



est. 1991

International
Specialised
Skills
Institute

Arts and Crafts, Art Nouveau and beyond: Exploring the evolution of secular stained glass to re-establish its utility in contemporary architecture. | Nadine Keegan, 2023

© **Nadine Keegan 2023**
First Published 2023

All rights reserved. No part of this publication may be reproduced, in any form by any means, without permission from the publisher

Report by Nadine Keegan

Typeset by Danielle Cull

Printed by MDM Copy Centre

The International Specialised Skills Institute

1/189 Faraday St,
Carlton VIC 3053

info@issinstitute.org.au
+61 03 9347 4583

ISBN: 978-1-923027-06-0

Table of Contents

4	Acknowledgments	22	Thomas Medicus Studio
6	Executive summary	28	Impacts
8	Arts and Crafts	31	Recommendations
11	Art Nouveau	33	Conclusion
14	Vienna Art Nouveau (Secession)	34	References
17	Derix Glasstudios	35	Appendices

Acknowledgments

The Awarding Body – International Specialised Skills (ISS) Institute

The Fellow sincerely thanks the Mason family trust for providing funding support for the ISS Institute and for this Fellowship.

The ISS Institute plays a pivotal role in creating value and opportunity, encouraging new thinking and early adoption of ideas and practice by investing in individuals. The overarching aim of the ISS Institute is to support the development of a 'Better Skilled Australia'. The Institute does this via the provision of Fellowships that allow Australians to undertake international skills development and applied research that will positively impact Australian industry and the broader community.

The ISS Institute was founded in 1991 by a small group of innovators, including Sir James Gobbo AC, CVO, QC, and former Governor of Victoria, who had a vision of building a community of industry specialists who would lead the up skilling of the Australian workforce.

The Fellowship program builds shared learning, leadership, and innovation across the broad range of industry sectors worked with. Fellows are supported to disseminate learning and ideas, facilitate change and advocate for best practices by sharing their Fellowship learnings with peers, colleagues, government, industry, and community. Since its establishment, ISS Institute has supported over 560 Fellows to undertake skill and knowledge enhancement across a wide range of sectors which has led to positive change, the adoption of best practice approaches and new ways of working in Australia.

The Fellowship programs are led by our partners and designed to achieve the needs and goals desired by the partners. ISS Institute works closely to develop a Fellowship program that meets key industry priorities, thus ensuring that the investment will have a lasting impact.

For further information on ISS Institute Fellows, refer to www.issinstitute.org.au

Governance and Management

Patron in Chief: Lady Primrose Potter AC

Patrons: Mr Tony Schiavello AO and Mr James MacKenzie

Founder: Sir James Gobbo AC, CVO

Board Chair: Professor Amalia Di Iorio

Board Deputy Chair: Mark Kerr

Board Treasurer: Adrian Capogreco

Board Secretary: Alisia Romanin

Board Members: Jeremy Gobbo

Chief Executive Officer: Katrina Jojkity

The Fellow would firstly like to thank Donna Kennedy, the director of Glaas Inc, who has supported her during her career and in the attainment of this Fellowship. The industry's growth in recent years is largely due to the tireless work and dedication of Donna and the members of Glaas Inc. The Fellow would also like to thank the studio members of Derix Glasstudios and Thomas Medicus for their hospitality and willingness to spread their knowledge. She would also like to thank all the guides, building caretakers and owners who graciously gave their time.

5

She would also like to thank Katrina Jojkity and Kyle Palmer from the ISS Institute for their continued support throughout this experience.

Executive summary

Australia is currently experiencing an exciting revival in the popularity of the ancient craft of stained glass windows. In contemporary vernacular 'stained glass' refers to many forms of artisanal windows, including;

- traditional painted and leaded windows most popular in ecclesiastical settings
- 'lead-light' windows, which consist of either painted or non-painted glass sections encased in lead channels, and
- 'architectural glass art' which can refer to any technically manipulated glass windows for buildings.

Nadine Keegan runs a stained glass studio that produces both objets d'art and architectural windows. Since the foundation of the studio in 2017, Nadine's practice has allowed her to explore theoretical questions about the relationship between craft and art, architecture and nature, and tradition and exploration.

Nadine believes that the most fertile ideas emerge from the intersection of these ostensibly opposing concepts. She believes that stained glass belongs in all areas of society, driving her ambition to create work in large and small scales and for all price-points. With experience in conservation stained glass studios in Australia, her current practice honours the traditions of the medium while simultaneously exploring the unknown potential of the craft.

While many people relate stained glass to its ecclesiastical uses, the majority of Nadine's work is produced for the secular world. The central focus of this Fellowship, therefore was the investigation of stained glass in such environments. Featured dominantly in Australia's architectural landscape are buildings from the Arts and Crafts and Art Nouveau periods, suggesting our historical appreciation for both the aesthetic and theoretical elements of these artistic movements. Over time in Australia however, according to historian John Freeland, these buildings forgot the foundational values underlying their aesthetic manifestation and became 'sterilized into utter superficiality' (1). The early days of Arts and Crafts architecture in Europe prized stained glass not just for the possibilities it provided as an architectural element and artform, but also for the values it represented: that of human connection, reverence for labour and objects and the envision-ment of a better future. This Fellowship aims to investigate and reinvigorate the stained glass and architecture sectors with the spirit that had, at one time, made the craft an important and inspirational contribution to society.

Beginning in England in the 1880's with the Arts and Crafts movement, the poignancy of ideas celebrating artisanal manufacturing methods resulted in its rapid spread throughout the world. The Fellow was able to shadow the movement with visits to notable buildings and institutions in England, Brussels and Vienna, researching how each city's unique cultural perspective affected the manifestation of the stained glass and artisanal products they produced. This provided an

understanding of how cultural context affects craft and architecture and how the consideration of one's own can foster a stained glass industry that is deeply rooted in Australia's cultural legacy.

It was also important for the Fellow to take a holistic approach in her research. The sustainability of the stained glass industry will not come from work that is a pastiche of the past but rather from work that combines a comprehensive understanding of the craft's legacy with contemporary innovations.

