

CURRENT PRACTICE IN THE FIELD OF ARCHITECTURAL  
AND AUTONOMOUS STAINED GLASS IN EUROPE  
AND THE UNITED STATES OF AMERICA

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Submitted in partial fulfilment of the  
requirements for the degree of  
MASTER OF FINE ARTS

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"But rather let him labour, working with his hands the thing which is good, that he may have to give to him that needth."

The Epistle of Paul the Apostle  
to the Ephesians.

The Holy Bible, Chapter 4 vs. 28.

"Therefore, longing to be an imitator of this man, I drew near to the forecourt of Holy Wisdom and I saw the Sanctuary filled with a variety of all kinds of different colours, displaying the utility and nature of each pigment. I entered it unseen and immediately filled the storeroom of my heart fully with all these things. I examined them one by one with careful experiment, testing them all by eye and by hand, and I have committed them to you in clarity and without envy for your study."

Prologue to the Second Book :  
"The Art of the Worker in Glass",  
"Diversarum artium schedula", by  
the monk Theophilus Presbyter,  
Circa 1110-1140.

"Il ne faut donc pas manquer les rendez-vous de l'histoire."<sup>1</sup>

Jean-Jacques Gruber  
'Vitrail Labyrinthes',  
Centre International du Vitrail,  
Chartres 1983.

"What aspects of the world are to be made visible is a matter of philosophical creed."

Rudolf Arnheim (1961)  
Quoted by Robert Sowers.<sup>2</sup>

<sup>1</sup>"One should never miss the chance of a rendezvous with history."

<sup>2</sup>SOWERS, R. (1965). Stained Glass : An Architectural Art.  
p. 93.

## ACKNOWLEDGEMENTS

1. The author gratefully acknowledges the financial assistance provided by :
  - The Human Sciences Research Grant 1984,
  - The Ernest Oppenheimer Memorial Trust Technikon Staff Award 1984.
  
2. The Rector and Council of the Port Elizabeth Technikon are thanked for the provision of five months study leave from July to December 1984.
  
3. The South African Embassies and the United States Information Service.

Letters were written in April 1984 to establish contact with the Counsellors of Cultural Affairs at the South African Embassies in London, England, and Bonn, West Germany, namely, Dr. J.M. Leighton<sup>1</sup> and Dr. G. Muller Ballot.<sup>2</sup>

Mrs. P. McArdle Fendrick<sup>3</sup> of the United States Information Service, Cape Town, was also approached concerning the proposed visit to North America.

Comprehensive lists of places, items and people that the author wished to see or meet were provided, and courteous replies were received.

Efficient and comprehensive arrangements were made on behalf of the author, doors were opened and contacts established that would otherwise have been difficult, if not impossible.

Ms. Judith Oringer,<sup>4</sup> Program Officer, USIA, New York, and Ms. Barbara Vasko,<sup>5</sup> USIA, Washington, D.C., were instrumental in providing a full and detailed schedule of meetings, transport and hotel arrangements in New York, Philadelphia and Washington.

4. Artists<sup>6</sup> in particular are notoriously loathe to give of their valuable time to visitors - furthermore, artists of standing are often besieged by critics, authors and admirers. Despite this, and due partly at least to the 'clout' of the organizations mentioned, the author (and his family) received courteous and co-operative receptions at all times. Grateful thanks are therefore due to the following artists, designers, academics, craftsmen and businessmen who gave so freely of their time and professional expertise :

#### 4.1 ENGLAND

Patrick Reyntiens, O.B.E.,<sup>7</sup> Head of Fine Art, Central School of Art, London, the most influential<sup>8</sup> master of stained glass in England, and Anne, his wife.

Mark Angus,<sup>9</sup> H.N. Dip. (Architectural Stained Glass), AMGP, designer and author, Bath.

Ray Bradley,<sup>10</sup> ARCA, FMGP, designer and lecturer, London.

Roy Coomber,<sup>11</sup> AMGP, chief designer and Director, James Clark and Eaton Ltd., Bristol.<sup>12</sup>

Frederick W. Cole,<sup>13</sup> R.F., FMGP, designer and founder-director of the Stained Glass Conservation Studio of the Dean and Charter, Canterbury Cathedral, Kent.<sup>14</sup>

June Lennox,<sup>15</sup> Head, Stained Glass Conservation, Department of Ceramics and Stained Glass, Victoria and Albert Museum, London.<sup>16</sup>

Peter Gibson,<sup>17</sup> F.S.A., Secretary and Superintendent, York Glazier's Trust, York Minster.

A.B. Nichols, Director, Goddard and Gibbs Ltd., London.<sup>18</sup>

Norman Barker, General Manager, Hartley, Wood and Co., Ltd., Sunderland, Tyne and Wear.<sup>19</sup>

Christopher Salmond, Head, James Hetley and Co., Ltd.,<sup>20</sup> and President, Glass and Glazing Federation of Great Britain, London.<sup>21</sup>

Neil Maurer, Manager, Stained Glass Supplies, Avon.<sup>22</sup>

Ian Burgoyne, Curator, Pilkington Glass Museum,<sup>23</sup> St. Helens, Merseyside.

Keith Grant, Director, Design Centre, Design Council of Great Britain, London.<sup>24</sup>

Jean Liddiard, Education Officer, National Portrait Gallery, London.<sup>25</sup>

W. Brown, Clerk of Works, Durham Cathedral.<sup>26</sup>

Jean Bruce, Personal Secretary to Dr. J.M. Leighton, Counsellor, Cultural Affairs, South Africa House, London.

Very Rev. Canon MacDonald, Ely Cathedral.<sup>27</sup>

'Bill' Bramham, artist, and Kathleen his wife, of Storrington, Sussex, for their hospitality and guidance, and their affection over some thirty years.<sup>28</sup>

John Erasmus, artist, of Richmond, Surrey, for his generous hospitality.

