for a 1980 Show of the Architectural and Art Designs receiving awards at the 41st National Conference.

There are many ways through which IFRAA seeks to encourage creative and quality work in the fields of art and architecture vis-a-vis religious faith. The recognition of outstanding designs submitted in the art and architectural exhibits is a coveted award by professionals. Held in conjunction with IFRAA's regional and national conferences, the works are viewed by more than judges and conference-goers as well as other religious organizations and the general public look forward to this service provided by IFRAA.

Mail and telephone services occupy much of IFRAA's staff time. All types of requests are received. Referral enables IFRAA to get its various publics together—architects and artists with building committees, manufacturers with church/synagogue committees, etc.

Recently, the pamphlet "The Architect and The Congregation" was updated and reprinted. It describes for

UPDATE


Martin Luther stated that if you were to ask the membership, "What is the Church?", that the majority would answer, "The gray stone building with the high spire on Main Street." The answer is understandable because buildings have always been a part of the Judeo-Christian tradition.

The nomadic Hebrew tribes took shelter in their tents from the burning and chilling desert sun. We recall how in the Bible—

The Lord spoke unto Moses, saying: On the first day of the first month shalt thou set up the tabernacle of the tent of the congregation. And thou shalt put therein the ark of testimony, and cover the ark with the veil.

It was with cedar and fir trees and gold that Solomon built the house of the Lord in the Holy City of Jerusalem. Centuries later an upper room was chosen by Jesus to reveal His relationship to those who believed in Him. We know that houses were the meeting and shelter in their tents from the burning of believers.
the Congregation and Building Committee the approach to the process of building with knowledge and insight. The pamphlets may be ordered through the Washington office at a cost of $ .25 per copy or $1.00 for five copies.

Also available through the Washington office is the brochure "The IFRAA Story" which describes IFRAA, its functions and goals. FAITH AND FORM readers are urged to write IFRAA. Let us have your ideas. IFRAA wants to improve its services and hopes also to move into new opportunities on behalf of its growing constituency.

How may we be of service to you?
What are the areas in which you would like to see IFRAA involved?

Strengthening your profession and assisting the religious bodies and organizations concerned about sacred space are goals to which IFRAA is committed.

Are you facing the problem of restoring or rehabilitating an older church or public building . . . and finding it difficult to locate proper sources and tradespeople?

The Studios of Potente, Inc. offers the professional services of unusually skilled craftsmen and talent to coordinate and complete even the most demanding and difficult restoration project.

- Fabrication of missing ornamental details, custom carvings and millwork.
- Ornamental metal work in traditional style, rebuilding lighting fixtures, refinishing.
- Painting, gilding, glazing, wood finishing.
- Mural painting and restoration.
- Stained glass repair and restoration.

Potente will confer and consult with you to develop procedures and budget, then organize and implement your entire project.

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Rambusch helps create a bold statement on a bald prairie.

The drama of this soaring multi-curved roof reaches a fitting conclusion in Rambusch's grand, circular stained glass window. The effect is imposing...from the exterior as well as the interior.

Built on a man-made plateau and surrounded by a bald prairie, Houston's Episcopal Church of the Epiphany makes a bold statement about faith...while concurrently accommodating the variety of needs of this community.

Rambusch was pleased, as liturgical consultants, to help bring to fruition this unique architectural and religious concept. Rambusch's art and craft studios created, in addition to the circular window, a series of stained glass windows and interior walls...and all of the Church's cultic appointments.

Episcopal Church of the Epiphany,
Rector: The Reverend Joseph DiRaddo
Clovis Heimsath Associates AIA, Architect.

stained glass/metal/wood/lighting/cultic appointments consultation/planning/design/fabrication/installation

Rambusch
40 West 13th Street, N.Y., N.Y.10011, (212) 675-0400
Philip Johnson, first recipient of the Pritzker Architecture Prize, was recently presented with a bronze cast of the "Architectural Award" sculpture created by Henry Moore. This is in addition to the monetary award of $100,000.

The maquette, one of a series of nine, was conceived by Moore for the winners of this international prize because of his great esteem for architecture.

The Pritzker Architecture Prize was established in 1979 for the purpose of encouraging greater awareness of the way people perceive and interact with their surroundings.

The first award was given to Johnson, whose work demonstrates a combination of the qualities of talent, vision, and commitment that have produced consistent and significant contributions to humanity and the environment. As a critic and historian, he championed the cause of modern architecture and then went on to design some of his greatest buildings. Philip Johnson is being honored for 50 years of imagination and vitality embodied in a myriad of museums, theaters, libraries, houses, gardens and corporate structures.
WHERE ART 
AND FAITH 
MEET

Roger Hazelton  
Abbott Professor of Christian Theology, Emeritus  
Andover Newton Theological School

We have never quite known what to do with the Holy, but we have never been able to get along without it. Even an age of secular absolutes breeds strange new substitutes for what earlier generations called the sacred. There is a striking ambiguity running all through the history of religions on this point, from which we ourselves are by no means exempt. It is as if we could not decide whether to adore the Holy or to adopt it, whether to serve it or to be served by it.

On the one hand, man has tried to localize the Holy, pin it down, and then keep it in its own particular place. It has been elaborately packaged in shrines and temples, not to mention synagogues and churches, all over the world—isolated in special spaces and times where it could be preserved until needed. We have even presumed to domesticate the Holy by reverencing it as something set apart, winning its approval at a distance so that it could underwrite our projects and insure our success. That is the perennial, besetting sin of every religious institution in the history of man—to humanize the Holy by putting it to work for us, making it mean what we want it to mean, confining it and protecting it so that we may know what to expect and how to live. This is what an ancient Hebrew named Uzzah, a good and well-intentioned man, was attempting to do when he reached out his hand to steady the Ark and made his fatal mistake.

On the other hand, have we not also known that the Holy cannot be trapped in our religiousness, and that it will break out of any package or protective device we can throw around it? Far from simply asking the Holy to wish us well and bless what we were going to do anyway, we know in our heart of hearts that it requires of us a certain abandonment, surrender, and delight—what Jonathan Edwards magnificently called our “consent to Being.” There are moments something like ecstasy in genuine faith; they may not come often, but when they do, they have a splendor that cannot be set aside, and they establish the direction of our going as “the last of life for which the first was made.” Evidently David the king was grasped by such a moment of ecstatic self-giving; as a man taken out of himself, literally beside himself, he had to celebrate the presence of the Holy. And so he whirled and pirouetted, rose and fell, giving himself into the keeping of the Holy that had entered him and taken possession of his life.

Most of us, I suppose, are more in sympathy with David’s way of dealing with the Holy than we are with that of Uzzah, but for just that reason I would like to say a brief good word for poor old Uzzah. When you have found something good you want to keep it. Instead of dancing around and adoring it perpetually, you want to move in on it, bring it down to your level, make it serve your needs and solve your problems. None of us can fail to understand that; it enters deeply into our relationships with each other and with whatever we mean by the word God. It is a large part of every covenant or commitment on the human scale; we need to be assured, and reassured, that someone we care for also cares for us, and that we have not given our trust in vain. I think it would be very surprising indeed if the same did not hold in our approach toward what we have discovered to be true no matter what, or good in spite of everything. How else can we get with and stay with what, when all is said and done, concerns us ultimately, satisfies us permanently, strengthens us sink or swim, rain or shine?

Nevertheless, you know and I know that this is not the end of the matter. David understood and acted toward the Holy better than Uzzah did. He glimpsed a Presence and let himself be moved by a Power. He was not too timid or afraid to become a whirling dervish for what is eternal and almighty. Far from trying to humanize the sacred, he gave himself up to the playful work of making sacred what is human, feeling as Henry Vaughan said:

Through all this fleshly dress  
Bright shoots of everlastingness.