In her article titled 'The Art of Light', ISSI Fellow Bronwyn Hughes suggests that 'perhaps glass, no longer stained or leaded, may need to be reinvented by a small number of designers with innovative and creative ideas, who are able to respond to the architectural challenges of the future' (2). Inspired by this sentiment, the Fellow spent a week at Derix Glasstudios in Taunusstein, Germany which has become a world leader in contemporary glass art manufacture. The studio exemplifies the attitude that through a keen sense of architectural trends and an emphasis on innovative technical developments, glass art can infiltrate widespread domestic and commercial markets. Derix provided skill enhancement in both traditional and contemporary stained glass techniques. Through the dissemination of these theoretical and technical skills the Fellow aims to encourage the Australian sector to innovate, work more collaboratively and sustainably while envisioning projects with greater complexity. A re-invigoration and re-integration of stained glass in contemporary architecture is necessary for the industry to support a growing number of practitioners. The fresh attitude towards the craft presents an exciting opportunity to re-establish the relationship between stained glass artist and architects in Australia.

The Fellow also spent a week with Thomas Medicus' stained glass studio in Innsbruck, Austria. This studio specialises in traditional stained glass techniques such as glass painting and lead-work, conservation work and traditional style leadlight windows. However, Thomas' passion lies in the utilisation of these traditional techniques for contemporary art purposes. The experience at this studio offered valuable insights into how to compartmentalise a studio into an art practice and commissioned projects.

While the Australian stained glass sector is experiencing increased attention from the younger generation, it is of utmost importance to develop global best practice standards for the construction and conservation of the craft, in order to protect our history and create internationally competitive new work. Culturally significant artwork is manifested through an understanding of both its place in history and in contemporary society. Disseminating these ideas throughout the established stained glass industry, peripheral industries such as architecture and property development and the Cert 111 and 1V Glass and Glazing course at Melbourne Polytechnic will benefit and ensure an exciting and sustainable industry for the future.

Arts and Crafts

8

The Fellowship trip began in London with the intention to research the philosophical values underlying the Arts and Crafts movement. These values were first articulated by the architect and interior designer, William Morris, who reacted against appalling labour and living conditions in Victorian England with his reintroduction of handcrafted manufacturing processes. With a first stop at the William Morris Gallery, a museum dedicated to the why's and how's behind the foundation of the movement, then continuing to the English practical arts collection at the Victoria and Albert Museum. Just outside London, the Fellow visited the 'Red House', a national trust owned house designed by William Morris.

As was common with architects of the Arts and Crafts era, in addition to designing a building's structure, William Morris designed all accompanying home decorative elements including stained glass and leadlight windows. His company, called Morris and Co. Interior Design Company, became one of the most successful decorative goods companies of the 19th and 20th centuries. Stained glass windows were one of the earliest products available to the public, with his success in this area enabling the expansion into the other handcrafted offerings. In order to sustain a stained glass practice today one must also be competent in the operation of a small business, the structure of which can be modelled on the shrewd business tactics of William Morris.

The first commissioned stained glass windows for the company were those offered by the church. One can imagine how these experiences would have fuelled a young Morris, with his socialist and equalitarian sensibilities, to envision a world where the mystique and beauty of stained glass windows could be available to everyone. The successful relationships he formed with architects on these projects instilled the trust in his abilities to begin producing windows for the secular market. Coinciding with the broader cultural re-examination of metaphysical ideas independent from religious doctrines, the stained glass window's association with the divine offered new opportunities to reorient spiritual pursuits.

The secular zeitgeist, or 'spirit of the times', permeated with new ideas like those introduced by the Romantics, including an edification of nature as the source of moral good. The increasingly urban and disconnected population yearned for the oneness that was suggested through a close relationship with nature and a natural state of being. While the Morris company's stained glass windows retained more of a gothic influence, the organic imagery of their tapestries and wallpapers influenced the biospheric qualities of the French and Belgium Art Nouveau windows that were to follow. Morris' understanding of and ability to capture the zeitgeist through his work is one of his most admirable qualities, and the key to producing work that connects with an audience. The curiosity in and analysis of one's own culture and a contextualisation of the role the artisan plays within it, is the first lesson we should take from William Morris.

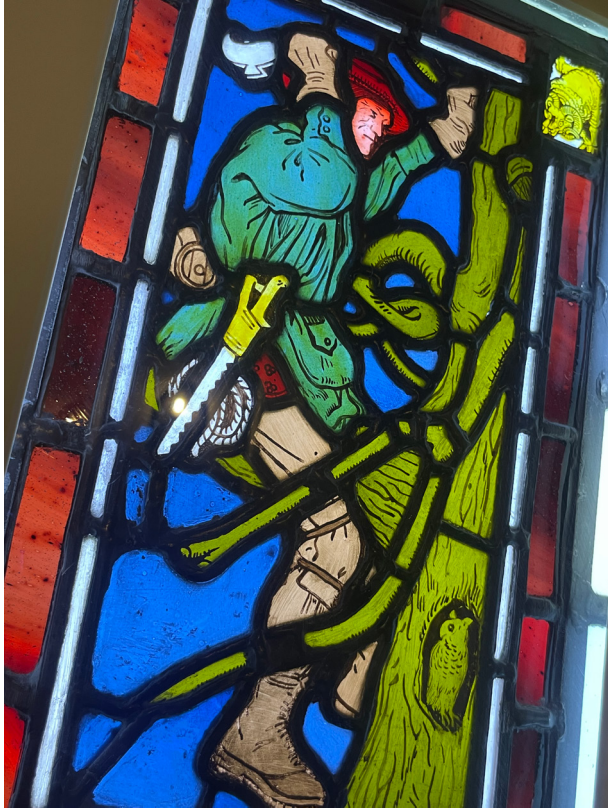


Figure 1. William Morris' gothic inspired stained glass window. William Morris Gallery.

