

# Shared Journeys

## The Stained Glass Art of Sarah Hall

By Dr. Shirley Ann Brown



Fig 1

A

Architectural stained glass surrounds us. We see art glass in all its forms in every type of public space, from religious buildings such as churches, synagogues and mosques, to secular spaces including schools, courthouses, city halls, hospitals, restaurants, train stations, swimming pools, offices, and department stores. Art glass windows also adorn private homes. Because architectural stained glass is so widespread it is sometimes taken for granted — but a serious study of the medium reveals it to be a rich and essential part of Canada’s cultural and artistic heritage.

The art and craft of stained glass window-making has a long history and was an exclusively male domain for the first 700 years of its praxis. It was as recently as the end of the 19th century that women gradually entered the field, gaining full acceptance only after WWII. Today, Sarah Hall is one of Canada’s foremost woman artists in the medium of art glass (*fig 1*). The scope of her work, the sheer number of her productions, her use of innovative techniques, and the originality of her artistry place her among the leaders of this medium in Canada as well as on the international stage. Although her works, created between 1974 and her retirement from commissioned work in 2018, are located primarily in Canada and the USA,



Fig 2

with a few examples in Germany, she has achieved international recognition and been the recipient of many awards and honours. She was appointed to the *Order of Canada* in December 2019, the only woman stained glass artist to achieve this status.

Sarah Hall was born in Hamilton, Ontario, in 1951 and grew up in the family home in Dundas, Ontario. At an early age she fell in love with the stained glass she saw in churches, and in 1974 she pursued this interest by studying for a year at Sheridan College's School of Crafts and Design in Brampton, Ontario. There, she took an introductory stained glass techniques course taught by Jack Taylor, along with courses in painting, photography, and metalwork. This led her to full-time study in the Architectural Glass Department at the Swansea College of Art in Wales in 1975-76. In 1976-77, Sarah assisted Lawrence Lee, ARCA, the renowned creator of the stained glass windows in the new Coventry Cathedral and Master of the Glass Department at the Royal College of Art in London. In June 1977, after passing the required exams she was awarded the Diploma in Architectural Glass from the City & Guilds of London Institute. During 1978-79 she spent time in Jerusalem studying Middle Eastern glass, gold leaf techniques, and mosaics. All the while, she continued her study of general art history and the history of architectural stained glass, building up a memory bank of visual examples.

In 1978 she returned to Canada and settled in Toronto, working as an assistant to stained glass artist Stephen Taylor, who had also studied under Lawrence Lee. In 1980, when she created her own design and fabrication studio at 94 Tecumseth Street she was a well-trained, well-travelled artist. In 1983 she moved to 31 Portland Street, sharing a studio with other glass artists: Robert Jekyll, Gundar Robez, David Wilde, Stephen Brathwaite, and Karl Schantz. As her career progressed, she was able to set up her solo studio at 1400 Dupont Street, where she remained for 16 years. From 1995-2003, she worked with Norbert Sattler's Stained Glass Studio in West LaHave, Nova Scotia, for the fabrication of several of her windows (*fig 2*). As her technique developed further and fabrication required more specialized facilities, from 1999 she formed working collaborations with the Peters Studio in Paderborn and with the Derix Studio in Taunusstein, both of which could accommodate large scale work and provide cutting edge technology. With most of the fabrication taking place in Germany, Sarah was able to downsize her studio and relocate to 347 Sorauren Avenue. Working primarily with the Peters Studio since 2003, she made a final move as a design studio to 98 Bousstead Avenue. Sarah closed her studio to commissioned work in 2018. In May of that year, she moved to Ontario's Prince Edward County where she built a new design studio where she could experiment with bird-friendly glass. Her focus is now on educational initiatives and mixed media projects she can create by herself.

Stained glass windows have been an integral component of Christian ecclesiastical architecture and to a lesser degree of secular buildings in Europe since the early 12th century. Developing north of the Alps, they were an alternative to the great mosaic cycles which graced the interiors of religious buildings in Mediterranean countries from the 5th century on. By the 13th century, churches of any consequence contained as many stained glass windows as they could afford, or for which they could find patrons. Iconoclastic ardour

brought on by the upheaval of the Protestant Reformation in the 16th century and the secularism of the 18th century Enlightenment, along with changes in stylistic preference in architecture, resulted in the decline of the acceptance, and thus the production, of these artworks. Fortunately, the romantic revival of all things medieval in the 19th century, combined with legislations guaranteeing freedom of worship, led to a renewal of stained glass production to fill the wall openings in the thousands of churches either being restored or newly-built across Europe. The Arts and Crafts Movement made art glass windows a popular addition to private residences.

As colonial Canada expanded, the erection of places of worship which connected the congregations to their countries of cultural and religious heritage provided settings for imported stained glass windows from the 1840s on. By the latter part of the 19th century, Canadian stained glass studios had been established, primarily in southern Ontario, Quebec, and British Columbia, and business was thriving. Soon, most Canadian churches could boast of at least one stained glass window, with many of them possessing a complete set of architectural art glass. Stained glass windows and transoms became a desired, status-affirming addition to private residences, individually commissioned for the homes of the wealthy, and ordered from catalogues for the middle-class.

Stained glass windows in religious structures perform several different functions. To begin with, they serve as physical and visual barriers to exclude both the elements and animate creatures, keeping the outside world out and the inside world in. But their unique role is to create an enclosed sacred space in which people can turn their attention and thoughts to the meditation of things divine, of eternal matters that transcend their daily lives. From ancient Egypt on, the sun's light was manipulated and directed to transform physical space into a spiritual environment. Sunlight has been interpreted as the manifestation of the presence of God in Christian thought from the foundation of the belief system. The concept of the alchemizing