Reprinted from Nexus, Boston University Vol. 13
Yes, David has rightly come to stand in our Jewish and Christian traditions for that sense of the Holy which does not bargain with it or use it for some human purpose, but enjoys and celebrates and adores it.

And there is where the arts of man and faith in God must surely come together, each giving to and receiving from the other. Music and dancing, poetry and drama, painting and sculpture, architecture, all the fruits of human imagination, do for us what common sense and its rarefied forms in science can never do. They open us up, make us serviceable to the Holy and invite it to act in us. They remind us that we are not our own and that the very business of being and remaining human is a great mystery to which there are no answers in the book of life.

The answer, if it was an answer, came in recognizing the hazard, risk, and openness of all things human before what Paul Tillich called "the power of Being in everything that has being."

Or consider the case of modern sculpture. Ever since Brancusi's "Bird in Flight" we have known that the mirroring of a visible reality was no longer its purpose. These unfamiliar shapes invade our privacy, undercut our safe beholder's stance. The sculptor Ernest Barlach said once that he wanted to create works of art that "look at you"; the intent is to reverse and reeducate the whole process of seeing, undermining our composure. No wonder that some people should be disturbed and even angered by this rude jolt to their tender sensibilities. But one thing is certain: you cannot stay neutral or untouched.

And there is poetry. Two lines of Robert Frost come quickly to mind:

"We dance round in a ring and suppose,  
But the Secret sits in the middle and knows."

Or there is the stroke of truth in a poem by Rainer Maria Rilke:

"There is no place  
That does not see you. You must change your life."

Poetry like this does not serve up Beauty on a platter asking only for your approval and admiration. It insinuates itself, disturbs your self-security, and has not really done its work until you have become involved and invited into sharing the poet's vision. The very words and rhythms are demanding, almost visceral, alive with portent and promise. They bring us up short, asking to become actors and partners with the poet in making and being what is new. "You must change your life."

Now all this has a great deal more to do with faith in God than we might suppose at first. Of course I don't mean that such art merely decorates or illustrates what earlier ages called the Holy; instead it discovers new forms of the Holy in the most unlikely places and events. But all the same, contemporary art does manage to reach out and grab us, when we are attentive to its many shapes and styles, with inklings of a new power of being, of being new, that are the very substance of authentic faith.

Where for men and women of today does art meet faith? First of all, in its unwillingness to take experience at its face value, its resolve to dig beneath the surface and expose the deep underside of things. No real artist is ever satisfied to reproduce or imitate what he sees; that is not what artistic creativity means at all. But he is concerned to get down to essentials, to lay bare "the steeliness of steel and the muddiness of mud," and so to uncover in us new eyes for what would otherwise remain invisible. In order to bring this about, an artist must peel back layer upon layer of the taken-for-granted to arrive at the heart of a matter; he may have to stir and shock us out of our habitual passivity as well. A composer like Stravinsky may have to invent a whole new scale in order to release the music that exists between the notes on a keyboard. A dramatist like Ionesco must devise ways to let three voices speak at once so as to activate the depths of human reality and bring an audience onto the stage. A painter like Picasso will adopt and then discard one style after another for the sake of probing more surely to the stuff of which we and our world are made.

One of the most revealing comments on this meeting-place of art with Christian faith comes in the notebook of Paul Klee. He wrote: "Art is a likeness of creation. The heart that beats in this world seems mortally wounded to me." The contemporary arts, just by concentrating so often on the brokenness and emptiness of much we call our life, bear their own undeniable witness to the wholeness and fullness of creation itself. We are not what we seem, and our existence is not what it was meant to be. The Quaker George Fox once said, "The light that shows us our sins is the light that heals us." Modern art, in its divergences and distortions of the human reality as being lived, meets the Christian faith at many unsuspected points underneath the shell of false composure and contrived sincerity.

A second meeting-place of art and faith in our time is located where man's full humanity is either threatened or denied. The artist is always a powerful sensitizer of the conscience of mankind. He stands aghast at the stubborn, blind drift toward dehumanization throughout our society. He may call himself an
atheist, but his allegiance to the community of man with man is unquestioned. His very work is a creative protest against those models and methods by which man tries to make himself into something less than human—a standardized, functionalized nonentity. The artist of today is very much on guard against the prospect of a takeover by socialized science, of society on an automatic pilot. No wonder that his vision should so often be a bitter one, full of dark omens and portents.

It is here more strikingly than anywhere else, I think, that contemporary art and faith come toward each other. Christianity has always known what is in man; refusing both optimism and pessimism, it has pretty generally clung to a sober realism regarding human possibilities and liabilities. Man is a little lower than the angels; but he must not think more highly of himself than he ought to think. Neither must he think more meanly or poorly of himself than he ought to think; “Man is a great deep,” said Saint Augustine, “and the hairs of his head are more easily to be numbered than the motion of his heart.” The modern artist is quite aware of this, too. When the mystery of being human is denied, the dignity of man is lost as well. A system of replaceable parts, or a product of what is now slyly called genetic engineering, is not mysterious. This temporary assemblage of functions is more a thing than a man or a woman. It may impel curiosity but not wonder. It may generate fear but not respect. Looking ahead, the artist and the Christian believer do not like what they see coming, and they tell us so. They want to alert us to the threat of dehumanization until we begin to share their deeper vision of a new humanity that is grounded in the openness of being itself.

A third point of convergence for art and faith today is their common questioning of those dualisms, dichotomies, polarizations which people the world over are trying so desperately to maintain. These dualisms, stubbornly held, continue to bedevil our political and social action; they insinuate themselves into our most intimate relationships with one another; and they keep us from growing up in every sector or dimension of experience. Interesting differences quickly become the basis for compulsive confrontations. Gaps are assumed to exist despite all evidence of common outlook and loyalty. Categories usurp the place that belongs to realities; and the total fabric of humanity is torn apart in countless ways as a result.

Now faith and art alike proceed on quite another kind of assumption. This is that dualisms, gaps, and confrontations do not define the way things are at all. Samuel Terrien points out that modern painting is a powerful protest against making any dualism final, whether it be that between mind and matter, object and subject, sacred and profane, past and future, or man and world. All these questions we once thought settled are now open again—not only in painting, but in sculpture, drama, architecture, music, literature too. These arts aspire toward unity, toward rapport and liaison with the whole of things, even with what is infinite.

Just as in the arts, so in contemporary theology there is a refusal to separate what God has joined together. The time of the dualisms is over. All questions are open. There is no longer any space reserved for the sacred. God is not to be confined to the shelf of our religiousness. The very word is a symbol for the holiness, that is the wholeness, of being, to which everything in being is “absolutely open upwards” as Karl Rahner says. In the fused vision of the artist and the theologian today the beautiful does not exclude the ugly; good is not at loggerheads with evil; man is not defined in terms of distance and difference from God.

“The world is charged with the grandeur of God,” exclaims the modern poet. “All the earth is filled with his glory,” cries the ancient prophet. If that is the way things really and finally are, then surely celebration is called for. Nothing less is asked of us than to take part in the joy of creation itself. Our time is as capable as any other of making sacred what is human, of opening man to the energies of God. There is a presence and a Spirit moving in our midst which cannot be useful in solving our problems unless we put ourselves at its disposal. “And David danced before the Lord with all his might.” See that you do the same.
SOLAR HEAT FLEXIBILITY AND BARRIER FREE DESIGN DISTINGUISHES UNITED METHODIST FACILITY

Jerry Ellis, A.I.A.

Jerry Ellis, a practicing architect for the past 16 years, earned his Bachelor’s Degree in Architecture from Ohio State University in 1960. For more than five years he was Executive Secretary of the Office of Architecture for the Methodist Church. He re-established private practice in Columbus, Ohio six years ago.