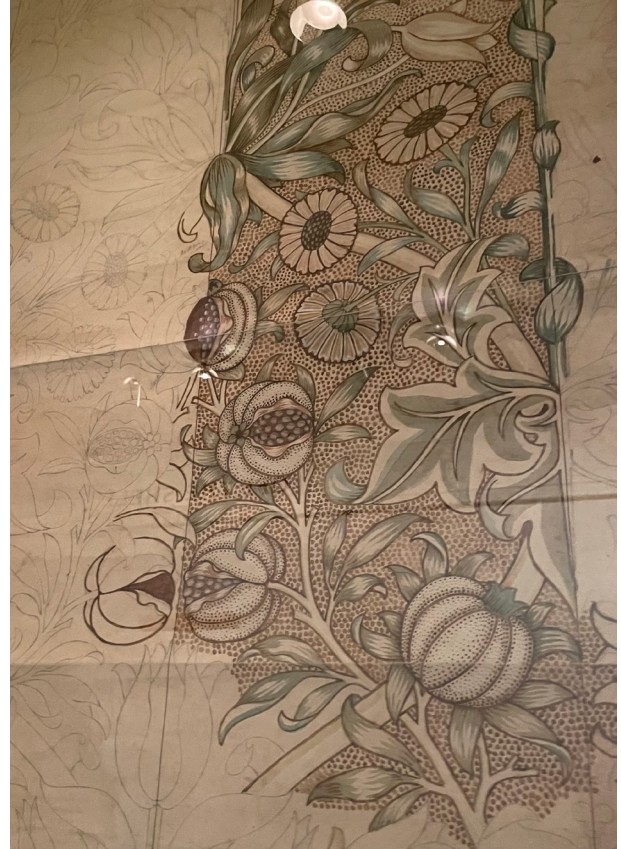


Figure 2. Organic pattern design for tapestry. William Morris Gallery.

Intellectually, Morris understood the importance of research, seeking inspiration from ancient cultures, literature, fine art and other craft disciplines. His explorations helped to introduce Japanese, Indian and Middle Eastern mysticism and symbolism into the European artistic vocabulary. With these influences he helped to articulate a new sense of reverence to craft making and consumer products. The Arts and Crafts movement re-evaluated technological processes for production and celebrated the intangible qualities related to the act of making such as craftsmanship and continuous development.

The Morris company's focus on extensive experimentation in material and technique underlines their three foundational principles; quality materials, artist-led design and high standards of craftsmanship. Using these principles, together with a brand identity and an ingenious marketing strategy helped build the company's reputation as synonymous with high quality. While the popularity of the company grew, Morris was determined to produce goods that could be available to everyone. The universality and breadth of their design language attracted both wealthy clients with the means to commission bespoke items, while middle-class customers could choose from off-the-shelf lines. For artists with similar class-defying attitudes, this compartmentalising of products



*Figure 3. Watercolour design for a large window.
William Morris Gallery.*

projects come from the domestic market with untapped potential in the public and commercial sectors. The investigation of Arts and Crafts and Art Nouveau architecture has highlighted many ways in which stained glass can provide solutions to architectural challenges and create unique atmospheric spaces.

is a fantastic idea. Experimenting with ways in which stained glass windows can be manufactured quickly and cheaply in order to keep costs low, is a worthwhile venture.

The establishment of a shopfront in a popular area also largely contributed to the success of the Morris Company. Not only could customers buy directly from the shop but relationships could be formed with potential commissioning clients through in-person conversations. Morris understood the importance of showcasing samples, watercolours and small-scale versions to inspire clients to envision larger windows. An artist today can be tempted with a reliance on online technologies to market and sell their work and while these are convenient tools to use, the value of in person consultations cannot be understated.

Morris' holistic evaluation of his times resulted in his ability to open up markets in secular architecture that had not previously existed. A similarly optimistic view can be taken by those working in the current stained glass industry. Stained glass is capable of infiltrating markets beyond what we have seen hitherto in Australia. Currently, most commissioned

Art Nouveau

As the Arts and Crafts movement made its way to Brussels, Belgium it became locally known as Art Nouveau. While the philosophical values underlying the movement remained similar, there was an evolution in its aesthetic manifestations and an increasing utilisation as an architectural element. While heritage laws of Brussels do not allow photos in many of these buildings, the Fellow visited the Frison House, Hotel Solvay, Horta Museum and the Museum of Musical Instruments and toured the facades of many others including the Stoclet Palace.

11



Figure 4. Art Nouveau facades. Brussels.

The Frison House in Brussels is one of the finest examples of Art Nouveau architecture in Europe, and exemplifies architect Victor Horta's philosophical and aesthetic principles. During a private tour of the house from the current owner, the Fellow took the opportunity to ask about the restoration of the house and why they believe the Art Nouveau values should be remembered today. The tour also provided a visceral experience of how the strategic use of leaded glass can determine the atmospheric quality of a space. The house represents an almost surreptitious example of William Morris' belief that a house must not only be a reflection of the life of the owner, but also a portrait



of them. The current owners explained how the many aesthetic and theoretical values of the Art Nouveau period were inspired by an ancient ‘oriental’ way of thinking, principally that one can find solace in harmony with natural elements. The similarity of the house with the home they grew up in in Rajasthan, India has cemented the sense of belonging they feel living in the house.

An architectural aim of Victor Horta and other Art Nouveau architects was to provide a sensation of freshness, health, happiness and energy within their buildings. Buildings that served as antidotes for the unhealthy conditions of their contemporaneous society. The belief that one’s harmony with nature can be a source of spiritual power is embodied in the symbolic decorative elements of the Frison House. Whiplash lines, folded structures and plant-like motifs contribute to the aesthetic language of the house, creating a sense of existing inside a living organism. Areas of balance and others of controlled chaos mimic the organic evolution of living forms. The undeniable ancestry of the organic forms found in Australia’s Art Nouveau windows is evident in this house.