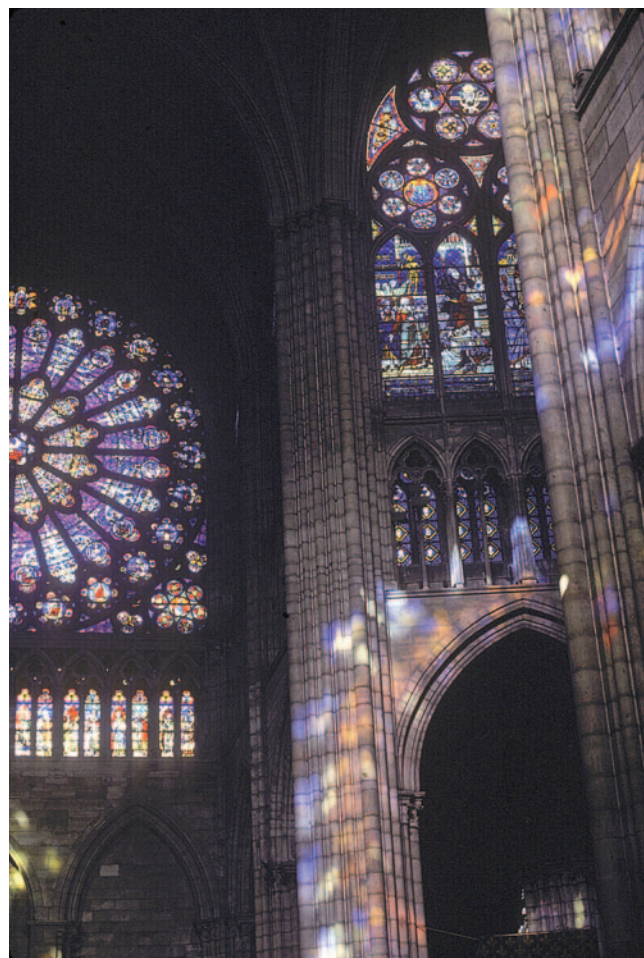


Fig 3

power of colour (*fig 3*). was added in the mid-12th century when Abbot Suger of St-Denis described how invisible sunlight passing through the membrane of his coloured stained glass windows is transformed into perceptible rays of colour which fill the dark interior of his abbey church and lead the viewer to contemplate divine beauty, the source of all physical beauty. The mind is elevated to higher thought.

Suger introduced another function of his now-famous windows — the pedagogical. Medieval windows were usually figural, depicting biblical scenes and visualizing the lives of saints. Often described as “the bible of the poor” these windows were used to educate both the monks and the laity in the underlying tenets of their faith, undoubtedly adjusted to differing levels of interpretation by lecturing religious teachers and by the casual visitor.



But it was not all unre-served acceptance. The physical and emotional power of stained glass windows was detested by Bernard, Abbot of the Clairvaux monastery, who forbade their use in all abbeys associated with his Cistercian order. He condemned the emotive power of the glorious light and colour of stained glass, the imagery, and its exorbitant expense. The argument about whether or not figural imagery should be allowed in religious settings stems from the Old Testament edict against idolatry and is still reflected in modern preferences when determining the nature of stained glass commissions. But the power of light and colour remains a constant.

Given the centuries-long history of architectural stained glass, it is not surprising that the majority of Sarah Hall's commissions have been for religious settings. One of the outstanding characteristics of her artistry is that she has worked with patrons from all religious communities, successfully interpreting the preferences of numerous Christian denominations as well as synagogues. Her approach has been to treat each project as a new and individual challenge, directed by a two-pronged exploration. She made a point of meeting with her clients, listening to them express their expectations, and building a sense of shared journey and commitment. Hall carefully studied the architectural settings for her windows, analysing how the light functioned in the interior, and what colours would best fit in the particular location, often building models to judge exactly how the windows fit into the structure. Both parties had to stretch their expectations to achieve a consensus. Often the resulting artwork was not what the clients had originally expected, but rather something that felt right for the community and the architecture. Although there are certain motifs and themes which recur in her work, she never



Fig 4

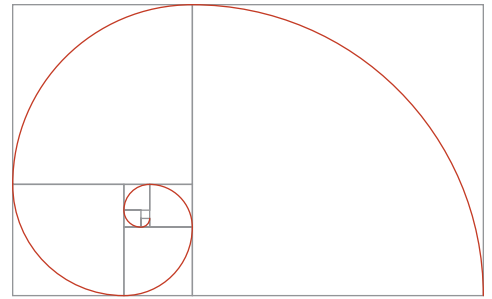


Fig 5

repeated designs. Each undertaking was a unique journey.

A frequent issue facing stained glass artists is the clients' desire to place conservative, traditional figural windows in contemporary architecture. Some congregations insist on designs built around a narrative or around the images of saints or historical figures — windows that serve a direct pedagogical function. This is where Sarah Hall combined her vast knowledge of historical art, religious exegesis, and hagiography with her position as an artist in the modern world. In several instances, she adapted scenes and figures from Rome's Early Christian Catacombs, as seen in Rose of Lima Catholic Church in Toronto (2005, *fig 4*) and in Manresa Jesuit Spiritual Retreat Centre in Pickering, ON (2009). On occasion she incorporated small, exact versions of known artwork, such as in St. Andrew Catholic Church in Columbus, OH (1997). Here the fifteen *Mysteries of the Rosary* (*fig 5*) are presented in screened panels based on



Fig 6

the 16th century woodcuts of Albrecht Durer, set into vast colour fields and an abstracted landscape. The small monochrome scenes from the *Life of Christ* embedded in the large windows of St. Catharine of Siena Church in Columbus, OH (2000, fig 6) remind viewers of traditional narrative windows without copying their intense realism — they become timeless catalysts to meditation.

Eschewing the traditional emphasis on the standard “holy picture” dominated by realistic, sentimental figures, she often chose to integrate



Fig 7

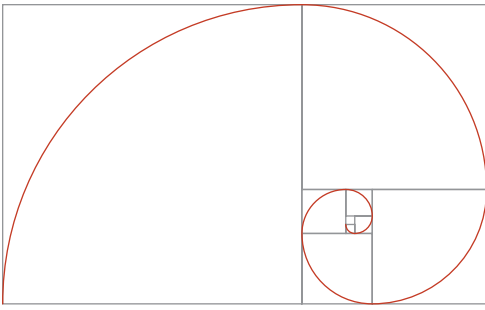
abstracted figures into colour fields at times supplemented with text. Her highly expressive series of saints for the windows of St. John of the Cross Catholic Community in Mississauga, ON (2001, fig 7) are rendered with a loose, sketch-like style that is more like a spiritual gesture drawing than portraiture, creating immaterial entities that are spirits, not bodies. These Carmelite saints are individually named, and accompanied by extracts of their writings. Her approach to the figure ranges from realistic to ethereal, reflecting her principle that the abstraction of modernism is essential to spirituality in the 21st century; that there must be room for the imagination.

This room for the imagination is provided by light and colour. The impact of floods of

multi-hued light, filling space and playing on the walls of the building, is a visceral, sensual experience. Sunlight gives a building its presence and stained glass reveals the divine presence in sunlight. It worked for Gothic churches, and it works equally in modern environments. Acknowledging artistic influences from the work and philosophy of Lawrence Lee and Georg Meistermann along with other post-WWII German pioneers of stained glass as a modern art, such as Schaffrath, Schreier, Poensgen, and Klos, Sarah Hall based her art on the interaction of colour, form, and line to bring out the transcending power of light.