Earth banking, reaching within inches of the roof eave, is backfilled against 4” of rigid insulation on all outside walls.
Nestled in the rolling hills of northeastern Ohio’s coal mining country is a newly completed church building, one of a handful of church structures across the country now operating with solar heating technology. Early in their planning, leaders of Scott Memorial United Methodist Church, in the small community of Cadiz, awarded me the design commission and mandated that I deliver an energy efficient building.

At the time of the commission, natural gas was not available, oil was expensive and in short supply and coal was being regulated by the Environmental Protection Agency. Electricity, although expensive, was in plentiful supply. Since the committee thought of electricity as “coal by wire” and solar heat as the fuel of the future, the energy source chosen was solar heat with electric heat pumps for backup and air conditioning.

Heating systems for church buildings, of necessity, must be easy to operate and maintain by custodians and volunteers. Thus, simplicity of design became almost as important as efficiency.

Solar heating systems utilizing water collectors promised greater efficiency. However, they also harbored the potential for greater incidence of mechanical failure and leaks. A solar air system, compatible with heat pumps and ducted air conditioning, was finally chosen for simplicity and its ability to accommodate extreme temperature ranges without physical damage.

Heating with solar or electric air systems involves subtle differences in air temperatures, requiring that the mechanical system and building structure must be tight and well insulated. Key problems with solar air systems are leaking joints, poorly fitted ducts, dampers that do not fully close and the
potential for a myriad of small air leaks that collectively destroy efficiency by allowing air temperatures to moderate between the system and outside air.

The local building committee, concerned for aesthetics, requested that heavy timber be used in the interior design. Insulating wood decking for solar heating called for construction of 2" x 12" wood framing above the deck. Insulation 12" thick filled the framework between the inside deck and plywood supporting the roof shingles.

Although solar heat dictated a minimum amount of window and glass area, the committee wanted to reuse three large stained glass windows from their old building. One window, was to be reused in such a way that it could continue to be backlighted and set in the sanctuary tower as a beacon to the community. It is protected from the weather and insulated by 1" hermetically sealed glazing. The two remaining large windows would create far too much heat loss, even with triple glazing for outside use so both were mounted 12" below the timber ceiling inside the building. The interior art glass "windows," are backlighted with fluorescent tubes on dimmers so the brightness level can be adjusted to match sunlight coming through the tower window, or turned down to a dim glow for night meetings or candlelight services.

The desire for natural lighting in other areas of the building, coupled with a strong feeling that space wasting corridors must be eliminated and that a large functional narthex be included, provided the impetus for a compatible solution to all three problems. First, a spacious narthex was designed around which classrooms, worship space and administrative offices were arranged—much like clustering stores around a shopping center mall.

Short clerestory windows top the narthex on all sides. Sunlight reaching the narthex floor splashes into surrounding glass fronted classrooms. An additional bonus is that floor-to-ceiling & wall-to-wall classroom glass makes the building "lost proof." Visitors can tell at a glance and without a guide which classroom houses children the age of their own. All classrooms vary slightly in size to allow education committees a variety of options for accommodating fluctuations in church school attendance.

The elimination of perimeter windows allowed exterior walls to be insulated with 4" of rigid insulation board and backfilled to the eave of the roof with earth, a significant factor in the overall energy conservation design.

Seventy-six solar collectors produce temperatures of 130°F to 160°F under direct sunlight. This solar heat is stored in 134 tons of washed river rock in a large insulated box over 100 ft. long.

Heat is stored in the rocks when the cool bottom of the rock bin is 15° lower than the back of the solar collector plate. When the rock temperature is increased to the point where it is only 5° below collector temperature the storage fans are turned off.

When the thermostat calls for heat, separate fans and ductwork carry heat from the top hot side of the rock bin to the sanctuary and narthex. Air is returned to the bottom cool side of the rock bin where it absorbs heat from the rocks and is circulated again through the building until the building is brought up to the desired temperature.

An additional conservation feature involves passing storage bin temperatures through a heat exchanger to precondition cold water which is stored in a holding tank and fed into an electric hot water heater as needed, thereby cutting the amount of electrical energy required to bring cold water to usable temperature.

Because the building's mechanical system was put into service late in the fall of 1979, realistic operational costs will not be available before the end of this year. Even then, figures may be misleading since considerable energy was used to "dry out" and protect construction before the project was completed.

Solar equipment costs for the project were $86,000. An additional $110,000 was spent for the back-up system of electric heat pumps. These costs do not include the building space constructed to house the solar and mechanical equipment.

Aside from energy considerations, the building boasts several significant functional features. Flexibility in design for worship was mandated by the need for seating as few as 180 and as many as 350 in the same room plus overflow capability for as many as 350 additional participants.

Portability is designed into all furnishings. The chancel platform, made up of close fitting carpeted rectangles and cubes, can be located and arranged in a variety of configurations. 5 foot portable pews and matching chairs provide congregational seating. Each pew can easily be lifted and moved about by one person using a specially modified two-wheeled hand truck. A dolly mounted organ, equipped with a long multi-conductor cable and special plug, can be connected to any of four special outlets located in each corner of the sanctuary. For overflow seating, a glass wall made up of sliding art glass panels, opens one side of the sanctuary to the narthex. Significant planning detail was given to energy conservation concerns in the sanctuary since it represented the largest volume of space to be temperature conditioned. Primary lighting fixtures are located adjacent to return air registers high in the peak of the pyramidal shaped worship area. Heat generated by the lights as well as rising heat generated by the people and from supply ducts in the floor is picked up directly by the return air system and redistributed.

In accord with the United Methodist Book of Discipline, special attention was devoted to making the structure free of any barrier that might inhibit participation by the handicapped. Some
**Solar Heating Mode**
(Above)
- Supply Air
- Solar Heat Exchanger
- Hot Water Out
- Solar tempering tank
- Cold Water In
- Electric water heater
- Heat exchanger
- Rock storage

**Water Heat Mode**

**Solar Collect Mode**

**Auxiliary Heat Mode**
(Electric Heat Pumps)
Side of sanctuary (rear) opens into narthex through sliding art-glass doors. Stained glass windows are backlighted.

of the notable features include:
All public spaces are on the same level with no curbs, steps or high thresholds to inhibit wheelchairs or persons with walking disabilities.
Ample exterior and interior lighting in all public areas.
No fixed seating anywhere in the building.
Low pile, high density carpeting used to facilitate wheelchair mobility and with handrails strategically placed throughout the building.
Toilet facilities designed to accommodate wheelchair.
No doors less than 36" wide and equipped with push bars or grip levers. (Hazardous areas have door levers knurled for a tactile warning to the blind.)
Drinking fountains designed to accommodate persons confined to wheelchairs.
Personal radio receivers tuned to an internal broadcast system to aid the hard-of-hearing anywhere in the building.

Teaching and worshipping in a solar heated and energy efficient church building is a new experience for the congregation. To help them understand how their solar equipment functions, a unique electronic information panel was designed and placed in the narthex where it is easily accessible to anyone. Members can trace functions of the system in simplified color coded schematics and may dial a switch that will activate digital readouts giving solar collector temperatures, outside air temperatures, temperatures of the cold side of the rock storage bin and temperatures of the cold and hot sides of the hot water heating system.
Colored lights on the panel indicate when the system is:
- Collecting solar heat
- Heating the building with solar heat
- Heating water with solar heat
- Operating on back-up heat pumps

To conserve energy, clerestory windows in narthex-fellowship hall are the only light admitting windows designed into the structure.
ARE PERFECT CHURCH ACOUSTICS POSSIBLE?

By Henry Jung*

In establishing the shape of religious structures the architect’s spectrum of evaluations is many sided. He is particularly concerned with the placement of the altar, the pulpit, and the font and the general tenor and traffic pattern of the worship service peculiar to each congregation. While these are considerations of major importance, it is the location of the choir and organ which has the maximum impact upon the ultimate results.