Horta has used an extensive amount of glass to bring light and freshness into the house. The glass acts as a way to paint with light, with the use of various textures and opacities to both intensify and soften light in appropriate areas. The best example of this is in the small, enclosed room in the middle of the house called the ‘winter garden’. A light well provides the room with an enormous amount of light that has been softened through the use of a translucent leaded glass ceiling. A

sense of calm and comfort is immediately felt when walking into this room, with a feeling of being connected yet sheltered from the natural elements. In order to disperse this light to the adjacent rooms, leaded glass is used in place of dividing walls. The strategic use of texture and opacity in these glass walls simultaneously provides privacy between the rooms. This use of glass not just as decorative elements but also as a solution to architectural challenges should inspire architects to reconsider the role and potential of leaded glass in contemporary buildings.



Figure 5. The winter garden in the Frison House.



Figure 6. The dividing wall into the winter garden. Image supplied by owners.

The owners are at the tail end of a lovingly and meticulously executed restoration which has inspired the house to act as a centre for their Foundation celebrating Art Nouveau values. The Frison House Foundation is an organisation that recognises cultural and artistic endeavours that align with the spirit of the Art Nouveau period, offering the house for performances and events. The Fellow is inspired by the Foundation's wish 'to cement bonds of common interest with multi-disciplinary organisations and hopes to initiate a cultural dialogue about the preservation, restoration and sharing of history and heritage' (3). The restoration and celebration of such projects asks us to question what values we would like to pass on to the next generation. The universal and timeless hope for a better, more connected and more sustainable future is instilled in the Art Nouveau legacy. These attitudes can be disseminated through the Australian community through a valuing of our own Art Nouveau legacy.

Vienna Art Nouveau (Secession)

14

The difference between Australia's Art Nouveau windows and those produced during the Art Nouveau period in Europe, is the contextualisation of the window within its surrounding architecture. A foundational value of these architectural periods was the idea of 'Gesamtkunstwerk', a concept relating to the overall harmony of the complementary elements within a space. While in direct terms it refers to the way in which an architect would not only design the structure of the building but also the interior decorative elements, it can also be a helpful concept to remember for stained glass artists aiming to produce work that complements contemporary architecture. One must not think of their work as an isolated artwork but as a universal thematic architectural element. To understand how craft and architecture intertwines the Fellow toured many Art Nouveau buildings in Austria, including the Postal Savings Bank, Secession building, Otto Wagner's Stadtbahn Pavilion, Saint Leopolds church at Steinhof and visited the Wien 1900 Museum and Museum of Applied Arts (MAK).



Figure 7. Otto Wagner's Stadtbahn Pavilion, Vienna.

The Viennese iteration of Art Nouveau (renamed Vienna Secession) developed their practical arts, including stained glass windows, alongside evolving trends in aesthetic preferences. Within the glass art of this period are the reflections of the increasingly modernising culture, many elements of which have become timeless staples in our contemporary aesthetic language. Through this intense architectural investigation the Fellow has been able to contextualise her attraction towards the aesthetic principles of these movements.

As one would expect from a culture on the verge of modernisation, intellectuals and artists were experimenting with the applicability of a multitude of spiritual propositions. The organic aesthetic of the English Arts and Crafts and Belgium Art Nouveau had evolved into a preference for organic elements in combination with geometric lines, grids and pattern, often used to represent stability and order. A reduced design vocabulary, function over form and regional folk art influenced the design of habitual spaces and practical arts in Vienna.



Figure 8. Vienna Secession glass experiments in material processes and designs. Wien 1900 Museum.

Koloman Moser was an Austrian artist and one of the founding members of the Viennese Secession. His design for the stained glass windows at Kirche am Steinhof (Church at Steinhof) is a great example of how a craftsperson who shares an aesthetic vision with an architect can produce an harmonious space. The geometric structure of the surrounding buildings is replicated in the pictorial and pattern elements of the window and the stylised robes and wings of the angels are represented as if they were on a flat surface. This achieves a monumental quality to the design, appropriately fitting in with the grandeur of the surrounding architecture. Other Secession buildings incorporated glass art that held back extravagant decorative features to match the work of the planning architect. This collective approach to craft and architecture enabled every art form to develop itself in association with the arts as a whole, creating a universal design language.



Figure 9. Koloman Moser windows at Kirche am Steinhof.

A fitting conclusion to the research into the Arts and Crafts and Art Nouveau period was via a contemporary design exhibition at the Museum of Applied Arts (MAK) in Vienna. This exhibition was the perfect bridging of how foundational Arts and Crafts values can be built on in current considerations of design, manufacture and labour. The exhibition argues that the ‘readily-available’ consumer culture of today requires the excessive exploitation of resources and constant acceleration, consequentially overwhelming and exhausting society. By evaluating the value of our labour we might remember production methods that are fulfilling, harmonious with nature and with resource-efficient production possibilities. Through our labour and a reverence towards the products we produce we can create a desirable world in which what increases is not mass-consumption but quality of life.

Derix Glasstudios

Derix Glasstudios is considered one of the leading manufacturers of architectural glass art, both currently and throughout their 150 year history. The studio operates with an enormous emphasis on collaboration, hence why the current premises in Taunusstein, Germany was chosen for its ease of accessibility for those within Germany and for international visitors. The studio has manufactured some of the most ambitious projects for international markets in domestic, commercial and public realms. Including windows for the Sistine Chapel and the largest stained glass ceiling ever constructed, a collaboration with artist Narcissus Quagliata, for an underground station in Kaohsiung, Taiwan. For a studio to work on projects of this magnitude they must possess extremely high levels of artisanal competence as well as knowledge in structural engineering, logistics, finances, safety and administration. The studio splits the responsibilities into departments, and the Fellow mainly spent time with the artistic, glazing and conservation departments during which she was able to have many conversations with the artisans regarding their roles.

17

The visit provided validation in the belief that the future of the stained glass industry will lie in the intersection of the traditional and the contemporary. The present and past directors of Derix have all held the belief that quality lies not just in the utilisation of all available known techniques but also in the exploration of the unknown potential of the material. A top-down approach is taken to all projects, with the architectural space and atmospheric intentions envisioned before the consideration of construction methods. Because the designs dictate how the window will be produced, manufacturing innovations are consistently being explored. Some of the most widely used contemporary stained glass manufacturing techniques have been developed within this studio.