Many Christian and Jewish congregations are reluctant to include figures in their art glass windows and this is where Hall’s artistic imagination reached its peak. Often historical non-figural designs will be inserted into colour fields as focus points, including Celtic designs from the Book of





Kells, papyri and manuscripts from the Chester Beatty Library in Dublin, and the Dead Sea Scrolls from Jerusalem, as indicators of the power of the Word in Christianity, as at Christ Lutheran Church in Waterloo, ON (2007, *fig 8*).

Frequently, it is forms from Nature that dominate her designs, forms based on Fire, Water, and Flora. Hall's tower added to the First Unitarian Congregation in Toronto, ON (1993) remains one of the city's most visible stained glass commissions. *Radiance, Reflection, Revelation* (*fig 9*) is based on the Unitarian's flaming chalice symbol, which originated from a logo designed during World War II for the Unitarian Service Committee by Hans Deutsch, an Austrian Jewish refugee living in Portugal. Representing *Revelation*, one of the logo's several interpretations, a sinuous golden spiral of flames ascends within the 15.25m (50 ft) high tower, rising like a crystal prism at the building's main entrance. It is lighted from within at night, glowing like a beacon on the busy street, a bold and assertive statement of the power of the light and colour of stained glass in today's urban landscape — an icon of public art. In 2016, Hall created another glass beacon, this time for Christ Church Cathedral in Vancouver, BC. (*fig 10*) Fabricated with leaded, German custom-made antique glass enhanced with sandblasting, the new free-standing bell spire rises 12 m (40ft) above the street. Lighted at night,



Fig 8



Fig 9



Fig 10



Fig 11

it recalls a time when the church was the tallest building in town, its light at night guiding sailors and fishermen into port.

Flames rising upwards in a blaze of their own light are an inspiring symbol of the risen Christ. In the *Resurrection* window (fig 11) in the chancel of St. John Lutheran Church, Dublin, OH (1998), multi-coloured flames shoot upwards to both support and fill a blue-rimmed orb surmounting a long-stemmed cross. Grisaille images of the Angel and the Marys at the Tomb emerge within the mainly yellow and green tongues of fire, combining traditional iconography with the abstraction of modernism.

In *The Living Cross* at Thornhill United Church, ON (2003, fig 12), forms merging fire, water, and plants replace the figural representation beloved in

traditional art, but often eschewed by Protestant sects. Hall imagines Christ and His Crucifixion, Resurrection, and Pentecost as a living plant bursting forth from a single stem, exploding upwards and outwards into the arms of the cross shape in flamelike tongues of green, red, blue, yellow, and white. The mottled blue and white circular border signifies both the sky and the sea. The underlying compositional design is itself one of the oldest — the cross-in-circle was used as a sun symbol in prehistoric cultures. It was adapted as a Christian symbol by the late 4th century, signifying the power of Christ reaching the four cardinal points the Universe, encompassing all of mankind and all of God’s creation. The old and the new come together in a timeless fusion.



Fig 12

Similar flame-like plants fill two windows at Scioto Ridge United Methodist Church in Columbus, OH (2007), one of which emerges through swirling eddies of blue water. The *Covenant* window in the Cathedral of the Holy Family in Saskatoon, SK, (fig 13) adapts the flames to represent the Burning Bush at the base of Mount Sinai where God appeared to Moses, here revealed in the rising sun in all its blazing glory. The parted waters of the Red Sea swirl on either side, inspired by Hokosai’s *The Great Wave off Kanagawa*, from his set of woodblock prints of ca. 1830.



Fig 13



Trees and plants are an integral component of Hall's artistic lexicon. Sometimes the plants are presented literally, as in the wheat spikes in the *Eucharist* window (fig 14) at St. Paul the Apostle Church in Burlington, ON (1990) and in the lily of the valley, the thistle, the thorns, the reed, and the hyssop representing the *Five Sorrowful Mysteries of the Rosary* in the narthex window at St. Rose of Lima Catholic Church in Toronto, ON (2005). Simplified foliage can fill the frames around central features in windows as in St. Catherine of Siena Church in Columbus, OH (2000) or be incorporated as compositional elements as in the *Passover, Shavuot,*



Fig 14



Fig 15



Fig 16

and *Sukkot* windows in Beth Tikvah Synagogue in Toronto, ON (1999, fig 15).

But of all the floral images, it is the tree that stands out in Hall's art. The Tree of Life is a fundamental archetype in many of the world's religious traditions, traceable as far back as ancient Mesopotamia. In the Judeo-Christian context, it is featured in Genesis as the source of eternal life in the Garden of Eden. In Proverbs, Wisdom is praised as the Tree of Life. It became a symbol of Christ in the early Middle Ages.

Deciduous trees, bare-branched or in bud, sometimes modelled on photographs of local trees, are simplified into silhouette forms, rendered either in white or in intermixed colours, spreading across whole windows as at Redeemer Episcopal Church in Cincinnati, OH (2012, fig 16) and at Divine Savior Holy Angels High School in Milwaukee, WI (2015). Trees spread their branches across the three sets of double doors to the chapel in St. Patrick's Home, a long-term care facility in Ottawa, ON (2013). Their white silhouettes fill the





Fig 17

*Centennial Window* in Rosedale United Church, Toronto, ON (2014, *fig 17*) and are the main motif in the narthex windows of the Western Theological Seminary in Holland, MI (2012).

In the Cathedral of the Holy Family in Saskatoon, SK (2011), in the centre of the *Glory* window (*fig 18*) a stylized Tree of Life stands before a water-filled cross. White dove-like birds flit among its red, green, and orange-leaved branches. On either side, silhouetted against a blazing red and blue background of prairie sky mottled with yellow, are almost leafless trees which are related to the budding trees found in the church's *Incarnation* window (*fig 19*). These latter are a realistic representation of the little grove of elm trees that stood on the construction site before the building took shape. The water at their base is the Saskatchewan River. The presence of the Mystical Tree in the local setting joins the eternal with the present, bringing a message of hope and glory to the congregation in this very place and time.