Good music depends not only upon the quality of the performance but also upon the kind of building in which it is auditioned. The same can be said of speech. The best sermon, poorly heard, loses its effectiveness. Thus the Science of Sound in Architecture for Worship becomes an important tool of the designer as he strives to create a satisfactory worship space in which speech and music can be enjoyed with equal effectiveness.

THE STATE OF THE ART

Acoustic knowledge has not progressed to the point where “perfect” acoustics can be accurately forecast or guaranteed. This is particularly true in churches where a conflict has existed for years between musicians and organ builders who demanded hard, reflective buildings, and architects and acousticians who realized that such spaces were unsuited for the hearing of the spoken word. In fact it could be fairly said that the better a room became for music the worse it became for speech! Within recent years certain scientific developments have softened this dilemma. In order to understand them, we must first examine the physical processes of hearing. Listening conditions in an enclosed space are dependent upon 5 factors: (1.) The general noise level in the room; (2.) The adequacy of the program material, particularly its loudness; (3.) The distribution of the sound within the space so that it reaches all listeners with equal intensity; (4.) The shape of the space and; (5.) The reverberation period.

THE REVERBERATION PERIOD

While all of these elements are important, it is the Reverberation Period which frequently causes the principal concern. (The “Reverberation Period” is defined as the length of time it takes a sound to die into inaudibility.) A long reverberation period is generally good for most music while a short reverberation period is best for the hearing of the spoken word. It is generally considered that it is impractical to design a static structure so that it serves with optimum efficiency for both speech and music. (A static structure is one without a loudspeaker system.) Special experimental rooms have been constructed with movable walls so that varying degrees of sound absorption may be obtained for different kinds of use. Such a system is not feasible in most churches.

THE ACOUSTICAL QUALITY OF ALL ROOMS VARIES

Every room has an acoustic “personality” of its own, through reason of its tendency to produce “ringing sounds” when notes of certain frequencies are generated. This can often be demonstrated by the singing voice, particularly in a tiled bathroom during the morning shower. These “ringing” sounds are referred to by some acousticians as “room ring Modes.” They have been familiar to the organ builders as “bull notes,” (i.e. notes which sound many times louder than other notes. They are controlled by materially reducing the loudness of the offending pipes.)

While most rooms for worship, (even small ones) use an amplification system for increasing the loudness of the spoken word, not too many use it for music. In spaces which are congenitally bad for listening, the introduction of a loudspeaker system can, in some cases, magnify (rather than lessen) the problem of obtaining satisfactory speech intelligibility. As the loudness level of the speaker system is increased so does the strength of the ring modes (multiple reflectances) and the consequent distortion of speech becomes more pronounced.

*Henry Jung A.I.A. Successor to Harold E. Wagner, F.A.I.A. & Assoc.
LOUD SPEAKER LOCATIONS

It might be interesting to note that there are numerous positions which have been tried for speaker locations. Multiple speakers down the side walls, multiple speakers in the ceiling, multiple speakers on pew backs, multiple speakers under the pew seats! All have been tried with varying results. Most acoustical consultants recommend speakers which are located near to the source of the sound in order that listening may be enjoyed in a climate of naturalness and relaxation. It is a recognized fact that varying speaker locations often produced varying and capricious results, but it was no cure-all, for it did not recognize the basic problem.

The judicious application of sound absorbing materials was often helpful as a remedial measure, but the dead rooms which ensued were an anathema to musicians, organ builders and music lovers.

THE LATE GREAT DR. C. P. BONER

In studying the behavior of "room ring modes," in relation to electronic voice reinforcement systems, Dr. C. P. Boner, Austin, Texas organist and physicist, observed the similarity between the "ring modes" and the "bull notes" of the organ. He reasoned that if these maverick bull notes of the organ could be tamed by decreasing their loudness, that the same principle might be applied to certain offending frequencies in the loud speaker system. His theory proved to be true.

What Dr. Boner had discovered was that the room ring modes were: (a) single in nature (that is they did not contain overtones); (b) that they could be minimized by reducing their loudness and; (c) that they were of longer duration, (i.e. their reverberation time was many times that of the other tones in very close proximity on the scale); (d) that the room ring modes were largely responsible for the "garbling" of speech. He overcame these difficulties by introducing filters into the loud speaker amplifiers at the critical frequencies.

THE SOUND SYSTEM OGRE: ACOUSTICAL FEEDBACK

Prior to the filter system process it was difficult to increase the loudness of a speaker system in a noisy room because the total electroacoustic system, (i.e. the electronic system and the room itself acting as a whole) generated "acoustical feedback" in the system, and a consequent self regenerative "howl" ensued.

Dr. Boner describes his observations as follows: "A sound system deals with the same acoustic spectrum as does the pipe organ. Both have to work in a room. The pipe has to be tone-regulated and tuned to match its room and its particular enclosure, as we well know. The sound system must, therefore, also be tone-regulated. In the organ, broad-band regulating includes setting and regulating wind pressure, use of offset chests, keeping certain sets of pipes physically apart to prevent pulling together, and all sorts of similar procedures. But, when these measures have been taken, the organ finisher must then deal with each pipe, pipe by pipe, and must tone-regulate and tune each pipe as its own entity.

FILTERS: BROAD BAND VS NARROW BAND

Thus it is with the custom sound system. It must be broad-band regulated to complement the room and its enclosures, just as the organ is broad-band regulated. Various manufacturers have brought out their own versions of the broad-band filters—all of them rather good. White Instruments, Inc. of Austin was the original manufacturer to do so. Altec Lansing, RCA and DuKane Corporation all have their own versions. All of these are filters covering rather broad bands of the spectrum—one-third octave and one-half and whole-octave for the most part.

In a highly reverberant or acoustically-difficult room, one now has to insert the proper narrow-band filters to insure that speech will be well understood in such rooms. This is because highly reverberant rooms "ring" at discrete frequencies, each of which is a sine wave (styled one Hertz wide). Those parts of the acoustical spectrum which do not happen to contain any of these "ring modes" need not be altered. We see some rooms which do not contain an appreciable number of serious "ring modes," but very few. A sound system, when it feeds-back, always feeds back in sine-wave modes—never in bands of frequencies of any appreciable width. Thus, the concept we developed handles each of these feedback modes—and each of the super ring-modes of the room when they exist—in narrow-band filters. They have a band width of about 5 Hz, and their insertion does not affect the remainder of the acoustical spectrum to any important degree.

TAKE TIME TO TUNE!

What Dr. Boner was saying here, is that there is no satisfactory method (in some cases) for quickly tuning a speaker system in certain rooms. In some instances the process may take only 2 or 3 hours; in others it may take 2 or 3 days if a satisfactory result is to be achieved.

The process, which I observed in one of our projects, looked like this:

THE PROCESS

A crew of 4 young men placed several pieces of electronic equipment on 4 card tables in the center aisle at the rear of the nave. The church had slate aisles and a reasonable amount of limestone on the walls, so that it was quite "hard" with a very long Reverberation Period of perhaps 4 seconds—much too long for speech clarity, but excellent for music.

Multi cellular horns (loud speakers) had been built into the structure, high on the rear chancel wall. These speakers were in the line of sight of every nave seat, (except that they were concealed behind an acoustically transparent fabric). It is important to remember this salient fact when locating speakers: if you cannot see the speaker you may not be able to hear it clearly. That is, you must see the speaker's location, if not the speaker itself.

The pulpit was located some 20 feet
Note the "cut outs" to represent the choir. The Ruffatti organ and choir have been ideally placed from an acoustical standpoint. However, the use of an exposed organ, front and center can cause aesthetic problems for the architect as well as pose theological questions not related to rubrics, but rather to the congregation's preference for the form of worship best suited to their needs.