The operational model of the studio has remained the same since its establishment in 1866. The original founders had the somewhat revolutionary idea of working with independent artists, rather than the common practice of using in-house designers. Artists of various mediums approach Derix with their design for a glass artwork, Derix then work collaboratively with the artisans to realise their vision in glass. The scale of these projects varies although, as they are often institutionally and governmentally funded, they are often quite substantial. The acquisition, client liaison and project management are fundamental to the studios success, therefore a dedicated department of people are responsible for these areas.

It is important for Derix to form relationships with their collaborating artists. During the fabrication process a guest house is available for the artists to reside in if they wish, enabling more time to be spent with the directors and artisans. A previous director, Ludwig Derix, built a wine cellar under the studio in order to facilitate get-togethers with the artists, understanding that casual conversations about art can lead to insights and ideas.



Figure 10. Large kiln at Derix Glasstudios.

The collaborative process unfolds in many ways. An artist can simply supply the design for the studio to execute, while others take a hands-on approach and become a part of the construction team. The Fellow was able to meet with one of the current collaborating artists who was residing at the guest house at the time. Being a multi-disciplinary artist this was her first time designing for the glass medium. While not participating in the physical construction of the window, she would visit every few months to check in on its progress. In the days prior to her arrival, the participating artisans were compiling a presentation of the work they had completed so far and as is common in working to a blueprint that had not been envisioned by a glass artist, some of the expectations of the design were creating construction challenges. These challenges represent opportunities for Derix to innovate and have led to the success and reputation that it has today. In order to manifest an exact replica of the design provided, the artisans can utilise the studio's enormous repertoire of specialised techniques or innovate a new way to do so. For this specific project, the team was experimenting with solutions that involved glass fusing; in which the Fellow was able to contribute

her knowledge in this area. The breadth of projects each with unique aesthetic and technical qualities produced by the studio is a result of this model of working with independent artists. Artists are able to commit entirely to their vision without considering technical restrictions. Even for stained glass studios with in-house designers, this should act as inspiration to design past the limitations of the medium.

Derix has not just brought success within its own studio walls but has also contributed substantially to the favourable attention that glass art receives today. A past director, Wilhelm Derix, was a consistent campaigner for glass to be accepted as a fine arts medium in the world of galleries, museums, collectors and architecture. The enduring focus on integrating glass art into architecture has directed an approach to design and construction that aligns with the corresponding architectural trends. During the 1980's a preference shift towards clean lines and smooth surfaces emerged in architecture. Derix responded to this by inventing the first leadless windows.

19

Many of the techniques that Derix uses today are motivated by this ambition towards leadless windows. During the stay at Derix, the Fellow was able to watch or participate in the construction of windows using the following techniques;

- Liquid lamination, performed by the glazing department. The application of a two-component silicone that enables sections of glass to be adhered together seamlessly. Sections of glass can be adhered next to each on a sheet of float glass or layered on top of each other.
- Airbrushing with vitreous enamels. This allows for a larger area of colour than is possible with sheet glass as well as smooth colour transitions.
- Multilayered acid etching which involves the application of acid to hand blown glass. This enables both smooth colour graduations throughout a large area and sharp contrasts by inserting contrasting enamels into negative spaces.
- Screen printing with vitreous enamels. Images or patterns can be applied to glass which can also be layered to increase complexity.
- Digital sandblasting. For the creation of various images and patterns.
- Slump moulding. For the creation of texture on float glass which is achieved by melting the glass into a mould.

There are many reasons why using techniques such as these can be beneficial for an architectural glass artist. Once the skill is developed, the time involved in producing complex and intricate designs is drastically reduced compared to the traditional paint and lead combination, while large areas of solid glass can be transformed into images and patterns increasing their strength and durability. These techniques can either be used independently or in combination to achieve extremely complex results.

During time spent with the conservation department the Fellow was able to participate in the deconstruction and restoration of an Art Nouveau era window. The conservation approach was undertaken via the guidelines of the *Corpus Vitrearum Medii Aevi (CVMA)*, the official code for the conservation and restoration of stained glass windows. The guidelines outline the broad ethical principles, long term strategies, preventive conservation, protective glazing etc. that should be considered when completing this work. Being quite broad in nature, it is the experience of a skilled craftsman that discerns the appropriate practical methods. As much as possible, minimal intervention to the original artwork should be applied with only the most damaged pieces being replaced in this project. Small breakages were inserted with a silicone epoxy to prevent further damage. Most of the work consisted of cleaning the window with an isopropyl alcohol and replacing only the most corroded of lead channels.



Figure 11. Window incorporating screenprinting and multi-layered acid etching at Derix Glasstudios, Taunusstein.



21

Figure 12. Restoration of an Art Nouveau period window.

Once the window sections have been restored by the conservation team they were taken to the puttying and finishing department. The members of this department are the newest employees, who are all currently completing an apprenticeship program. Puttying is the final step in the construction of a traditional stained glass window and while participating in this task the Fellow took the opportunity to inquire about the apprentices educational journey. Excluding those working in the administrative roles, all the artisans working at Derix have been through an apprenticeship program. The program lasts for three years and combines both practical and theoretical components. The students start working at Derix in their first year, with the practical work in the studio alternating with weeks in the classroom at a technical college. After their first year the apprentices choose a department to specialise in, either the art, glazing or conservation departments. The apprenticeship program is a long-standing tradition at Derix who insist that it encourages dedication and curiosity in the students while also building the skills to be internationally competitive.

Thomas Medicus Studio

22

A week-long stay at Thomas Medicus' studio in Innsbruck, Austria was an incredible way to get hands-on experience and to investigate how a small studio handles both artistic pursuits and commission work. There are many ways to approach a career in stained glass; the medium attracts artists who wish to pursue contemporary conceptual ideas, artists who can apply their mastery of their craft to commissioned projects and those interested in the restoration of existing windows. Artisans may wish to operate their studio as a specialisation in one of these areas, however, through the experience of this Fellowship the Fellow has learnt that a studio that is willing and able to participate in all areas has a higher chance of long-lasting success, eventually being able to specialise in establishing their career. Thomas' studio was chosen for the high quality of art produced while simultaneously working on conservation and commission projects. A visit to the studio provided the opportunity to investigate how a studio operates within the intersection of these areas.