Fig 18

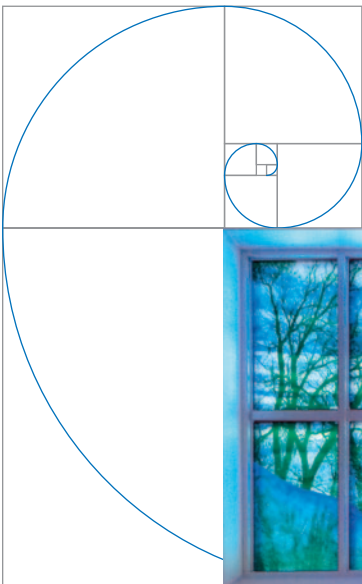


Fig 19

The largest of the tree compositions is *Singing the Light*, (fig 20) found in Greenwood College School in Toronto, ON (2016). Spanning five floors of the main staircase, it was designed in conjunction with the new addition to the school. A grove of trees, some bare and others in leaf, some in dark silhouette and some in grey silhouette, stretch upwards in two main groups. The variegated roots

are in the basement, and the tree crowns touch the ceiling. Bright, multi-coloured birds sit on the branches or fly about. It is an allegory of the school community, the trees standing in for the teachers and their sheltering and supportive roles. The birds are the students, who come and learn, but who eventually fly away into their own lives at graduation.

Drawings from children also feature in Hall's stained glass art. It began with her commission to work with June Callwood on the windows for the Nursery at Jessie's, the June Callwood Centre for Young Women in Toronto (1991), which serves as a home and shelter for teenage mothers and their babies. Hall used central panels of prisms and bits of iridescent glass to shatter the sunlight and create moving patterns of sunlight throughout the room. The coloured borders incorporate sand-

blasted white childlike drawings of sailboats, fish, and palm trees to delight the toddler (fig 21). The effect is kinetic and mesmerizing. In *The Rainbow Project* window for W.J. Watson Public School in Keswick, ON (1993), she incorporated drawings submitted by the children into her rainbow design. She continued this practice in Thornhill, ON, in the *Rise and Shine* window

over the entrance to Thornhill Public School (1994), and in *The Imagined Land* screen for the 16th Ave Public School (1995, fig 22).

Stained glass is a physical entity and its technology and materials evolved over the centuries to allow designer/artists to work in new ways to meet the times. Glass is a mixture of sand and potash heated in a furnace to 3000 degrees Fahrenheit. Various metallic oxides are added to the kiln mixture to create a product which is coloured throughout its body. From the molten state, it can

Fig 20



Fig 21



Fig 22



be blown or moulded to create three-dimensional objects or flattened into sheets to be used in windows. A traditional stained glass window is created by joining small pieces of coloured glass together using lead strips (comes) extruded into an H shape so that the pieces fit into the channels. The designs are painted onto the glass using a brownish-black vitreous enamel made of ground glass, iron oxide, a binder such as gum arabic, and water. Controlled firing in a kiln makes the design permanent. After assembly, the intersections between the pieces of came are soldered and the gaps between the glass and the leads are filled with putty.

Stained glass has always been a contemporary art in the sense that its aesthetics reflect changes in style seen in other forms of painting, such as manuscripts, easel paintings, and wall frescos, as well as the effects of different materials. As medieval two-dimensional painted imagery evolved into Renaissance and Post-Renaissance realism, stained glass imagery followed suit. But perhaps because of the enduring connection of stained glass with ecclesiastical neo-medievalism, it did not keep pace when representational easel painting metamorphosed into abstraction in the early 20th century. Although there were bold experiments in introducing modernist abstraction into stained glass in the 1920's by Josef Albers, Heinrich Campendonk, and Johan Thorn-Prikker in Germany and Margeurite Huré in France, these never became mainstream expressions. It was only in the aftermath of World War II that fully abstracted and non-representational design was incorporated into stained glass by pioneering artists in Germany and France, signalling a break with the past. Stained glass art became a truly modern art in the mid 20th century.

Early stained glass was hand blown and produced in small panels, and even today, hand-blown glass sheets are relatively small, rarely exceeding three or four feet in width and length. The network of leadlines required in traditional window construction does not allow the creation of large, uninterrupted colour fields. To solve the dilemma, large panels of float glass have been adapted for

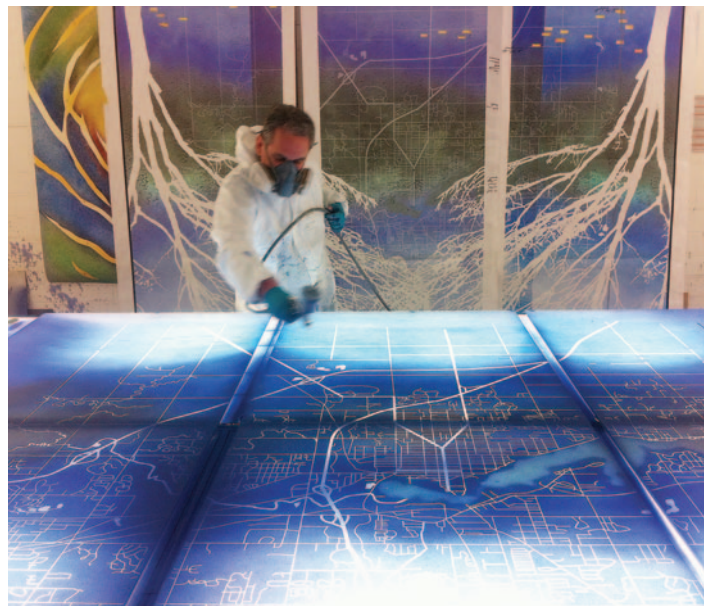


Fig 23

use in art glass windows, so that the use of lead coming is greatly reduced, and often eliminated all together. Laminating panels together allows very large compositions to meet architectural specifications and to be safely installed in buildings.

Today there is a large colour range of vitreous enamels, both opaque and transparent, available for the artist's use. New methods of applying paint, including screen printing, airbrushing, photo-printing, and digital printing have revolutionized how artists design for the medium (*fig 23*). Surface texture is achieved through sand-blasting, and by kiln-fusing pieces of glass to the surface of a panel.