#### 4.2 WALES

Dr. Gerald Stockdale, M.Ed., M.Sc., Phd., C.Eng., MI.Min.E.  
Principal;

John B. Richardson, FISTC., MSIAD., Dean, Faculty of Art and Design;

Timothy Lewis, ATD., ARCA., AMPG., Senior Lecturer and Course Leader, Department of Architectural Stained Glass;<sup>29</sup>

John Edwards, NDD., ASMPE., lecturer;

Jane McDonald, MA., ATC., lecturer;

ALL OF : West Glamorgan Institute of Higher Education,  
Swansea.<sup>30</sup>

#### 4.3 SCOTLAND

John L. Paterson, D.A.(Edin.), ARIBA., FRIAS., FSIAD.,  
Principal;

Douglas C.J. Brown, D.A.(Edin.), MA., DMS., MSDC., AIST.,  
Head, School of Design and Crafts;

John C. Lawrie, D.A.(Edin.), FMGP, Lecturer-in-charge, Glass Design;

Douglas Hogg, D.A.(Edin.), FMGP, Lecturer-in-charge, Stained Glass;<sup>31</sup>

ALL OF : Edinburgh College of Art, Edinburgh.<sup>32</sup>

#### 4.4 WEST GERMANY

Helmut Horschler, Works Manager, Glasfabrik Lamberts, Waldsassen.<sup>33</sup>

Ursula Derix, Karl Traut and Michelle Androu,<sup>34</sup> all of the Studio Wilhelm Derix GmbH., & Co., K.G., Taunusstein-Wehen.<sup>35</sup>

Ludovikus Oidtmann, Partner, Glass and Mosaic Studios of Dr. Heinrich Oidtmann, Linnich.<sup>36</sup>

Paul Weigmann, designer, Leverkusen-Küppersteg.<sup>37</sup>

Ludwig Schaffrath, designer, Alsdorf-Ofden, arguably the most influential single designer of the last twenty years, on an international scale.<sup>38</sup>

Joachim Edgar Klos, designer, and his daughter, Bettina, Architectural Stained Glass student, and charming translator for her father, Schaag-Nettetal.<sup>39</sup>

Peter Derix, Director, Glasmaler-Werkstätten Hein Derix, Kevelaer.<sup>40</sup>



#### 4.5 UNITED STATES OF AMERICA

Roy Carruthers, artist, and alumnus of the Port Elizabeth School of Art (1956), and his wife, Pamela, of Greenwich, Connecticut, without whose friendship and hospitality the North American 'leg' of the tour could not have taken place.

Richard Millard, designer, and editor of "Stained Glass", the quarterly magazine of the Stained Glass Association of America, New York.<sup>41</sup>

E. Crosby Willet, Chairman, Apprenticeship Training. Stained Glass Association of America, and Director, Willet Stained Glass Studios Inc., Philadelphia, Pennsylvania.<sup>42</sup>

Charles Z. Lawrence, Stained Glass designer, and Director, Stained Glass Association of America, Philadelphia, Pa.<sup>43</sup>

Helene Weis, Curator, Willet Stained Glass Studios, Inc., library, and Chairman, Audio-Visual Aids, SGAA., Philadelphia, Pa., who spent her birthday taking the author on a conducted tour of stained glass sites in Philadelphia.

Peter Rohlf, Proprietor, Rohlf's Stained and Leaded Glass Studio Inc., Mt. Vernon, New York.<sup>44</sup>

Lowell Nesbitt,<sup>45</sup> artist and designer, Old Greenwich, New York, New York.

Fred Jayson, Managing Director, S.A. Bendheim, Inc., stained glass and accessories suppliers, New York, New York.<sup>46</sup>

Ray Claghan, Head, Stained Glass Dept., Rambusch Glass and Decorating Company, New York, New York.<sup>47</sup>

Albinas Elskus, designer and glass-painter, author and teacher, New York, New York.<sup>48</sup>

Robert Sowers, designer, painter, photographer, and influential writer on stained glass, Brooklyn, New York.<sup>49</sup>

Mel Greenland, designer and restoration specialist, Greenland Studios, New York, New York.<sup>50</sup>

Peter and Christina Green, designers, and Proprietors, Renaissance Studios, Westport, Connecticut.<sup>51</sup>

David Chiodo, President, Steuben Division, Corning Glass;

Paul Schulze, Director of Design, Steuben Division, Corning Glass, New York, New York.<sup>52</sup>

Dwight Landman, Director, Corning Glass Museum, Corning, New York.<sup>53</sup>

Rowan Le Comte, of Waterford, Virginia, and designer pre-eminently, of many windows in the Cathedral Church of Saint Peter and Saint Paul, the National Cathedral in Washington, D.C.<sup>54</sup>

Mark Anderson, designer, the Torpedo Factory Studios, Alexandria, Va.<sup>55</sup>

Bob and Louis Long and their children, kind hosts for Thanksgiving Day 1984, Alexandria, Va.<sup>56</sup>

Joe and Rosemary Cooley, of Morristown, New Jersey, late of Port Elizabeth, South Africa (1983), and kind hosts.

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Finally my thanks are due to my study supervisors, Professors Robert Brooks and Joshua Nell, and Ms. Erda Verwey, for their guidance and patience.

Dedication : I dedicate this work to Ruth, my wife, and Alice, my daughter, who so patiently accompanied me on all my travels, endured the vicissitudes of weather, foreign language and aching feet, and were there to encourage and exhort me to further effort when my spirits flagged.

G.H.H. Nesbit.

Port Elizabeth, South Africa.

November 1986.