Figure 13. Thomas Medicus' studio in Innsbruck, Austria.

When the Fellow was starting her career in stained glass five years ago, there was no institutional formal training available in Australia. This causes a craftsperson to seek out education from other sources, becoming a sort of collector of skills where they can obtain them. This is a long process and after the several years spent practising, there can still be gaps where one lacks confidence. The installation process was one such gap for this Fellow. This is an extremely important aspect of the stained glass making process where many challenges can arise for an inexperienced glazier. For this reason, often it is easier to outsource.

During the stay with Thomas Medicus, the Fellow travelled with members of the studio to a nearby town in Tirol, Italy to perform an installation of commissioned windows at St. Josef Church. These were large windows that Thomas had been commissioned to construct

to the design of another artist. The windows were made in a medieval method of construction, a combination of stained glass painting and leaded glass, although his mastery of light manipulation and colour resulted in windows that look contemporary yet complement the existing windows of

the church. The experience of the designer was evident when experiencing the windows from ground level, with a perfectly scaled pattern design and a harmony between all the windows. The excellent choice of using white enamel paint, ostensibly an odd choice, creating a beautiful illusion of shadow from a distance.



Figure 14. Installation at St. Josef Church in Tirol, Italy.

The opportunity to help the team with the installation was an invaluable experience and helped to ease some doubts about the Fellows ability in this area. The installation was done in a traditional medieval method, used commonly when the window is to be placed in a stone frame, yet can also be applied to frames of other materials. Each window was divided into four separate sections of about one metre by one metre, this assures a rigidity and strength to the window while aiding in an ease of transport and installation. A metalworker had previously been on site to create a steel frame in which the four sections each had a shelf to sit on and had included sashes to hold the window in place. This was a decision made to protect the stone while also helping in the accuracy of sizing and installation. Each section was placed in the frame with two strips of rebar connected

with wire in 30cm intervals, this keeps the window from sagging over the decades. After the sashes were screwed back into place, a strip of putty is placed between the sash and the window to ensure the window is waterproof and secure. The putty was applied with the use of a putty gun, enabling the process to be much quicker and more consistent than the usual method of applying by hand, an innovation that has an enormous effect on an installation project of this size.

24

Over the course of the next few days the Fellow travelled with Thomas to various sites around Innsbruck to assist with installations. One of these sites was a window that Thomas had been commissioned to make in the historical Innsbruck leadlight style of hexagons of glass encased in lead cames. This was an interesting take on the Tudor tradition of the diamond shaped leadlight, with both used to maximise the strength of the window. Other projects consisted of various glazing activities, with Thomas' seemingly becoming the go-to glazier of the town. The variety of projects was welcome as it is this variety that makes the installation of windows a daunting task. The Fellow has a new found confidence to be able to deal with unforeseen challenges that may arise during her installations.



Figure 15. Installations and minor on-site repair work with Thomas Medicus.

This Fellowship aims to contribute to the increasing standard of education available to budding stained glass artists in Australia as well as providing inspiration for existing artists to reach their full potential. It is for this reason that conversations were had with Thomas about his educational background and artistic philosophies.

Compared to Australia, the criteria to operate a stained glass workshop working in the architectural field is much stricter in Austria. While this report does not argue that stricter rules should be enforced in Australia as this would decrease the accessibility and demotivate a much needed workforce, it is worth noting the quality of conservation and restoration that occurs under such rules.

Thomas went to school for stained glass at Gasfachschnle Kramsach and completed a master glazier degree which was a necessary requirement for him to open his own studio. Before working for himself he worked in a stained glass studio called Tiroler Glas-Malerei (TGM) where he gained experience in restoration, leading, designing, customer contact and engineering while also being supported to complete his own projects simultaneously. The high quality of Thomas' work and the success of his own studio for the relatively short time it has been operating, may be attributed to the high level of education and apprenticeship he received. This understates the importance of the passing down of knowledge from experienced stained glass artists within Australia, and less established artists seeking out mentorship from those more established.

This Fellowship was interested in the investigation of studios working at the intersection of artistic projects, conservation and commission work. Therefore these areas were all topics of conversation while with Thomas.

Thomas' passion lies in the utilisation of glass for his own contemporary artistic pursuits. He prefers to conceptualise, construct and market his own work that can be sold or exhibited. For Thomas, commission and restoration work are means to an end which he uses to fund his own artistic pursuits. Church restorations are relatively easy to acquire for his studio as there are only a small number of studios in his area that can perform these tasks. He believes that one loses artistic integrity if work is solely done for commercial purposes, although he also admits that these can sometimes work out well. The importance of pursuing one's own artistic practice is a valuable lesson to remember for an artist that may become inundated with commissioned projects.

Thomas' artwork is a great example of how a contemporary conceptualisation can transform a traditional craft. Undoubtedly being inspired by the medium itself, his work deals with ideas of perception. His recent public artwork allows an audience to walk around a 3D sculpture of glass, where one facade transforms into another via their movement. This illusory perspective is inherent in glass itself with Thomas quoted as saying 'it is a very ambiguous material, very hard and brittle

but at the same time with no independent surface. By only refracting light that is passing through it, the glass has an almost bodiless property’.

26



Figure 16. Thomas Medicus 'Head Instructor'. [https:// thomasmedicus.at](https://thomasmedicus.at)

The intersection of traditional and contemporary also appears in Thomas' material and technical choices. Due to being trained in the traditional methods of stained glass production and having trust in their ability to withstand aging, these are the techniques that he utilises to construct his artworks. While using traditional techniques like oil painting, bronze casting and stone working to construct his artwork he does believe that using modern technologies to digitally design is a useful practice. This should not discourage artists from experimenting with techniques, as there are still many possibilities to explore within the medium, yet should act as a reminder to emphasise durability and strength testing when doing so.