Over the span of her career, Sarah Hall created art glass that employed all the techniques and materials available to her, ranging from windows which rely on leading, to those created out of large, single sheets of tempered glass. Her early works were created with leaded antique glass primarily from the Lamberts Glass Company in Waldsassen, Germany, enhanced with acid-etching, sandblasting, and hand-painted or screen-printed with matte and silver stain. Gold leaf appeared early at Immaculate Conception Church in Woodbridge, ON (1990), and was joined with gold, silver, and copper leaf combined with reverse painting at Queensway General Hospital



Fig 24



Fig 25

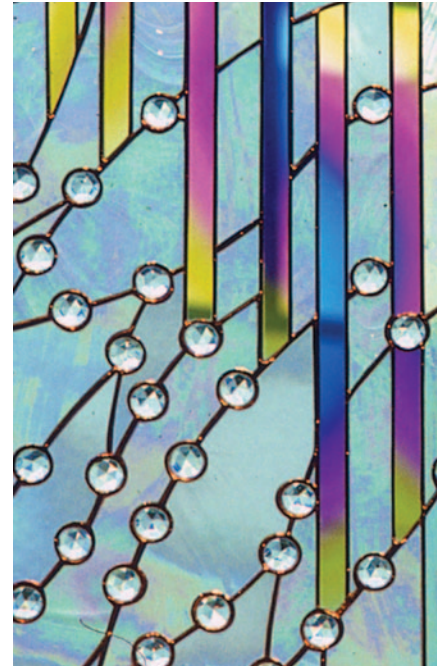
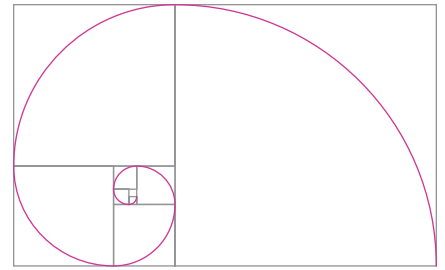


Fig 26

in Toronto, ON (1992, *fig 24*). Gold and copper leaf are combined with airbrushed enamels and sandblasting on antique glass for the *Sea of Kuwait* staircase window in the Embassy of Kuwait in Ottawa, ON (2003, *fig 25*). Prisms, lenses, and textured optical glass were leaded into place in the Nursery windows for the June Callwood Centre, Toronto, ON (1991) and used many times after that. Dichroic glass, which shifts colour depending on the viewing angle, was introduced at Cardinal Carter High School in Aurora, ON (1992, *fig 26*). It was leaded together with antique glass, textured glass, bevelled glass, and prisms to create the

kinetic quality of the glass tower for the First Unitarian Congregation in Toronto, ON (1993).

Hall's transition to a more painterly style without the constraints of the leads began with her collaboration with Derix Studio in Taunusstein and her windows for the Spiritan congregation in Laval House, Toronto, ON (1999, *fig 27*). Enamels were air-brushed onto float glass to create uninterrupted, nuanced colour fields, along with hand painting. At this time she came to the decision to fabricate her work primarily in Germany, where the technology and craftsmanship allowed her to move forward with her artistic vision. Although she continued to use leaded antique glass when the window and setting called for it, as for *New Dawn* and *Fields of Praise* at Grace Church on-the-Hill in Toronto, ON (2006 and 2008), and *Welcoming Light* at Christ Church Cathedral in Vancouver, BC (2016) the majority of her subsequent work was



Fig 27



created using airbrushed enamels, and fusing and lamination techniques. The art glass was often then tempered or made into laminated safety glass to comply with architectural specifications. Cooperation between industrial glass companies and art glass studios in Germany made this transition possible.

This culminated in her immense *Singing the Light* for Greenwood College School, 18.3m (60 ft)

high and 5.5m (18 ft) wide, spanning five floors of the stairwell (fig 28). The multi-layered artwork involved new, cutting edge glass technologies. The tree layer, a strong graphic element, was made with four layers of white ceramic digital printing on single sheets of 10mm opti-white glass. The birds and horizontal colour bands were gently hand-tinted with airbrushing on additional 10mm opti-white glass (fig 29). Both layers were tempered

and then laminated as a strengthened safety glass and holes were drilled for mounting into the concrete wall. Composed of 35 separate panels, installed in groups of seven on each floor level, it was manufactured in technical partnership with Peters Studio in Paderborn, Germany.

Traditionally, stained glass could only be seen from an interior during the daytime. If it was to be displayed at night, it had to be artificially lighted from inside the building. Hall designed the glass tower at the First Unitarian Congregation in Toronto to be illuminated from within by artificial lighting operating on a programmed timer set to go on at sunset and off at sunrise. The tower became a timepiece, attuned to the rhythm of Nature. Unfortunately,

cost cutting resulted in a manual timer being installed. Now nighttime illumination is sporadic.

Hall's next step was to liberate the night-time display of stained glass from the unpredictability of human intervention. Inspired by the use of large scale photovoltaic panels on the façades of commercial and public buildings in Germany (Building Integrated Photovoltaic (BIPV) systems), she decided to experiment with the possibilities of combining solar panels with stained glass. At home Sarah was encouraged by her mentor, Dr. Ursula Franklin, a physicist at the University of Toronto, to pursue an environmental direction for her work. In collaboration with Peters Studio, in 2005 she created two experimental panels,



Fig 29

Fig 28



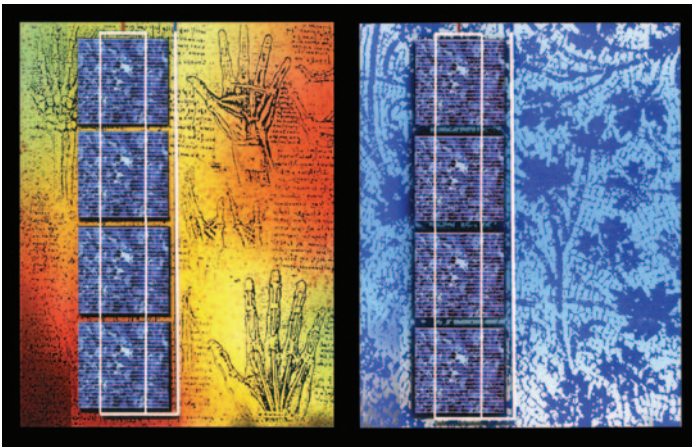


Fig 30

*Homage to Da Vinci and Blue Vine (fig 30)*, integrating solar panels and art glass with airbrushed enamels and gold leaf.

With the support of a Chalmers Fellowship awarded by the Ontario Arts Council, she joined the Canadian team from Concordia University (Montreal) competing in the 2005 Solar Decathlon held in Washington, DC. Their entry, Northern Light House, introduced the first window in North America to combine working solar electric cells and art glass in its creation, in this case featuring a design of maple leaves. Her collaborators included Peters Studio, German solar engineer Christof Erban, and engineers at Natural Resources Canada. In Northern Light House, an array of blue solar cells were embedded in the window, collecting enough energy to illuminate the building's foyer at night. The collected energy was stored in hidden batteries which

powered LED lights at night, illuminating *Northern Light (fig 31)* so it can be seen from the exterior. But the night light was rather dim.