The placement of the choir, organ and musicians was a mandatory requirement of the client. While the location is ideal from an acoustical standpoint, it was feared that this arrangement might generate too much emphasis on the music program. In an effort to overcome this possible criticism, the architects designed a very large pulpit with tester above to give visual importance to this facet. The "tester" has an absorptive underside, in order that unwanted sound reflections will not enter the microphones.
WHITE NOISE

In order to determine the acoustical response of the room and its sound system, a temporary loudspeaker was placed about 4 feet behind the pulpit microphone. "White noise" was injected into the microphone. This is a sound much like a loud "sh-h-h-h" which contains all of the audible frequencies from 20 to 20,000 cycles per second. This sound was picked up by the pulpit microphone and then broadcast into the room by means of the multicellular (horn) loudspeakers above mentioned.

ACOUSTIC GAIN:

The "Acoustic Gain" of the room was established by measuring the sound pressure level at the most distant seat in the room, with the sound system turned off. Then the level at the same receiving point was measured again but with the sound system set a bit below feedback threshold. The system "gain" before feedback was defined as the difference between these two levels. The gain was about 6 decibels (Dr. Boner notes, "In many existing rooms, we have found that the acoustic gain, with the sound system in its original uncorrected state, tends to lie between 2 and 8 decibels").

One of the young men walked through the seating area with a sound level meter and measured the sound pressure level in each band of white noise throughout the entire audio spectrum. These values were then plotted on what is known as a "House Curve." The operator now introduced sine waves into the amplifier (pure tones). As I looked at this "House Curve," I observed that the frequency at 245 was behaving in an erratic manner (i.e., it was too loud). This was a "ring mode." It and other ring modes were brought under control in order that the acoustic gains could be increased and speech intelligibility heightened. This was done by inserting filters between the pre-amplifiers and the amplifiers which are a part of the loudspeaker system. These do not remove the sound of the frequency of 245, (or other offending frequencies) they simply reduce their loudness. Each filter may be as small as 5 cycles wide hence it has no effect on the frequencies a bit remote from 245, or whatever the odd frequency happens to be.

In a large church the total operation may take about 3 days. Many "House Curves" are plotted, and replotted as the peaks and valleys are eliminated. If only "broad-band" filters were used, the time would be much less.

"TUNING" THE LOUDSPEAKER SYSTEM

What all this means, is that even though a sound system has been "tuned," that does not insure its success, unless the tuning has been carried to the degree necessary in the particular room. That is "Broad band" tuning which is quicker and less costly, may not always produce satisfactory results. In the church I observed, the "acoustic gain" was brought from 6 decibels to 23 decibels!

It is claimed that any loudspeaker system can be "tuned" to the particular space in which it is performing if the system design is proper. However, because of the nature of the work, it seems obvious that all of the speaker components must be composed of compatibly related parts. It might be pointed out that those who sell electronic equipment are not always fully acquainted with the exact nature of the parts, nor their precise performance as they relate to each other. An expert should be employed to give proper counsel.

ARE PERFECT CHURCH ACOUSTICS POSSIBLE?

What does the above discussion mean to the church committee, to the organ builder, to the musician, to the architect?

A great deal, I think. It does not mean that every odd shaped structure (especially circular ones) can be made acceptable for both speech and music.

It does not mean that acoustically absorptive materials will never be employed.

It does mean that if a knowledgeable acoustical consultant is retained (be aware of equipment salesmen who call themselves "Acoustical Engineers") and if compatibly related equipment is installed, and if it is carefully TUNED, reasonably good hearing conditions should ensue for both speech and music, even in a highly reverberant room, and providing, of course, that the "talkers" use microphones.

Although Dr. Boner's discoveries were made 12 or 15 years ago, and although "tuning" is now available on a large scale, I find it rather startling how few choir directors and organists (and even architects) understand the principles involved, and how the campaign to eliminate all absorptive material still lingers. Perhaps this article will help close the theoretical gap between architects and musicians. "Perfect" church acoustics cannot be guaranteed now, and perhaps never will be. But we have come a long, long way thanks to electronics and particularly to Dr. C. P. Boner. □
A CALL TO WORSHIP*

Betty Herndon Meyer

A recent event sponsored by the Bishops’ Committee of the Roman Catholic Church in America can change the whole direction of Protestantism in the next decade. The future of both faiths depends ultimately on whether members regard worship as an experience that still has meaning for individuals living into the 21st century.

Publicized as a National Symposium on Environment and Art in Catholic Worship, it called together a broad spectrum of people concerned about worship as the central action of the community of faith. Architects and artists, liturgical consultants, bishops and clergy building committees and interested laypersons were all invited to participate in the event, held at Marquette University, Milwaukee, Wisconsin on June 3, 1979. While the discussions were to be based on Roman Catholic rites, all interested churches of whatever denomination were welcomed.

THE PROBLEM

Robert Hovda, a professor of liturgy at Loyola University, Chicago, told the assembly that there is an ecclesial renewal now going on in America that is more researched and resourced than any the world has ever known. He eloquently urged the church to stop, look, and listen. The environment of our worship leaves much to be desired. He spoke of numbered and sterile sacraments, of priests and bishops who serve only as dispensers with service station efficiency. Occupied with clerical and consumer piety, the church has allowed its worship environment to be peripheral and of low priority. If the church is the assembly of people and the Sabbath was made for them, then they can no longer be patient with the pain of a dying worship experience, but must work toward an environment that will give worship rebirth.

Documentation for the symposium was a book Environment and Art, published by the Bishops’ Committee on Liturgy in 1979 as a companion to their 1972 statement on Music in Catholic Worship. It was written “to provide principles for those involved in preparing liturgical space for the worship of the Christian assembly.” Liturgical needs and objectives of the church seem clearer now than a decade ago, especially with the publication of the General Instruction of the Roman Missal and the pastoral experience of implementing Post-Vatican reforms.

A NEW THEOLOGY NEEDED

Architect William Conklin, a United Church of Christ member, characterized the book as one of impeccable intentions and careful words. “It is a spiritual book about the form of objects

*Reprinted by permission from New Conversations, United Church of Christ, Winter 1980.
and their meaning." He heralded the book as a possible source for a theology of things. "Much of the problem of our physical environment," he said, "can be traced to a popular simplification of Judeo-Christian thought, that degrades all things physical and elevates all things referred to as spiritual. We need to rethink the nature and meaning of "things." We were taught that things exist to be of service to people. Eastern religions think of things as unimportant, part of maya or play. The American Indian reverenced nature but not artifacts. Are not stones also created in God's image? Do not things have a right to be? Is this not meaning enough?

If we begin with our own place and time, use the perceptions of other cultures as tools to learn, then perhaps we can develop our own concepts of the holiness of the real. A new attitude toward things, Mr. Conklin concluded, could have a startling effect on our perceptions of environment and our theory of design.

RETHINKING THE EUCHARIST

Beyond the celebration of the Eucharist itself, the Church has continued the ancient tradition of reserving (placing in an enclosed space in the center of the altar) the bread for communion to the sick thus creating an object of private devotion. The current trend in liturgical renewal suggests that the tabernacle for the reservation not be placed on the altar because the altar is a place for action, not for reservation. The eucharistic bread will now be in a specially designed place apart from the altar, preferably in a chapel.

It is permissible for the cross to be on the altar but preferably elsewhere in the sanctuary, likewise the candles and symbols and to cover them with a heavy curtain of words, texts and commentary. We also duplicate and multiply symbols until they are no longer effective. Another common problem is a tendency to "make up" for weak primary symbols by many secondary ones. As individuals and as communal groups we must rethink and study the liturgical symbols until we can appropriate them as our own.

A CHANGE OF LITURGICAL MENTALITY

The liturgist of St. John's Abbey, Godfrey Dieckmann, announced boldly that "we must give up all ideas of church building as it has existed for 1979 years and begin all over again." Where, however, can we find a parish prepared to do this? It must begin with its liturgy.