## REFERENCES AND NOTES - ACKNOWLEDGEMENTS

1. Dr. J.M. Leighton, Counsellor (Cultural Affairs)  
South African Embassy  
Trafalgar Square  
London, WC2N 5DP  
England. Telephone 01-9304488
2. Dr. G. Muller-Ballot, Counsellor (Cultural Affairs)  
South African Embassy  
5300 Bonn 2  
West Germany. Telephone (0228) 8201-0
3. Mrs. P. McArdle Fendrick, Attache  
American Center  
Plein and Darling Streets  
Cape Town 8001. Telephone 021-214280
4. Ms. Judith Oringer, Program Officer  
U.S. Information Agency Reception Center  
1414 Avenue of the Americas  
New York, New York 10019  
United States of America. Telephone (202) 826-4726
5. Ms. Barbara Vasko, Program Officer  
Visitor Program Service of Meridian House International  
United States Information Agency (USIA)  
1776 Massachusetts Avenue, N.W.  
Washington, D.C. 20036  
United States of America. Telephone (202) 822-8688
6. The descriptive terms 'artist' and 'designer' are frequently synonymous when used in the context of stained glass. 'Glass-painter' generally applies to 'master-craftsman' i.e. one who is a specialist, who may or may not be an 'artist-in-glass'. The term 'artist' is gene-

rally used to describe Fine Art practitioners (e.g. Painters) who also design for stained glass.

7. Patrick Reyntiens, designer, and writer on stained glass,

Ilford Bridges Farm

Close Stocklinch

Somerset

England.

Telephone 04605-2241

REFER:

SPENCE, B. (1962). Phoenix at Coventry. pp. 52-54.

THOMAS, B., & RICHARDSON, E. (1972). Directory of Master Glass-Painters. pp. 83-87.

REYNTIENS, P. (1976). The Story of Stained Glass.

REYNTIENS, P. (1977). The Technique of Stained Glass.

HARRISON, M. (1978). Glass/Light. pp. 26-28.

CLARKE, B. (1981). Architectural Stained Glass. pp. 63-64, 193, 199, 213.

HARRISON, M. (1982). John Piper - painting in coloured light. pp. 4, 6, 12.

ANGUS, M. (1984). Modern Stained Glass in British Churches. pp. 32, 60, 111, 112-115.

OSBORNE, J. (1981). Stained Glass in England. pp. 16, 94, 96, 97.

8. Articulate, urbane, yet controversial; through his long partnership with John Piper he perfected an awesome technique for the interpretation of the slightest painter's mark into stained glass.

Furthermore, Reyntiens was the first to introduce modern German design and designers to Britain, while his teaching sessions at Beaconfield, England, and Pilchuck, Seattle, have had international influence on a younger generation of designers.

9. Mark Angus, designer, and writer on stained glass,  
The Manor  
Woolavington  
nr. Bridgwater  
Somerset  
England. Telephone 0278 6842

REFER :

FIRMIN-DIDOT, P. (et al.) (1982). New British Glass & Vitrail Français Contemporain. pp. 24-25.

ANGUS, M. (1984). Modern Stained Glass in British Churches.

ANGUS, M. (1984). Ecclesiastical Stained Glass : its Spirituality and Relevant Meaning. Stained Glass (SGAA), 79, 1. pp. 38-41.

10. Ray Bradley, designer and lecturer  
3 Orchard Studios  
Brook Green  
Hammersmith  
London, WC 7BU  
England. Telephone 01-602 1840

REFER :

THOMAS, B., & RICHARDSON, E. pp. 8-10.

ANGUS, M. pp. 68, 92.

CLARKE, B. pp. 186, 187-192.

11. Roy Coomber, designer and Director  
James Clark and Eaton Ltd.  
Hartcliffe Way  
Bristol, BS35 SB  
England. Telephone (0272) 669637

REFER :

SOLOMON, J. (1984). The Rose Window is saved. The Courier.  
p. 5.

COOMBER, R. (1982). CLARK-EATON : THE BRISTOL STUDIOS.  
(Prospectus).

LEES, D. (1983). The robust revival of a fragile art.  
Gloucestershire and Avon Life. p. 31.

SEE : Appendix.

12. SEE : Appendix.

13. Frederick W. Cole, designer

Cerne Cottage

Ewell Minnis

Alkham

Dover

Kent, CT15 7DY.

Telephone Dover 824746

Retired Director (Dec. 1984), Conservation Studios of  
Canterbury Cathedral, and a master glass-painter.

REFER :

THOMAS & RICHARDSON. pp. 18-23.

MILLARD, R. (1984). Nativities of Frederick W. Cole.  
Stained Glass (SGAA). pp. 345-349.

NEWTON, R.G. (1982). The Deterioration and Conservation  
of Painted Glass : A Critical Bibliography. pp. 20,  
95-96.

19. Canterbury Cathedral is the Mother Church of English  
Christianity; The Archbishop of Canterbury is the  
Primate of the English Church. The site upon which the  
Cathedral stands is one of the most sacred and historic  
spots in England - for more than one-thousand-five-  
hundred years Almighty God has been worshipped here. The  
stained glass of the Cathedral ranks with Chartres in



the importance of its thirteenth century windows; as we will see, it also possesses exceptional twentieth century windows.

15. At the time of the author's study tour, Ms. June Lennox was in charge of the Stained Glass Restoration Department of the Victoria and Albert Museum in London. On the retirement of Frederick Cole of Canterbury, she succeeded him as Director of Conservation there. Both addresses are therefore given :

1984 : Head, Stained Glass Conservation  
Dept. of Glass and Ceramics  
Victoria and Albert Museum  
South Kensington  
London, SW7 2RL  
England. Telephone 01-589 6371

1985 : Director of Conservation  
The Stained Glass Studio  
Dean and Chapter of Canterbury  
8A The Precincts  
Canterbury, CT1 2EG  
England. Telephone (0227) 453626

16. REFER :

MOLE, S. (1984). The Conservation Studio at the Victoria and Albert Museum. Stained Glass (BSMGP). pp. 8-10.

17. Peter Gibson, Secretary and Superintendent

York Glaziers Trust  
York Minster  
York  
England. Telephone 0905 24874

REFER :

NEWTON. pp. 43.