Hall's solution for *Lux Nova*, at Regent College at the University of British Columbia in Vancouver (2007) combines the new technology with an iconography suited to the metaphysical aspect of religious stained glass. *True North* is a 12m (40ft) high wind and ventilation tower over the college's subterranean library. Working with architect Clive Grout and engineer Christof Erban, Hall created solar art glass for the tower's south façade. A grid of embedded solar panels collect energy, which is released at night to power a column of LED lights that illuminate the tower and the art glass. The composition consists of four layers: the grid of solar panels, a layer with twelve crosses made of dichroic glass, a layer with the Lord's Prayer in Aramaic, and a layer with a waterfall design fired onto float glass. During the daytime, the crosses read as opaque glass inserts in the wall, while at night the Lord's Prayer and waterfall appear (fig 32). With this work, the barrier of darkness was broken. With the creation of stained glass that created electricity, art glass that is both symbolic and functional, the medium was adapted to the contemporary need for sustainability.

Hall went on to design *The Science of Light* for Grass Valley Elementary School in Camas, WA (2009) and in 2011 she created the three monumental



Fig 31



Fig 32



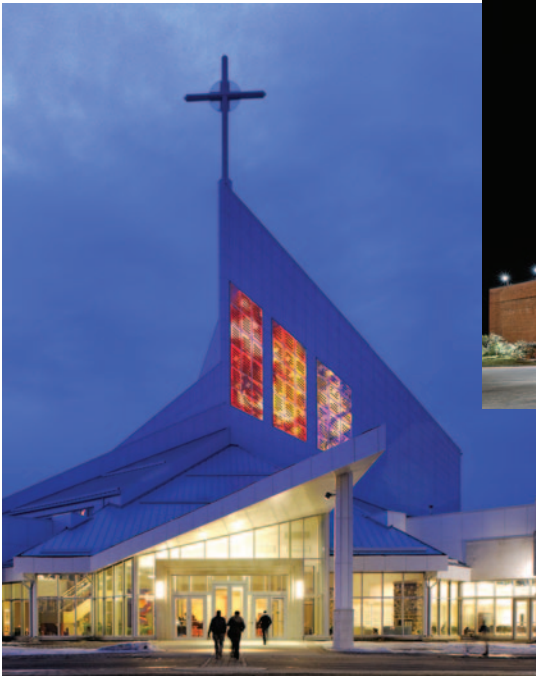


Fig 33

windows entitled *Lux Gloria* for the south façade of the tower of the Cathedral of the Holy Family in Saskatoon, SK (fig 33). Each of these huge windows is composed of 54 trapezoidal panels containing a total of 1015 embedded silver solar cells to collect energy for the building. The windows were connected to Saskatoon’s energy grid in 2013. Red, yellow, and blue enamel airbrushed onto the glass layer represent the differing temperaments of the prairie skies, and laminations of dichroic glass reflect shimmering crosses that move through the sanctuary with the passage of the sun. At night the tower is a beacon rising above the city and the flat prairie landscape.

The largest of Hall’s solar art glass installations was *Waterglass*, for the Harbourfront Centre Theatre, Toronto, ON (2011, fig 34). An essential retrofit of the roof and curtain walls of the glass envelope that had been added to the original building in 1987 was carried out by Enwave Energy Corporation in 2010–11. The purpose was to improve the thermal performance of the building by preventing leakage and heat loss/gain. The new envelope incorporated the innovative Building Integrated Photovoltaic (BIPV) system and heat-



Fig 34

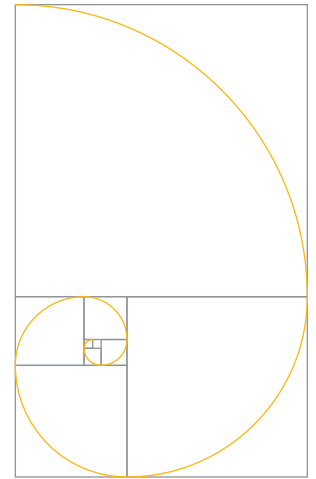


Fig 35

reducing glass to improve internal conditions. Enwave sought out Sarah Hall to create an integrated, permanent, large scale solar art glass installation which would reflect the Harbourfront Centre’s identity as an arts and cultural organization by Lake Ontario. In enamels airbrushed onto the surfaces of heat mirror insulating glass, the deep blue of the lake water undulates in flowing waves over the vertical north and east faces of the glass enclosure and onto the canopy of the west side, where ten grids of photovoltaic panels were incorporated into the enclosure’s design. On the east wall, Hall made a visual reference to solar cells with ten panels of dichroic glass, each consisting of 36 painted squares, about 15cm (6 in) in size. On these she screen printed 360 images of the human history, geography, ecology, and primal beauty of Lake Ontario. Colour floods the interior of the glass gallery (fig 35) blending interior and exterior, while the imagery unites the area’s historical past and present.



Fig 36



Simultaneously with the Harbourfront project, Hall was awarded the commission to create a new solar art panel to join York University's collection of on-site artworks. *Leaves of Light* (2011, fig 36) was installed outside the entrance of the new Life Sciences Building. The 520cm (17ft) by 220cm (7ft) panel consists of the three layers: one layer with digitally printed imagery with hand painting and sandblasting, a middle layer of sheet LED, and a layer of embedded solar cells with dichroic glass. Hall wanted to bring both the physical location — the building is located in a grove of ginkgo trees — and the educational role of the University into her work. During the day, the painted façade features the text of Goethe's short poem, "Gingko Biloba," in the original German, along with translations into seven different languages. The English version is written on two sprays of ginkgo leaves. The word *Gingko* is written in ten languages to acknowledge the multicultural character of the University. At night, when the LED lights activate, the text recedes and a background scene of a small person standing in a grove of leafy trees beside a pond emerges, recalling the on-campus Pond. On the