The celebration of the Eucharist is the focus of the Roman Catholic worship and the observance of the sacraments is of primary importance. The Counter Reformation church has continued to follow traditional rites for too many years because those rites were manageable and efficient. They have lost significance to the lay person, however, who mourns the loss of any experiential sense of the sacraments. Baptism and marriage have become so privatized that there is no sense of the communal. Every sacramental act should be celebrated in the midst of the community if is to have integrity and fullness of the sign. Such a concept, according to Louis Weill of Nashotah Seminary, challenges individualism in a radical way. Aloneness cannot bring transformation. We must move people in our parishes to a new mentality.

How can this be done? By an opening up of symbols until we can experience them as authentic. Every word, gesture, movement, object, appointment must be real in the sense that it is our own. "There is a cultural tendency to mini-

Magnificence on a modest scale.

By Möller.

The tonal finishing here is literally thrilling, remarkable even by Möller standards in a two manual organ of only 20 ranks. Articulate, full-bodied, glorious, the Möller voice adds the final perfection to this unique and jewel-like sanctuary. Completed just two years ago, St. Mark's Lutheran Church, Wilmington, Delaware is well worth seeing and, above all, hearing!
candlesticks. The altar stands free, approachable from every side, capable of being encircled. It is designed and constructed for the action of a community at which the presiding minister stands and upon which are placed the bread and wine, the vessels and the Book.

Furniture and all objects used in liturgical celebrations do not have only a utilitarian purpose, but should also serve as visual signs and sensory contributions to the beauty of the action.

Liturgy makes two demands: quality and appropriateness. Whatever the style or type, no art has a right to a place if it is not of high quality and appropriate. God does not need liturgy; people do, and people have only their own arts and styles of expression with which to celebrate. The misconception that anything private and individual is personal and anything communal and social is impersonal must be changed. Liturgy is both a personal and a communal experience. By emphasizing the participatory role of the laity, the Church will foster interdependence and mutuality of gifts.

A NEW FORM OF BAPTISM

All people should participate in the eucharist and the sacraments, and the personal acknowledgment of another’s presence by actual eye contact is important. This is not to diminish, however, the continuing primacy of mystery; “seeing beyond the face of the person or the thing, to a sense of the holy, the numinous, mystery.”

Critics of current liturgical trends, according to Horace T. Allen, Jr. in the September, 1973 issue of Liturgy accuse them of a creeping immanentism. But he goes on to note that “transcendence is not simply an upwardly mobile sensation; it is the experience of the uncommon in the midst of the common, the vertical as a horizontal experience.”

Protestants will be surprised to know that though private and semi-private baptisms are still prevalent, the Church is rejecting this as a norm. Professor Louis Weill spoke of infant baptism as a derivative and therefore an abnormality. Articulation of the prepared adult as the candidate for the rite of Christian initiation should be made explicit, he said. We are called back to adult baptism, as the model for instruction and formation.

This great symbol of an individual’s initiation into Christianity should be prepared with dazzling intensity. The place it is celebrated in a building, whether old or new, can have a profound effect on the congregation. Dr. Weill, an Anglican professor of Liturgics, spoke of the value of having a separate space for baptism away from the eucharist, even though a union of both is always implied. It should be a space where the congregation feels it participates with the parents in a period of preparation for the baptism, just as the engagement period precedes marriage.

Some churches find that an enlarged entry or porch where one enters the church is a good transitional space for a font because it reminds congregants of their own initiation into the faith. Moving water, as in a fountain or spring, is used to recover the image of scriptural living water. Then one can hear the baptism as well as see it. Imersion as an option, deepens the Pauline sign of burial with the Christ and the subsequent rising to newness of life. Dr. Weill spoke of a small church near Houston which uses an antique copper tub into which the sponsors pour water followed by the use of oil to anoint the body of the initiate. After the baptism, which often is culminated after an Easter vigil, there is the washing of feet to show that we are all called in baptism to serve and not be served.

After baptism, the initiate offers personal talents for the support of the faith community; not as a volunteer or because of the honor involved, but because one’s ministry must support a life of faith. There may be times when one would like to participate in a special ministry, but if one does not have the special gift to do it, then the ministry is not yours to do. The extended ministry of the laity is in continuous preparation and development; an alerted church will call upon as many ministries in worship as possible and will also devise ways of recognizing such ministries.

THE ROLE OF THE ARTS

The crucial role the arts can play in relation to the new church is what Rembert Weakland, Archbishop of Milwaukee and chairman of the Bishops’ Committee on Liturgy, called mainstreaming. The further the arts are removed from the idioms and styles of our time the more likely they are to be sterile and vapid. The custom of the church has been to establish counterparts of the art recognized in the secular world, and while our efforts may be inoffensive they are seldom inspired. Church art has been a product of the ghetto for decades because it has been out of the mainstream. The best church artist is the one who is also the best secular artist.

"The quicker we can close the gap between the creative artist and the taste of our people," the archbishop said, "the quicker we will arrive at a liturgical revival of lasting value."

Several reasons were given by speaker Fr. Richard Vosco for a pervading lack of sensitivity to artistic quality:

Socially static groups have little learned taste; kitsch products are so easily available; bad influence of advertising; and the prevalent belief that more is better.

Since taste cannot be mandated, an educational process to raise the level of congregational taste was outlined.

The role of the liturgy committee is more than planning liturgy from week to week. It must help the congregation and the artist understand that they can be sounding boards for each other as they work toward understanding the needs of their church.

One teaches best by example. Words are inadequate. It is better to write a piece of music or paint a picture than to talk about it.

We must redefine the role of the expert. No church can have an expert in all fields but can call them in when they are needed.

The artist must realize that he can be a bridge builder between the secular world and the community of faith. Active in both worlds, he must sense where the congregation is.

We should recognize that secretly we are all individually closing the gap.

THE ARCHITECTURAL PROCESS

Edward Sovik, a Lutheran architect, outlined the importance of process in assuring buildings of quality and noted the interacting roles.

The congregation must be willing to accept ten members carefully chosen by a nominating committee to make decisions for them. Since the majority is not always right, the committee should decide that the moderator may sometimes declare a decision for the minority. There should be a balance between people and professionals on the committee.

Mr. Sovik’s criteria for an architect included the qualities of a good designer, work appropriate to the Christian enterprise, integrity, sensitivity to beauty and the spiritual, good technique and administration.

He reminded us that creativity is a patient search and that churches should be aware of the amateur who loves the work because it is his, not because it is good.

A CELEBRATION OF THE FUTURE

Robert Hovda brought the assembly up short when he reminded us that most people change not when they are convinced but when they have new visions and fantasies. Parables he said, put us in new situations and challenge
For the most efficient use of church space...
Sauder flexible seating.

Interlocking wooden seating, for straight or radial rows. Self-stacking, for minimal storage space. Choice of styles and finishes. In flexible seating or traditional pews, Sauder makes wood make the difference.
cannot contain or confine God, they can, like the world itself become icons, avenues of approach, numinous presences, ways of touching without totally grasping or seizing.

Jesus. And then in Jesus, the Word of God is flesh: "This is what we proclaim to you: what was from the beginning, what we have heard, what we have seen with our eyes, what we have looked upon and our hands have touched—we speak of the word of life."

Covenant. Biblical faith assures us that God covenants a people through human events and calls the covenanted people to shape human events.

Liturgy. Liturgy has a special and unique place in the life of Christians in the local churches, their communities of faith. Each church gathers regularly to praise and to thank God, to remember and make present God's great deeds, to offer common prayer, to realize and to celebrate the kingdom of peace and justice in today's realities. The action of the Christian assembly is liturgy.

Priesthood of all believers. Not only the planners and ministers are active in the liturgy but the whole congregation. With a baptismal audience there is no audience. Planning should involve representatives of oppressed and disadvantaged parts of the communities in which they are located.