GIBSON, P., F.S.A. (1980). The Restoration of the Stained Glass of York Minster.

GIBSON, P., F.S.A. (1979). The Stained and Painted Glass of York Minster.

MOLE, S. (1984). Peter Gibson and the rose window from the south transept, York Minster. Stained Glass (BSMGP). p. 3.

18. Goddard and Gibbs Studios Ltd.

41-49 Kingsland Road

Shoreditch

London, E2 8AD

England.

Telephone 01-7396563

REFER :

HAILEY, J. (1983). Goddard & Gibbs, England's Largest Stained Glass Studio. Stained Glass (SGAA). pp. 360-365.

SEE : Appendix.

19. Hartley, Wood & Co., Ltd.

Portobello Glass Works

Portobello Lane

Monkwearmouth

Sunderland

Tyne and Wear, SR6 ODN

England.

Telephone (0783) 672506

A subsidiary of Pilkington P.L.C., and the only manufacturer of true 'antique' (hand blown) glass left in England.

SEE : Appendix.

20. James Hetley & Company Ltd.

Beresford Avenue

Wembley

Middlesex, HA0 1RP

England.

Telephone 01-903 4151

Antique glass suppliers, distributors, exporters, specializing in Hartley, Wood Glass.

An important annual competition, the Hetley-Hartley Wood Competition, stimulates advanced student activity. In this connection -

REFER :

MOLE, S. (1984). The Hetley-Hartley Wood Competition.

Stained Glass (BSMGP). pp. 4-6.

SEE : Appendix.

21. Glass and Glazing Federation of Great Britain

6 Mount Row

London

England.

REFER :

ABRAHAMS, A. and SHAW, p. (1983). Survey of British

Glass in the 1980's. pp. 70-71.

22. Stained Glass Supplies

Unit 5, Brunel Way

Thornbury Industrial Estate

Bristol, BS12 2UR

England.

Telephone 0454 419975

Suppliers of 'antique' glass from England, France and German drawn antique. Also American Bullseye, Spectrum, Kokomo and Uroboros machine-made art glass.

REFER :

MOLE, S. (1984). SGS. Stained Glass (BSMGP).

LONDON ADDRESS :

41-49 Kingsland Road

Shoreditch, E2 8AD.

NOTE : SGS is a subsidiary of Goddard and Gibbs Studios.

23. Pilkingtons Glass Museum

Pilkington Bros.

Prescot Road

St. Helens

Merseyside, WA10 3TT

England.

Telephone 0744 28882

REFER :

BURGOYNE, I. and SCOBLE, R. (1983). Two Thousand Years of Flat Glass Making.

PILKINGTON GLASS MUSEUM. (1979). "'Tis a concrete of salt and sand and stones".

SEE : Appendix.

24. The Design Centre

The Design Council

28 Haymarket

London SW1Y 4SU

England.

Telephone 01-839 8000

25. National Portrait Gallery

Trafalgar Square

London, WC2H 0HE

England.

Telephone 01-930 1552

1984 was the fifth year of the Portrait Award, sponsored by John Player & Sons and Imperial Tobacco Ltd., to foster new talent in portraiture. The winner receives a cash award of £1,500 to paint a well-known sitter. This portrait becomes part of the National Portrait Gallery's contemporary portrait collection. The artists whose works are placed second and third also receive cash awards as do five additional entries specially commended by the judges.

The researcher was received courteously by Ms. Jean Liddiard, and conducted through the collection.

26. Durham Cathedral has been called the finest Romanesque cathedral in Europe - it is certainly the greatest Norman Church in England.

REFER :

JOHNSON, M. (1983). Durham, Historic and University City.

STRANKS, C.J., VEN. (1984). Durham Cathedral.

NORRIS, R. (1984). The Stained Glass in Durham Cathedral.

Reference to the stained glass at Durham is made in the text.

27. Ely Cathedral, architecturally speaking, is famous for its superb Galilee Porch at the west entrance of the cathedral, and the great octagonal lantern tower, built to replace the Norman crossing tower that collapsed in 1322.

No medieval stained glass remains; most of the glass is sixteenth century French, and nineteenth century, largely by Henri G erente, who, with his brother, Alfred, collaborated with Viollet-le-Duc on the restoration of the Abbey of St. Denis, and Sainte-Chapelle, Paris.

A Stained Glass Museum has been established in the wide triforium of the cathedral. Established in 1972 to rescue and conserve important examples of stained glass from redundant churches and other buildings, it displays panels that illustrate the history of the medium from the Middle Ages to today.

REFER :

CAREY, M.S. (1973). Ely Cathedral.

ROLLET, J. (1980). Les Maitres de la Lumiere. p. 255.

MOLE, S. (1986). The Stained Glass Museum at Ely. Stained Glass (BSMGP). p. 21.

28. J.W. Bramham was trained at the Doncaster School of Art. He taught painting, drawing, and Historic Ornament at the School of Art of the Johannesburg Technical College from the late 'forties to the 'sixties, when he returned to England. The researcher studied under him from 1953-1956.

29. Timothy Lewis, designer, and Course Leader, Architectural Design, West Glamorgan Institute of Higher Education, Swansea.

REFER :

ANGUS. pp. 33, 112.

KNIGHT, A. (et al.) (1980). Glass Masters - Contemporary Stained Glass from West Germany. pp. 3-5.

30. Faculty of Art and Design, previously, the Swansea School of Art

West Glamorgan Institute of Higher Education

Townhill Road

Swansea, SA2 0UT

Wales.

Telephone (0792) 203482

REFER :

MOLE, S. (1984). The Hetley-Hartley Wood Competition.  
Stained Glass (BSMGP). pp. 4-6.

MOLE, S. (1984). Demain Le Vitrail. Stained Glass  
(BSMGP). p. 7.

SWASH, C. (1986). The Fiftieth Anniversary of the  
Stained Glass Department at WGIHE - Swansea. Stained  
Glass (BSMGP). pp. 4-6.