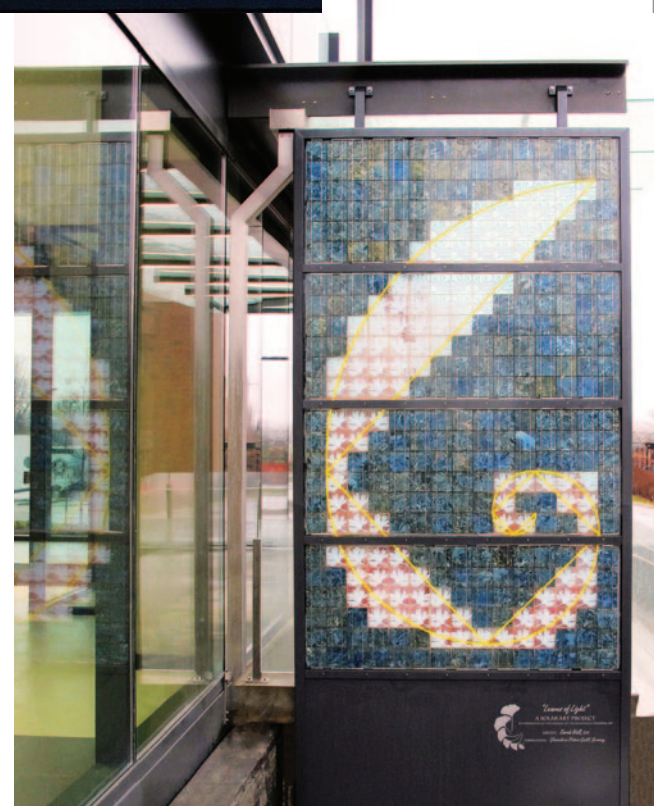


Fig 37

reverse facade, the Fibonacci Spiral, a version of the Golden Mean, enhanced with ginkgo leaves, is placed in the grid of solar panels (fig 37). Here, solar art glass has become a tool for environmental advocacy as well as an educational tool.





Fig 38

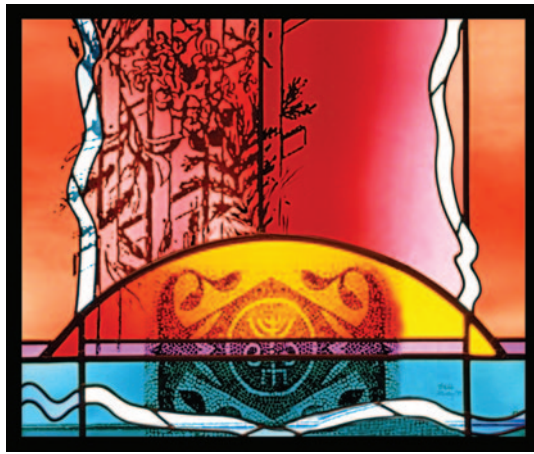


Fig 39

Although most of Hall's work has been installed in religious and commercial buildings, she has also created art glass for private residences and for exhibitions, employing a full range of techniques. *Sea/Sky* (1981), fabricated with unpainted leaded antique glass, was designed to be inserted into a set of interior doors. *Regions of the Air* (1984) a front door panel, combined acid-etching and painting with leaded antique glass. *Lightly Go Round* (1998, fig 38) is more technically complex, supplementing leaded flashed antique glass with acid-etching, silver stain, and lenses. Originally installed as a set of fitted dining room windows, it was donated to the Canadian Glass and Clay Gallery in Waterloo, ON, in 2021 by Ann Mortimer, its original owner. *More Red Than Blue* (2000), an exhibition panel, features leaded streaky glass with acid etching

(1999) where the *Sukkot Shahrut* window includes a painted portion of the floor mosaic from the 5th century Hammam Lif synagogue in Tunisia (fig 39). *The Parable of the Loaves and Fishes* is represented as a simulated mosaic in one of the sanctuary windows at St. Thomas a Becket Catholic Church in Canton, MI (2000). In 2010 Hall created her first large scale mosaic to serve as the surround for the new Casavant organ in St. Barnabas on the Desert Church, in Paradise Valley, AZ (fig 40). Great flowing shapes based on the colours and forms of desert flowers surround and fan out behind the organ pipes. These 32 custom-shaped interlocking panels of *Wondrous Love* consist of glass mosaic, hand painted framework, and gold leaf, while the painted screen mesh supporting it allows for transparency of sound.

and sandblasting. In 2005 Hall created a conservatory window which combined textured and fused glass with airbrushed enamels.

It is not unusual for stained artist/designers who work in stained glass to venture into creating mosaics. Hall incorporated mosaic designs into her work at Beth Tikvah Synagogue, Toronto, ON



Fig 40



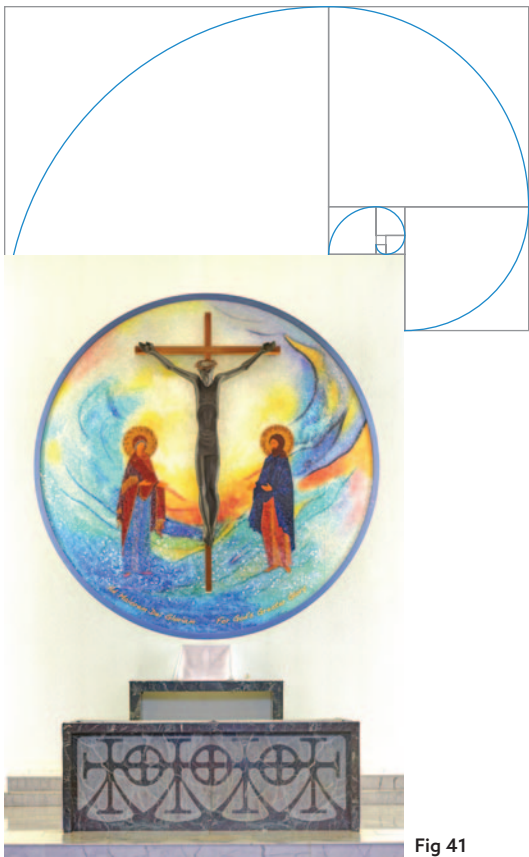


Fig 41

At Holy Name of Jesus Catholic Community in Vancouver, BC (2012), Hall was asked to integrate an existing crucifix into her artwork (fig 41). *Ad Maiorem Dei Gloriam* is a 4.27m (14ft) circular mosaic of Mary and St. John on either side of the Cross, their handpainted faces and hands standing out against the glass tiles. The swirling blue and yellow background gives the impression of a great globe suspended above the altar, not unlike that found in the 6th century church of San Apollinare in Classe in Ravenna, Italy.

In 2014 Hall completed *Joy to the World*, a 4m (13ft) by 9.5m (31ft) mosaic of the Annunciation for the Queen of Peace Chapel at the Cathedral of the Holy Family in Saskatoon, SK (fig 42). The two figures, based on Jacopo Pontormo's 1528 Annunciation fresco in Florence, at the suggestion of Bishop Donald Bolen, stand on either side of a great blue globe. The message is that the conversation flowing across the space between Mary and the archangel Gabriel is about the whole world — a universal redemption coming into being.