Some of the success of Thomas' studio can be attributed to his use of social media. Some of his artistic projects have 'gone viral' which directly led to international sales and commissions. Online

audiences like to see behind the scenes of an artist, and Thomas' use of the tool to document progress, express ideas and exhibit work has increased the reach of his audience. The emphasis he put on taking photos of the installation process at St. Josef highlights how important he believes it is to have professional looking photos of all stages of the windows construction.

Impacts

Personal

28

This Fellowship experience has contributed significantly to the Fellows personal growth. Through the research and report writing elements of the process, the Fellow has been able to both challenge and confirm her theoretical and technical approaches to her craft. The experience has provided the opportunity to validate and articulate what had previously been somewhat intuitive feelings about the role of stained glass in contemporary society and the contribution the Fellow can make. This has instilled a new sense of confidence in the Fellow personally and in her work.

Managing a small business is an important aspect of producing stained glass windows. All decisions relating to the manufacturing process, design aesthetic, management and marketing are the responsibility of a small business owner. This demands a high level of competency and confidence in a broad skill-set. One can be tempted to pursue a safe and known path, however the Fellow believes that an envisioning of a new approach can help the industry maintain relevance into the future. This commitment to the evolution of the industry may take longer to have commercially successful results. The Fellowship has both invigorated the Fellow with new inspiration and provided the confidence to keep exploring. The Fellow finds comfort in the fact that William Morris, who helped establish the secular stained glass industry we know today, was once ridiculed for his revolutionary ideas and took many years to establish his enormous commercial success. His advocacy that labour should be a source of pleasure is also a mantra that alleviates stress during challenging times.

The Fellowship journey has also instilled a new sense of belonging through an evolving network of international stained glass artisans. Connections could be made quickly and strongly with those who share a passion for the craft with friendships established that continue to inspire. Knowledge was not just gained but was exchanged, helping the Fellow feel confident in what she had to offer.

Professional

This experience has helped the Fellow refine her approach to the design and manufacture of her stained glass windows. Through the holistic investigation of both technical details and broad philosophical contexts, the Fellow has increased the arsenal of inspirations from which windows can be envisioned. The Arts and Crafts appreciation of an authenticity of material is a concept that strongly resonates with the Fellow. This has helped guide experiments with intention to explore all the potentials and limitations of the medium, uncovering ways to best showcase the honest character and essence of glass in her design and manufacturing processes. This has expanded the Fellows aesthetic vocabulary.

Results have also been noticed in the scope of projects that have become available to the Fellow's studio. Commercial architects require a proven history of experience and competence in the

artisans they commissioned and the Fellow believes that this experience has contributed to the trust placed in her studio. Since the experience the Fellow has attained commercial projects and feels confident to complete them with a wider repertoire of skills. Manufacturing techniques have been reconsidered in order to produce work at scale, for a multitude of different settings and within budget requirements. The Fellow hopes that through the completion of these projects, the scope of projects available will continue to increase.

As well as continuing to be commissioned for residential and commercial projects, the Fellow aims to work towards large-scale public artworks. The experience has provided insights into how to attain, apply for funding, construct, collaborate, install and manage projects of this size.

The conservation research has inspired the Fellow to have more involvement in the conservation sector. Leading practice in traditional stained glass techniques learnt from the European studios will increase employment opportunities. As well as feeling more confident to complete restoration projects the Fellow aims to contribute her insights into the importance of protecting our historical architectural legacy to heritage institutions, which can then disseminate these ideas throughout the wider community.

The broad sector

The expansion of the stained glass industry is possible through the cultivation of relationships with broader cultural institutions. The foundational values of stained glass discussed in this report have been similarly propagated throughout other art and craft disciplines. This has been used as a common thread to connect stained glass to Australia's cultural legacy. The Fellow was invited to talk at Duldig Studio, a museum celebrating the life and work of the late artists Karl and Slawa Duldig. With connections to the Vienna Art Nouveau period this was a way to continue the conversation about this shared history, and disseminate the values inherent in the artistic philosophy.

The Fellowship has also helped strengthen the relationship between stained glass artist and architect. The commencement of high profile commissions for commercial projects will help re-establish stained glass in contemporary society, in which they can act as vessels for the values of human connection, beauty and skill-mastery. The Fellow took the opportunity while working with the architects on this current project to inquire about their perspectives on craft and why it should be included in the architectural conversation. Some of their answers have been presented in the appendices of this report.

There has been a continued effort to disseminate the ideas discussed within this report throughout the stained glass community. A close relationship with Glaas Inc has facilitated conversations about the action of both short and long term goals. Agreeing with the Fellow that there is a gap in

installation education within the industry, there has been discussion into how we can incorporate this into extra-curricular activities for the students of the Melbourne Polytechnic course, as well as by providing assistance in this area for practising artisans. Amendments to the curriculum to include architectural and historical subjects have also been discussed for the future.

30 Many in person and online conversations within the stained glass and wider community have facilitated discussion about topics that arose during the Fellowship. Through private workshops the Fellow has been able to disseminate technical learnings and hopefully inspire others with philosophical purpose. The Fellow participated in a podcast episode of 'Cracked' while at Thomas Medicus' studio in which she was able to discuss her Fellowship experience with the stained glass community.

Recommendations

In recent years, the establishment of a certificate III and IV in Glass and Glazing at Melbourne Polytechnic has increased the accessibility of the industry for budding artisans. The choice of completing a one or two year certificate offers a fantastic introduction into the industry with a high standard of education. This is largely thanks to the efforts of Glaas Inc, an organisation that acts as a central supportive body for the industry, which has worked tirelessly to establish and manage the course. Their success is evident in the consistently high numbers of participants and their level of commitment to the industry upon graduating. Working within limitations that affect the course length and breadth of subjects covered, the course has contributed enormously to the sustainability of the industry.