The Whole person. It is critically important for the church to reemphasize a more total approach to the human person by opening up and developing the intuitive elements of liturgical celebration. One should be able to sense something special (and nothing trivial) in everything that is seen, and heard, touched and smelled and tasted in liturgy.

Contemporary. Because it is the action of a contemporary assembly, it has to clothe its basically traditional structures with the living flesh and blood of our times and our arts.

Intercultural. Because different cultural and subcultural groups in our society may have quite different styles of artistic expression, there are no universal sacred forms.

I am convinced that a fresh examination of the environment and art of Protestant worship can point us in the direction of a relevant future. If we engage in such a process our people will learn a new language, one that will enable them to talk with each other on a new dimension; to talk with liturgists, musicians and artists with a new facility; to talk with Roman Catholics with a new realization that all Christians share in common in both word and sacrament. □

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COMBATING THE COMMERCIALISM OF CHURCH ART

by Kathy Pickel

Americans have long accepted—or at least tolerated—crass commercialism as an invading force in nearly every aspect of their public and private lives. However, occasionally it seems appropriate to consider the alternatives to that invasion.

In the field of liturgical art, few people are even aware of the current war of salesmanship. Yet increasingly, as church committees “shop around” in search of special discounts, cheap imitations and fringe benefits, the pitch takes precedence over the product.

Consider the procedure for selecting liturgical art. In most cases, when a new church is under construction, the architect or church committee will send blueprints or a building description to a number of art studios, asking them not only to submit quotations, but to prepare designs for all or part of the art work as well. It is taken for granted that this work is to be done without pay and obviously, without guarantee of a contract.

While the studios or artists who accept the invitations do so voluntarily—and may, in fact, actively seek an invitation to bid—they actually have no choice. They must work within the present system to avoid being left without work.

Yet can you imagine selecting an architect by asking half a dozen firms to submit designs for your church—gratis, of course—promising to select the one you like best? And if a few ideas of one of the unselected architects happen to be incorporated into the final building, well, isn’t flattery compensation enough? No architect would stand for the possibility that his ideas might become part of an eclectic “best suggestions list” gleaned from various competitors and handed over to the lowest bidder. Architects, chosen for their reputation on past projects, always begin work from a contract. If a church decides to terminate the contract, the architect is still compensated on a percentage basis for the work completed.

Similar comparisons can be made in other, unrelated fields (doctors, lawyers, etc.). Any artist worth the church’s consideration is as well-trained and/or talented as other professionals. Why not treat him as such?

This is not to say that church committees should NOT “shop around” for art, but rather that they should shop wisely. A committee chosen to select art work for a church needs to spend time on research. If possible, the members should visit studios near them. Certainly they ought to be able to visit other churches. Sometimes non-religious buildings are also good sources. For instance, stained glass windows, sculpture, mosaics and paintings can be found in mausoleums, public buildings and private homes in addition to religious structures. The members would be wise to send for brochures and/or sample photos from various studios.

(Names can often be gleaned from trade journals such as Stained Glass, the official magazine of the Stained Glass Association of America, and the advertising sections of church yearbooks.) The members should study and ask questions until they feel confident they know what to look for in quality of design, craftsmanship and materials. All of this can be done at little or no cost to the artist, and should give committee members a clear idea of what they would like in art work for their church.

It is the lack of a clear idea that is so confusing to art firms as they try to magically find the artistic “style” which will most please a committee. The artist asked to find that style tends to feel he or she is competing for first prize in a contest instead of being appreciated for an already demonstrated ability and well-earned reputation. Moreover, it is the confusion over the committee’s desires which leads some firms into “sweet-talking, three martini lunches” and other gimmicks in order to gain an edge over the competition. Yet even non-gimmicky design submissions from half a dozen firms add to the overhead of ALL of the firms, since no single company will be awarded ALL the contracts. Higher overhead, whether it is caused by winning and dining clients or submitting designs without contracts, forces firms to A) raise their prices, B) cut their quality, or C) both of the above.

The present system of commissioning art work in churches will not be changed overnight, but each church committee can take a stand and make a beginning.

Whenever possible, the committee members should do enough research to enable them to select a single artist or studio for the art work, recognizing that a studio, once chosen, will gladly rework any design the committee deems unsuitable. (If different firms are chosen for different media—sculpture and stained glass, for instance—care should be taken to see that the artists’ varying styles will blend.)

Moreover, when the committee members do have a definite preference for the work of a particular artist, they should not let themselves be persuaded to invite others to submit designs simply to satisfy the rule of competitive bidding.

If a committee insists on soliciting design proposals from various artists, their names should be listed on the invitation to bid. Artists have a right to know with whom they are competing. Another firm’s reputation for cut-throat tactics may deter some artists from bidding, but knowing the competition frees those artists to make an intelligent, cost-conscious choice.

However, assuming the committee members limit their invitation to submit design proposals to those studios whose work they actually favor, they should be willing to pay fair compensation to the unsuccessful bidder(s) for the work prepared. The amount should be stated in the invitation.

The Church was once the primary patron of fine arts, generously fostering the inspiring creativity of artists. Perhaps we can help to bring about a new, ethical Renaissance by choosing our liturgical art with forethought and fairness. □
STAINED GLASS ASSOCIATION OF AMERICA

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The SGAA is a non-profit organization established to encourage the finest development of the ancient craft of stained glass in contemporary America. Our studio membership is composed of only those who have met the Association's requirements for excellence in craftsmanship, integrity, and business practices. Anyone of our more than seventy member studios will gladly consult with you on design problems and budget considerations. For quick follow up action, send your request to our home office in St. Louis, Missouri.

MEMBERSHIPS
The SGAA cordially invites you to join, participate in the activities, and help promote and advance the stained glass craft in a way that can only be accomplished through group action. Information concerning our Association and its various memberships can be acquired from our home office. Those who wish to join and help support our cause may become an Associate Member for an annual dues of $30.00. Membership dues includes a subscription to our publication, STAINED GLASS.

SGAA'S PUBLICATION
Published quarterly at the beginning of each season, STAINED GLASS is a comprehensive magazine containing sources of supply, names and locations of our studio members, great color illustrations, technical information, articles, editorials, reports, book reviews, and much more, all relating to the field of stained glass. Subscription rates are $10.00 per year, $12.00 outside the U. S. A. ORDER TODAY! Send your remittance, name, and address to STAINED GLASS, 2304 Silhavy Road, Valparaiso, Indiana 46383.

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IFRAA REGIONAL CONFERENCE
at
Indianapolis

October 31 to November 1, 1980
by
N. Vernon Blankenship
Convener Planning Committee

A Central States Regional Conference sponsored by the Interfaith Forum on Religion, Art and Architecture will be held at Indianapolis, Indiana October 31-November 1, 1980, with a pre-conference tour to Columbus, Indiana on October 30. The conference will be held at the Christian Theological Seminary in Indianapolis.

Program emphasis will be on efficiency in the use of energy and space in religious buildings. Addresses, workshops and tours will help develop this theme.

The keynote address for the conference will be made by Dr. Keith Watkins, Professor of Worship, Christian Theological Seminary. Architect Edward Barnes, designer of the buildings of Christian Theological Seminary, has been asked to make an address at the evening session on October 31.

A panel discussion on use of solar energy in a church, office, and residence will be part of the Friday, October 31 schedule. Tours of Indianapolis churches showing efficient use of space will be a part of the program of the first day.

Several workshops will be held on Saturday, November 1. These will deal with energy alternatives, church planning and construction methods, and financing religious buildings.

Plans are being made for the participation of architectural students from Ball State University School of Architecture and Theological students from Indianapolis and Anderson, Indiana in joint projects.

While most of the sessions will be held at Christian Theological Seminary, participants will be housed at local motels.

The conference is open to architects, artists, ministers, seminary and architectural students, local congregation building committees and church leaders.