Fig 42

Once again, handmade glass mosaic tesserae are combined with hand painted glass for the faces, hands, and feet of the lifesize figures.

All three of these major mosaics were fabricated at Peters Studio in Germany and shipped in panels to Canada for installation (fig 43). Hall's last



Fig 43



mosaic was personally created in her studio on Boustead Avenue in Toronto. Commissioned for the Chapel Royal at the University of Toronto's Massey College, *Council Fire* (fig 44) depicts the 1764 wampum belt affirming the Silver Covenant Chain — the alliance established between the Seven Nations of Canada and the British at the signing of the Treaty of Niagara. The two human figures on the belt are equals, representing the friendship and partnership between the two peoples. In the mosaic, the belt is formed into a circle backed by the rising flames of the First Nations' council fire. The mosaic is formed with hand-made Byzantine smalti, glass beads, and Murano millefiori on a background of fiery silver, copper and gold leaf. St. Catherine's Chapel was designated as a Chapel Royal by Queen Elizabeth II in 2017 in recognition of the sesquicentennial of Canada and the relationship between Massey



Fig 44

Installed as an ecologically sensitive precinct overlooking a garden, the glass enclosure provides a beautiful sanctuary and prevents bird collisions and mortalities.

College and the Mississaugas of the Credit First Nation. It acknowledges the complex and often painful history between the Crown and Indigenous nations, and the need for reconciliation going forward.

Motivated by the enormous number of birds that perish in collision with glass façades and windows, Hall, since her retirement from stained glass commissions has been pursuing the idea of bringing together art glass and markers, or patterns, which birds see and don't fly into. Her prototype is a triple glazed window (fig 45). The interior layer has air brushed and hand painted bare-branched trees while the exterior surface is laser-etched with text markers every 5cm by 5cm.



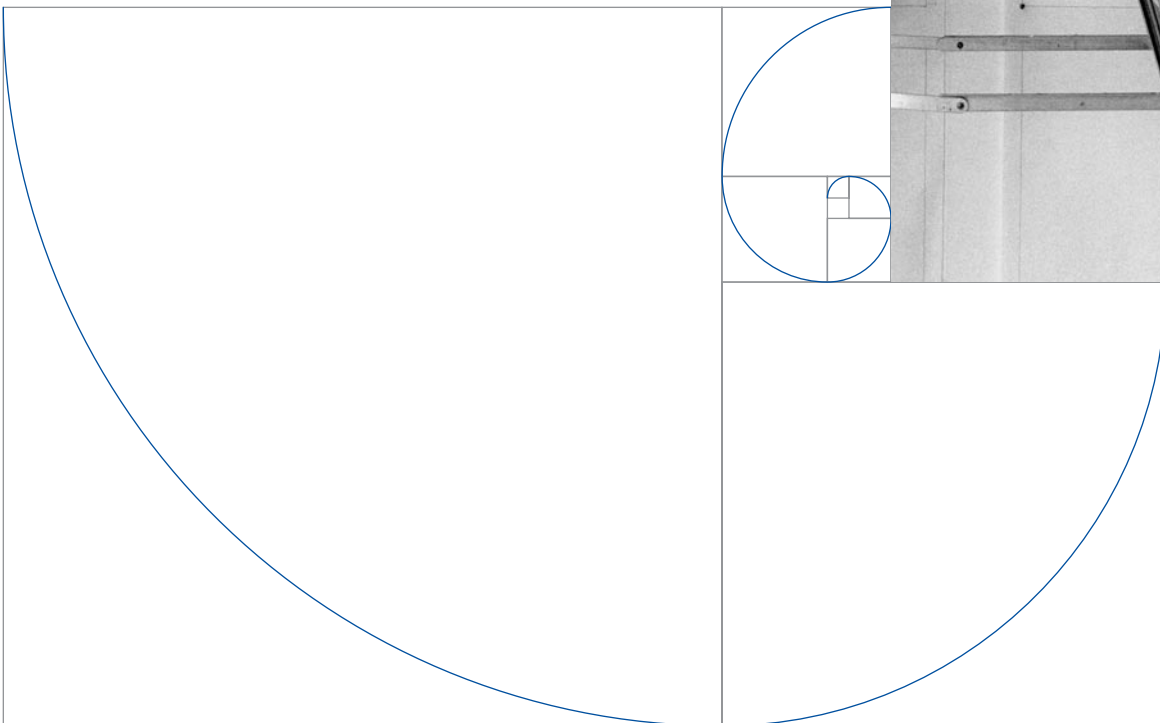
Fig 45

Sarah Hall is a craftsperson, an artist, an innovator, an educator, and an environmentalist, ever moving forward in her quest to transform our built environment with the glorious light and colour produced by stained glass. For her, each creation is a shared journey, best described in her own words:

“Every project I take on generates and encompasses a great story — made from the purpose of the artwork, specifics of the site and architecture, fresh ideas, technical challenges, the process of designing, and of all the people involved.” ■



Sarah Hall



All photos courtesy Sarah Hall Studio

Dr. Shirley Ann Brown is Professor emerita and Senior Scholar at York University, Toronto. An art historian, she introduced unique courses on general stained glass history, stained glass as a modern art, and art glass windows in Canada to the undergraduate art history and humanities curricula at York University. In 1986 Dr. Brown founded the Registry of Stained Glass Windows in Canada (RSGC) as an ongoing data-gathering project to locate, identify, and record art glass windows in Canada, both domestic and imported. Information is stored by hard file, computerized data and photographic file. Dr. Brown served as an invited consultant in collaboration with the National Historic Sites Directorate (Parks Canada) for the McCausland Studios historical designation (1990) and the pre-restoration study for the National Memorial Chamber Windows in the Peace Tower (1997). She has published numerous articles on this country's stained glass windows, including those located in Massey Hall, the Hospital for Sick Children, and St. James Anglican Cathedral in Toronto; in St. John the Baptist Anglican Cathedral in St. John's; in St. Bartholomew's Anglican Church and the Peace Tower in Ottawa. She has led stained glass walking tours in various Toronto neighbourhoods and delivered many public lectures and conference papers on architectural stained glass. As the foremost researcher on Canada's art glass heritage, Dr. Brown's aim is to bring progress and coherence to the study of architectural stained glass in Canada.