31. Douglas Hogg, designer, and lecturer-in-charge  
Stained Glass Department, Edinburgh College of Art  
34 The Square

Kelso

Borders

AND :

13 St. Stephen Place

Edinburgh, 2 CH3 5AT

Scotland

Telephone 031 225 8216

REFER :

FIRMIN-DIDOT, P. (1982). p. 47, plate 13.

32. Edinburgh College of Art

Lauriston Place

Edinburgh, EH3 9DF

Scotland.

Telephone 031-225 8432

REFER :

MOLE, S. (1986). Courses - Edinburgh College of Art.  
Stained Glass (BSMGP). p. 19.

SEE : Appendix.

33. Glasfabrik Lamberts Waldsassen GmbH.

8595 Waldsassen-Opf.

Postfach 1106

Wes Deutchland.

Telefon (09632) 2371

The manufacturers of exceptional Antique glass, considered by many designers to be the best in the world. This firm is prepared to make any specialized type of hand blown glass if required, and carries extensive stocks.

34. Ms. Michelle Androu, designer

Wilhelm Derix GmbH. & Co. KG.

Platterstr. 94

6204 Taunusstein-Wehen

West Germany.

Telefon 06128 84201

A young New Zealander, trained at the Chelsea College of Art and Design, who worked at the firm of Goddard and Gibbs before joining the Derix studio.

REFER :

FIRMIN-DIDOT. pp. 22-23.

35. Wilhelm Derix GmbH. & Co. K.G.

See address above. One of the premier fabricators of stained glass in Europe. More is said of their activities in the text.

REFER :

DERIX CREATIVE GLASS. (1984). Creative Glass enhances atmosphere. (Brochure).

36. Werkstätten Dr. Heinrich Oidtman

Rurdorferstr. 9-11

5172 Linnich

West Germany.

REFER :

STEPHANY, E. (1983). Licht Glas Farbe, for the history of this old and reputable firm.

SEE : Text and Appendix.



37. Paul Weigmann, designer  
Küpperstegerstr. 9  
5090 Leverkusen-Küppersteg  
West Germany.

Telefon 0214-61819

REFER :

STEPHANY, pp. 11, 46, 47, 49, 50, 51, 136, 137, 138,  
139, 219, 220.

DERIX, H and PLOTZ, R. (1984). Die Glasmaler-Werkstätten  
Hein Dericx. pp. 101, 102, 116.

Paul Weigmann-Glasmalerei aus dem rheinischen Raum.  
(1983). (Exhibition Catalogue).

38. Ludwig Schaffrath, designer  
Theodor-Seipp Str. 118  
5110 Alsdorf-Ofden  
West Germany.

Telefon 02404/1243

REFER :

CLARKE. pp. 29, 31, 32, 38-40, 73, 109, 199, 213.

STEPHANY. pp. 4, 13, 39-45, 144-145, 147, 153-154,  
166-167, 169.

DERIX. pp. 97, 104.

RICKE, H. (1983). Neues Glas in Deutschland. pp. 45-51,  
55, 224-226.

LEE, L., SEDDON, G., and STEPHENS, F. (1976). Stained  
Glass - Music for the Eye. pp. 50-53.

REYNTIENS, P. (1976). The Story of Stained Glass. (Part  
6). pp. 3, 4, 14, 15.

SOWERS, R. (1981). The Language of Stained Glass. pp.  
10, 64, 68, 69, 71, 97, 112, 113, 115, 148, 149, 150,  
151, 152, 153, 154, 166, 168.

DUNCAN, A. (1975). The Technique of Leaded Glass. pp.  
16, 17, 130, 135, 156.

BÖRNSEN, N. (1984). Neuaufbau einer alten Kunst, Der  
Glasmaler Ludwig Schaffrath. Westermanns Monatshefte.  
(Sept. 1984). pp. 6-14.

POENSGEN, J. (1984). Ludwig Schaffrath, zum 60  
Geburtsdag. Neues Glas, New Glass, Verre Nouveau.  
(Feb. 1984). pp. 64-71.

HAUFSCHILD, L. (1984). German Architectural Stained  
Glass 1984. Stained Glass (SGAA). 79, 2. pp. 139,  
140, 141, 142.

39. Joachim Edgar Klos, designer

Buchenweg 13

4051 Schaag-Nettetal

West Germany.

Telefon 02163 / 70836

REFER :

CLARKE. pp. 30, 103, 104-108.

RICKE. pp. 49, 152-153.

DERIX. pp. 95, 106, 109, 159.

KNIGHT. pp. 4, 14.

STEPHANY. pp. 108, 109.

HAUFSCHILD, L. (1984). German Architectural Stained  
Glass 1984. Stained Glass (SGAA). 79, 2. pp. 136,  
137, 138, 141.

New Glass Review 5, (1984). Corning Museum of Glass.  
Plate 43.

40. Glasmaler-Werkstätten Hein Dericx

Gelderner Str. 29-33

4178 Kevelaer

West Germany

Telefon 02832 / 2362

REFER :

DERIX, H. and PLOTZ, R. (1984). Die Glasmaler-  
Werkstätten Hein Dericx. The history of the firm.

NOTE :

There is also a Derix studio in Düsseldorf :  
Wilhelm Derix Werkstätten für Glasmalerei, Mosaik, und  
Betonglasfenster GmbH.

Alte Landstr. 190  
4000 Düsseldorf 31  
West Germany.

Telefon 0211 / 401370

SEE : Appendix.

41. Richard Millard, designer, writer and Editor of Stained Glass (SGAA)

R.D. 3, Hopewell Junction  
Poughkeepsie  
New York, 12533

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106 W. Allens Lane

Philadelphia

Pa. 19119

United States of America.