To receive information on registration and housing when it is finalized, fill out the form below and forward to the IFRAA office, 1777 Church Street, NW, Washington, DC 20036.

---

Yes, I am interested in attending the Central Regional Conference in Indianapolis, IN October 31 through November 1, this fall. Please send registration and housing information to:

Name __________________________________________
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State ___________________________ Zip ____________

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# INTERFAITH FORUM ON RELIGION, ART AND ARCHITECTURE

## APPLICATION FOR MEMBERSHIP

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Registered Architect [ ]  Clergy [ ]
Artist/Craftsperson [ ]  Manufacturer [ ]
Church Administrator [ ]  Layperson/Other [ ]

**OCCUPATION:**

**RELIGIOUS AFFILIATION**

Note: Additional information may be supplied on separate page.

**SCHOOL AND COLLEGE**—dates, degrees and honors

**ARTIST/ARTISANS**—Museum or private collections, professional shows, one person shows.

**CLERGY**—Please detail faith/denomination, religious and/or interest background in area of religious architecture and art.

**MANUFACTURER**—Please detail product related to religious architecture and the arts.

**LAYPERSON/OTHER**—Please detail interest background in area of religious architecture and the arts.

**NAME OF IFRAA MEMBER(S) KNOWN TO YOU**

**MEMBERSHIP DUES:** $50.00 per year.

Please mail application with check for first year dues made out to:

**INTERFAITH FORUM ON RELIGION, ART AND ARCHITECTURE**

1777 Church Street, N.W.  Washington, D.C. 20036

Phone: (202) 387-8333

Signature
Notes & Comments—Cont. from p. 3
deals with reducing noise levels in structures through use of quiet equipment and absorption materials, and may be purchased for $48.00 from National Audio Visual Center, GSA, Reference Section, Washington, DC 20409. The same package may also be borrowed free of charge from Modern Talking Picture Service, 5000 Park Street North, St. Petersburg, Florida 33709.

The National Solar and Heating Information Center, operated by the Franklin Research Center for HUD and the Department of Energy, has compiled a computerized listing of more than 5,000 solar building design professionals whose expertise is available to the public.

Professionals with experience are encouraged to add their names to the National Information Bank. The list, subdivided according to work, currently lists 2,400 architects, 2,700 designers of solar systems and 1,000 energy consultants. To submit a listing or request resource assistance write:

National Solar Heating and Cooling Information Center
P. O. Box 1607
Rockville, Maryland 20850

Also from NSIC, a new 150 page publication, "Site Planning for Solar Access." Professionals may receive a free copy by ordering from the National Center (address above).

A Nostalgic Look at the IFRAA Orlando Regional

I have just returned from another IFRAA conference, this time a "Regional" held under Nils M. Schweizer's direction at the Harley Hotel in Orlando, Feb. 24, 25 and 26. As I sat in a comfortable deck chair in the bright sunshine and watched Nils, IFRAA President Sherrill Scales, Hal Watkins and the Board of Directors discussing last minute conference details in the shade of the hotel awning, I felt just a bit "left out." But the feeling soon disappeared when I realized how often, through the years, I had wished for the wonderful sun I was enjoying, instead of devoting conference time to wondering whether we had ordered enough or too many meals, or checking to see if the printer would really deliver the programs on schedule.

I have attended 34 (or is it 35?) annual IFRAA national gatherings, and I have lost track of the number of regionals, beginning many years ago when a handful of architects and denominational executives met together annually in what was known as the Church Architectural Guild, later to become the Guild for Religious Architecture, (at the time we affiliated with the A.I.A.) and finally three years ago when the merger was effected with the American Society for Church Architecture and the Commission on Church Planning and Architecture to form the Interfaith Forum for Religion, Art and Architecture (IFRAA). But no matter how the names have changed, the overall thrust has remained the same: the effort to gather together ministers, particularly those in denominational positions, architects, artists, laymen and hopefully a generous number of church building committees who are all interested in discussing problems of mutual concern in the erection of thoughtful houses of worship.

There were over 100 attendants at the Orlando Conference including 15 architects and 17 building committees. And who could ask, in these days of high interest and declining numbers of religious building projects, for a more pleasant situation than to have the building committees outnumber the architects! (No, we didn't get any new clients!)

On Monday evening, Feb. 25th, the conference got off to a fine beginning in St. Luke's Episcopal Cathedral, where Edward Sovik delivered an excellent address entitled Art & Environment. It is truly amazing, through the years, how he captures the essence of what is happening architecturally and spiritually to American church building, as new cultural norms affect people's behavior and their attitudes toward religious buildings.

The following day was devoted to various seminars which discussed such matters as Retrofit, Energy Saving Buildings, Financing, and Which Unit Shall We Build First, with John Potts of the U.C.C. church serving as moderator.

Between 5 and 7 P.M., there were four impromptu "Experiments in Space," carried out by four teams chosen from the participants and the exhibitors. (The exhibits of ecclesiastical arts and crafts by various manufacturers and craftsmen contributed much to the conference.) These "Experiments," demonstrating worship, communion, a wedding and a baptism, by their very spontaneous nature, seemed to generate much interest, especially since many of the delegates were involved.

In the evening Nils and Bev Schweizer invited a few friends to their marvelous home, built 18 years ago in a wooded area near Orlando, and still "modern" in the fullest sense. It is the most delightful house I have ever visited! (And thanks, Nils and Bev, for having your beautiful daughter emerge from the ribboned box to celebrate my birthday!)}

On Tuesday, Feb. 26th, Father Richard Vosko discussed Flexible Worship Spaces, while Maureen McGuire, Marjorie Coffey and Marjorie Drane talked about stained glass and vestments, in a panel moderated by Crosby Willet.

At the noon lunch, Bob Rambusch (always a provocative speaker) showed slides of what he called the "Architecture and Art of the American Monastic Societies" including that of the Shakers and similar groups.

During the afternoon busses took the groups to various local churches, first to the United Methodist Church where design and acoustics were examined, then to St. Stephens Lutheran Church (LCA) and the Wekiva Presbyterian Church, where flexible space was discussed.

At the awards banquet in the evening, presided over by Father Sherrill Scales, the Rev. James Monroe, General Presbyter of the Presbytery of St. Johns, give a not too pleasant outline of the problems of the current financing of religious buildings, but fortunately ended on an optimistic note, as to the near future.

The Awards Committee, chaired by Donovan Dean, A.I.A., announced the following IFRAA citations for churches building in Florida since 1974:

**Honor**
The New Chapel Addition
Christ the King Catholic Church
St. Petersburg, FL
Architects:
Robbins & Bentler, AIA
Tampa, FL

**Merit**
Emmanuel Lutheran Church
Venice, FL
Architects:
James C. Padget, AIA
Sarasota, FL

**Merit**
St. Augustine Catholic Church
Casselberry, FL
Architects:
Nick Arthur Jones, AIA
Clermont, FL

**Merit**
First Presbyterian Church
Delray Beach, FL
Architects:
Harold E. Wagoner, FAIA
Philadelphia, FL

The conference was an excellent and rewarding one, and hopefully will set a fine example for several other regional conferences being planned under the direction of Henry Jung.

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Maureen McGuire Design Assoc.
924 E. Bethany Home Road
Phoenix, AZ 85014
602/277-0167
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MOLLICA, PETER
10033 Broadway Terrace
Oakland, CA 94611
415/655-5736
Lead stained glass.

MYERS, JEAN
P.O. Box 531
New York, NY 10011
212/755-0400
Architectural stained glass, sand carved plate glass.

WILET, E. CROSSBY
10 E. Moreland Avenue
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215/247-5721
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SYNAGOGUE ART

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We invite FAITH & FORM readers to avail themselves of the opportunity to contact directly the listed artists/craftspersons for further information.
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