31

The investigation into the European approach to stained glass education has provided many valuable insights into how the course can be strengthened moving forward. The Fellows membership in Glaas Inc provides an easily accessible avenue for the dissemination of the ideas within this report to the wider sector. Understanding that most changes are long term goals with changes to the course structure and curriculum having to be implemented gradually. The European approach to stained glass education is one deeply-rooted in tradition, with students dedicating lengthy periods of time to their education and strict rules implemented for employment upon graduation. This lack of educational traditions in Australia is beneficial to the industry at the moment. The industry is comparably more accessible with the artisans competence, knowledge and commitment the only criteria which will determine their success. The lack of a large studio such as Derix Glasstudios, which provides an easy pathway for employment, and only a small number of established studios that have the need for extra employees means that students must be prepared to start their own businesses. Glaas Inc continues to support students after graduation although more education in small business management should be emphasised. While the course does not have scope for large changes at the moment, the inclusion of a mentorship program would be beneficial and in lieu of this, students should be encouraged to seek unofficial mentorship with established studios. Once both the industry and the market for stained glass expands, conversations should continue about the reinstatement of an official apprenticeship program.

Through the education system, we have the opportunity to establish an industry with deep-rooted foundations in which students become passionate and knowledgeable advocates for the legacy of their craft and from which they are able to contribute their unique contemporary perspectives. The Fellow believes that a comprehensive education of architectural and historical context would be a beneficial addition to the course curriculum. For example, the Arts and Crafts and Art Nouveau eras of architecture are periods in which stained glass was prioritised as an architectural element, and education of these periods will help students envision the potential of their craft and contextualise their practice within the architecture sector. An education in the philosophical values of these movements will also help students strengthen the foundations of their own practice. Cultivating a

curiosity for architecture will help artisans create work that is appropriate and meaningful, in time leading to a stronger relationship between the stained glass industry and architects.

32

The cultivation of interest in these eras of the stained glass windows history will also help fill the gap in the conservation sector. Understandably, many young artisans today are interested in exploring contemporary uses of the medium, and with such potential as an artistic medium there is still a need for specialists in conservation methods. With an aging workforce of studios that complete restoration projects and reproduce historical styles for heritage architecture, this is a viable career path for a section of the industry.

A primary aim of this Fellowship and for the Fellow is to increase the confidence of architects and property developers in the stained glass industry. This will be imperative to sustain the growing industry. The Fellow endeavours to infiltrate further into the architects and property developers' consciousness by forming relationships with firms and sharing this report with the Australian Institute of Architects. Six Degrees architecture firm is one that has valued artisanal craft since its establishment. The Fellow has taken the opportunity while working with them to inquire into the rationale behind their utilization of craft elements, with an aim to encourage other firms to think similarly. See appendix.

The Fellow will continue to share the technical approaches, learnt through this Fellowship, with the Australian stained glass community and the public through masterclasses and workshops. With an aim to further the recognition of stained glass as a fine art medium the cross-disciplinary approach will continue through the participation in exhibitions and events with Craft Victoria and fine art galleries. In addition the Fellow will continue to research funding opportunities from organisations and governments for the production of public artwork.

Conclusion

Throughout our built history, stained glass has offered places to contemplate and celebrate. Behind the physical attributes lies deeper messages about human ingenuity, craftsmanship and the value of our labour. This Fellowship aims to invigorate the stained glass industry with this spirit that had inspired those before us, a spirit that is alive and well in Europe. By re-establishing the relationship between stained glass art and architecture we can sustain the art form and help to prevent a broader cultural amnesia of the favourable qualities of our past. Through the investigation of world-leading architectural glass art manufacture, the Fellow aims to encourage the Australian sector to think radically and innovatively about what is possible.

References

Donald Leslie Johnson (1980) *Australian Architecture, 1901-51*. Sydney : Sydney University Press; Forest Grove, Or. : International Scholarly Book Services.

Hughes, B. (2012) 'The Art of Light: A survey of stained glass in Victoria', *The La Trobe Journal*, (90), pp. 78–98.

Tron, N. (2019) *Victor Horta and the Frison House in Brussels*.

Appendices

Interview with Peter Malatt, a founder of Six Degrees Architects.

In what ways do you think craft (or stained glass specifically) can contribute to the architecture of a building?

At Six Degrees we are interested in materials and building technologies which are not just selected from a catalogue. That includes recycled materials, materials from other industries, arts, crafts and ‘handmade’ elements like metalwork and steel windows. Stained and textured glass is an element we have used for many years because it adds colour, texture and a very human touch to the building. It also has a different design focus, with its use of colour and transparency, which people can make a real connection to. This is partly through the memory we all have of colour glass in churches, houses and other public buildings. It connects us with the past and talks to something in the human spirit.

35

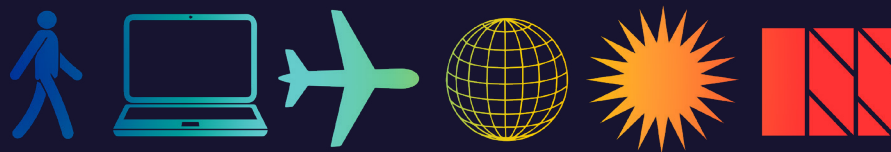
Do you think craft is important in contemporary architecture? Have you seen a change in attitude throughout your career?

Most contemporary architecture is based on clean lines and perfect factory finishes. We are interested in more texture and tactile quality in buildings, the kind of textures found more in historic buildings. So we like to use brut concrete, brick, block, timber, steel, ceramics and textured glass, which are textured materials with links to our oldest buildings. We don’t particularly enjoy using conventional aluminium and laminate finishes.

We think the use of crafts in building is important to making space humane and truly connect with people. This has been a constant theme in our work over thirty years.

What do you look for in a stained glass craftsman?

The key skills are artistic design ability and colour sense, the ability to accurately price the work, and the technical ability to make the work and coordinate with the builder involved for installation.



The International Specialised Skills Institute
1/189 Faraday Street, Carlton VIC 3053
Ph: 03 9347 4583
www.issinstitute.org.au