44. Rohlf's Stained and Leaded Glass Studio, Inc.

783 South 3rd Avenue

Mt. Vernon

New York, 1055-4996

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102 East 22nd Street apt. 5h.  
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52. Steuben Glass Division  
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New York, New York  
United States of America

53. Corning Glass Museum  
Corning  
New York State. Telephone (607) 974-9000

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55. Mark Anderson, designer.  
Studio 316, Torpedo Factory Art Center  
105 North Union Street  
Alexandria  
Virginia, 22314  
United States of America. Telephone (703) 683-7655
56. Americans make a point of showing hospitality to visitors from out-of-town, and particularly visitors that they know of from foreign countries.





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 \*Illustration 16 is a postcard supplied by Gallerie du Vitrail, Chartres, France.

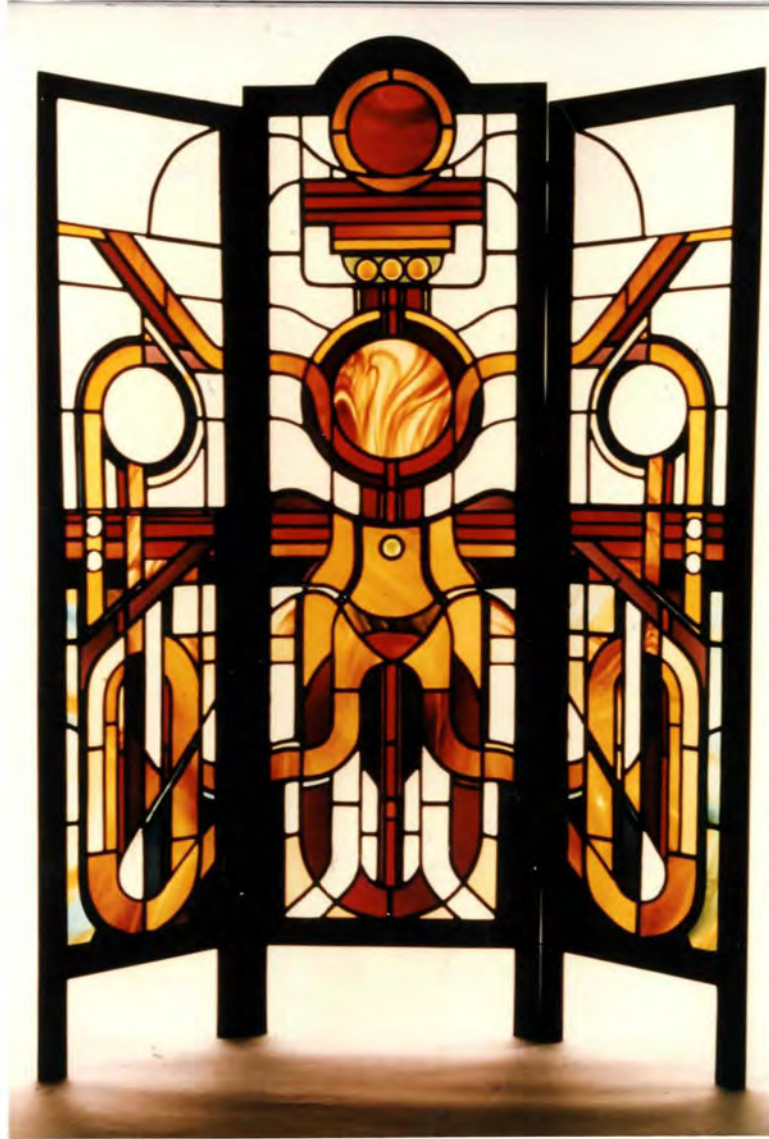
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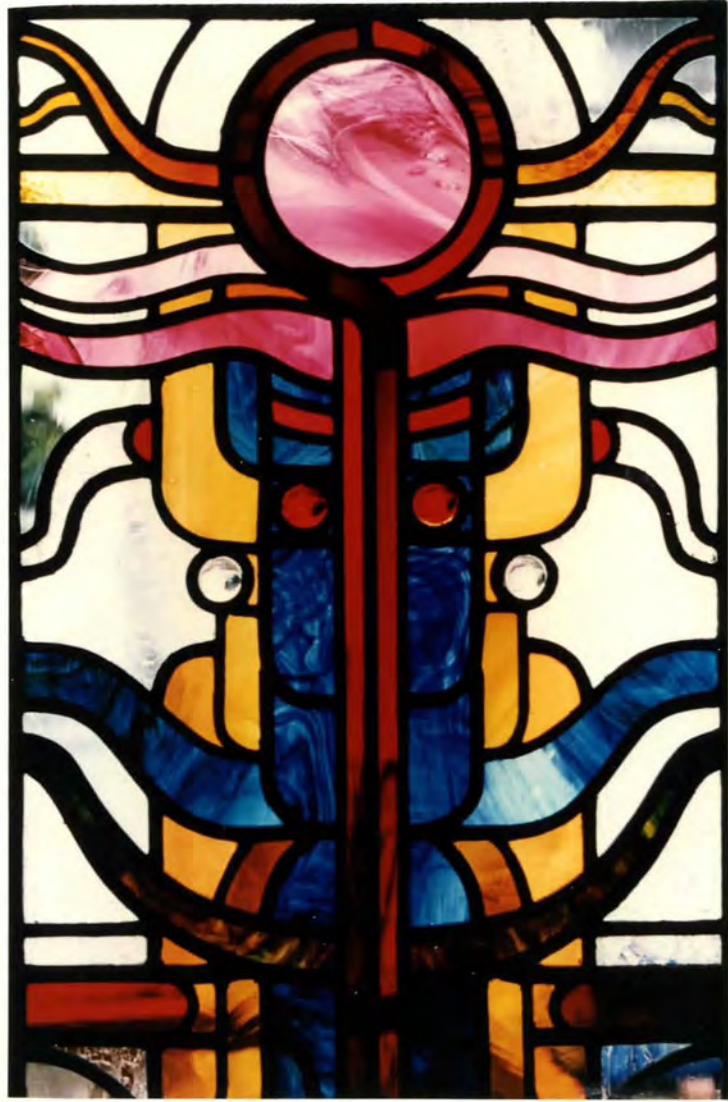
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## SELECTED ABBREVIATIONS

AMGP	Associate, British Society of Master Glass-Painters.
ARCA	Associate, Royal College of Art.
ARIBA	Associate, Royal Institute of British Architects.
ATD	Art Teacher's Diploma (U.K.).
BA (FA)	Bachelor of Arts (Fine Art).
BSMGP	British Society of Master Glass-Painters.
CVMA	Corpus Vitrearum Medii Aevi.
DAC	Diocesan Advisory Committee.
FMGP	Fellow, British Society of Master Glass-Painters.
FSA	Fellow, Society of Antiquaries of Arts.
GMF	Glass Manufacturers' Federation.
HNDD	Higher National Diploma in Design (U.K.).
ICOM	International Council of Museums.
IIC	International Institute for Conservation of Historic and Artistic Works.
NDD	National Diploma in Design (U.K.).
N.Dip.Tech.	National Diploma in Technology.
NTC(Art)	National Teacher's Certificate (Art).
PE	Port Elizabeth.
RF	Royal Fusiliers.
SGAA	Stained Glass Association of America.
SIAC	Société Internationale des Artistes Chrétiens.
USIA	United States Information Agency.









## CHAPTER 1 : INTRODUCTION

### 1.1 BACKGROUND TO THE STUDY

The candidate, a practising artist since 1957,<sup>1</sup> designer in stained glass and glass-painter since 1976,<sup>2</sup> completed a comprehensive study of the medium of stained glass through the Port Elizabeth Technikon, and with the assistance of a grant by the Human Sciences Research Council, Pretoria, for the award (cum laude) in 1983, of the National Diploma in Technology in Fine Art.

In his thesis, entitled,

"PAINTING WITH LIGHT -  
An exploration of image and technique in Stained Glass as an extension of the painter's vision with reference to traditional and modern techniques for ecclesiastical and secular purposes",

the history and techniques of this art form were traced from ancient times to today.

This prodrome sought to define through research, the material, composition, historic foundations, significance and technical development of glass as a window-glazing material for ecclesiastical, and later secular purposes, and examining thus its determining rôle in the development of architecture.



The history and techniques of stained glass, an art-form linked more than any other to the mythology and dogma of the Roman Catholic Church, were traced; its history is thus one with that of the church, rising to its greatest glory during the twelfth and thirteenth centuries, and declining from the late fifteenth to the seventeenth centuries. The iconography of the church was examined, and the development of window and tracery types discussed through reference to pertinent examples on both sides of the English Channel. Subjects, stylistic and technical factors, sources of reference, ecclesiastical influences, were all viewed within the context of social and political history.

The study referred to the development of heraldry which became a common subject in glass in a martial age.

The discovery that silver chloride or nitrate, when fired into the surface of white glass made possible shades of yellow from pale lemon to deep orange, and thus revolutionizing the medium in the fourteenth century, was illustrated with pertinent examples.

The thesis traced the history of the medium through the ages to the times of religious strife in the sixteenth and seventeenth centuries during which stained glass suffered through malevolent iconoclasm, and during the eighteenth century - the 'Age of Reason' - barbarous neglect - indeed,

the very formulae and techniques for making 'antique' coloured glass were lost.

With the dawn of the Industrial Revolution and the mass movement of peoples, the 'Age of Romanticism' and the great Anglo-Catholic Revival in the nineteenth century, stained glass flowered again, enjoyed a world-wide renaissance, and was carried in the sphere of British influence and Empire to many colonies.

This was made possible by the technical innovations of Georges Bontemps of France, Charles Winston and William Edward Chance in England, and later, John La Farge and Louis Comfort Tiffany in the United States of America. Through their research, coloured 'antique' glass of unrivalled beauty was manufactured.

With the impetus of succeeding movements and powerful creative exponents, (William Morris, Edward Burne-Jones and the 'Firm'; Henry Holiday, Christopher Whall, and the Arts and Crafts Movement; Charles Rennie Mackintosh, Louis Comfort Tiffany, René Lalique, John La Farge, Victor Horta, Hector Guimard, and the Art Nouveau Movement), the boundaries of the art form were greatly extended.

The first Great War (1914-1918) brought a change in mood and a decline in interest in the medium, although Frank Lloyd Wright in America, Johan Thorn Prikker and the

artists of the Bauhaus in Germany, the artists of the De Stijl group in Holland, Harry Clarke, Evie Hone and Wilhelmina Geddes of Ireland produced stained glass that could measure up to the best of any period.

In England the medium lapsed into a form of academism, until the Second World War (1939-1945) provided in its catastrophic wake, the very stimulus for a renaissance, and here mention was made of Coventry Cathedral, rebuilt after the war.

It was in Western Germany, however, where unparalleled destruction was wrought, and large-scale movements of populations took place; where refugees of different Christian denominations with the same urgent need for spiritual succour worked together after the holocaust with true ecumenical zeal to build churches where Catholics and Lutherans could worship in harmony. A meeting of minds on theological, artistic and technological levels resulted in a new architecture with multi-functional churches designed for meditation, discussion, youth and musical events, as well as worship.

At this time the rôle of pictorial imagery in the church and the difficulty of portraying Christ today was debated. It was concluded that images should be symbolic rather than literal or naturalistic. Furthermore, it was resolved that creative artists should be required only to show due re-

spect and reverence, to assure them artistic freedom of expression and interpretation.

This stimulated a new generation of designers to produce daring compositions in a non-figurative style. Meistermann, Schaffrath and others brought about a new understanding of the potential of large-scale architectural stained glass in the contemporary 'milieu', while Schreiter, Poensgen, Buschulte, Klos and others, extended the dynamic frontiers of the medium. Their work had a far-reaching impact on designers in the British Isles and the United States of America.

The thesis went on to examine the English Romantic tradition as conveyed by the work of the artist-craftsman team of John Piper and Patrick Reyntiens at Coventry, Liverpool and elsewhere, and the older generation, with particular reference to Frederick Cole of Canterbury, who has fine windows in Holy Trinity Church, Port Elizabeth. Examined briefly, were the young designers of the 'sixties and 'seventies who advocated the architectural rôle of glass in a decidedly non-representational way in emulation of their German contemporaries. Brian Clarke, Ray Bradley and David Wilson, in particular, have earned considerable reputations in far-flung places such as Dubai, Lagos, Bahrain and the United States of America.

In France after the Second World War, an enlightened group of Dominicans centred on Father Couturier and Father Régamey brought together nine great painters to execute stained glass in one church at Assy. Among them were Pierre Bonnard, Georges Braque, Jean Lurcat, Henri Matisse, and Georges Rouault.

Mention was made of the work of the architect, La Corbusier and his masterpiece, the Church of Notre Dame du Haut at Ronchamp. Attention was also given to the international designer, Gabriel Loire of Chartres, the designer of the Mountbatten window in Cape Town Anglican Cathedral. In this connection, the development of 'dalle de verre', or slab-glass, was discussed.

Finally, the course of contemporary stained glass in North America was assessed, with particular reference to the author-designers, Robert Sowers, Abinus Elskus, and Peter Mollica - and the younger generation such as Richard Posner, Nancy Siegel, and Ray King.

In conclusion, the candidate reasoned that stained glass, although nominally related to the medium of painting, has a very significant multi-dimensional quality which is neither part of painting nor of sculpture. 'Light' is the natural force which must be manipulated by the stained glass designer, to hold the eye of the spectator on the surface of a material which is at once both transparent and translu-

cent, yet conveys the eye through the surface to the shapes, colours and textures of the forms that lie beyond it.

Furthermore, the artist must titillate the eye with the refractive qualities of the light force as it moves on and through the glass construction towards the spectator, yet hold the eye by the manipulation of the linear element to be found within the glass or the lead-line that contains it, for the creation of passages of drama, and moods of tranquility, excitement, or stability.

Finally, the artist must control the emotive element of colour, which due to the light force which reveals it, can act decisively for good or bad.

The Appendix contained an essay on the Conservation of Glass, a detailed list of manufacturers, suppliers, and the materials required by the practitioner of the craft.

An extensive Glossary of Terms, and comprehensive Bibliography concluded the study.

## 1.2 FORMULATION OF HYPOTHESES

It is hoped that this study, which will take the candidate on a five-month tour, from July to December 1984, to parts of the British Isles, France, Switzerland, Austria, West

Germany (Federal Republic), Belgium, and the eastern seaboard of the United States of America (New York City and environs; Corning, New York State; Philadelphia; Washington, D.C.), will confirm the hypotheses :

- 1.2.1 that a modern renaissance in stained glass has taken place in the British Isles, Europe, and the United States of America, and that the medium is not, as it has often been described, a 'forgotten' or 'dying' art,
- 1.2.2 that stained glass works that rival accomplishments in other art forms, and measuring up to the achievements of the past, are being created in modern times by masters of the medium,
- 1.2.3 that a corresponding rich variety of materials and techniques is available to the ambitious proponent of the medium,
- 1.2.4 that the introduction of stained glass in a South African institution of tertiary education is a viable proposition,
- 1.2.5 that conservation and restoration are neglected fields in South Africa, yet both are directly relevant to the study of architectural and autonomous works for both aesthetic and technical reasons, and

provide significant financial input to any self-sufficient stained glass business.

### 1.3 AIMS AND OBJECTIVES

The aims and objectives of this study tour may be summarized as follows:

- 1.3.1 To view personally a representative number of stained glass works from the first millenium A.D. to the Modern period, i.e. at least some of the great works that were the subject of preliminary theoretical study (outlined in 1), works that constitute a part of the heritage of Western civilization,
- 1.3.2 To assess, in the light of the previous statement, the degree to which stained glass has become a collectable commodity -
  - as part of museum collection policy in general,
  - in specialist museums established to this end.
- 1.3.3 To visit significant centres of stained glass conservation with reference to 1.2.5, and 1.3.1 and 1.3.2, above, Such visits are considered essential in order to consolidate the researcher's knowledge, and to establish contact with experts in the field for further liaison purposes.



- 1.3.4 To attempt an evaluation of stained glass in the contemporary 'milieu' :
- in relation to other art forms,
  - with due observance of differences arising out of national styles, if any, and other possible influences.
- 1.3.5 To visit, with 1.3.4 in mind, as many art galleries and museums as possible, in order to view a wide range of contemporary artefacts and art works.
- 1.3.6 To meet designers of note and writers on the topic, in order to discuss the medium and its aesthetic with them.
- 1.3.7 To visit centres of glassmaking in France and/or Germany and/or the British Isles, and suppliers of raw material and equipment :
- to effect further liaison,
  - to examine a range of supplies not readily available in South Africa,
  - to observe, at first hand, the manufacture of 'antique' glass.
- 1.3.8 To visit selected professional stained glass studios which execute the designs of freelance designers, and those that employ designers on their own payrolls; to

observe any possible differences of approach, and to view the techniques of professional practice.

- 1.3.9 To visit educational institutions which offer courses in stained glass in order to assess student interest, their involvement in practical assignments, and to glean information on syllabi and methodology.
- 1.3.10 To review current literature on the subject by visiting specialist libraries and booksellers.
- 1.3.11 To accumulate as much visual reference as possible, in the form of 35mm slide transparencies, for lecturing purposes, and for future visual research as a practising designer.
- 1.3.12 To examine the dichotomy between the 'autonomous' and the 'architectural' in stained glass works, is deemed necessary in a study in which aesthetic evaluation is the central theme.
- 1.3.13 To examine the rôle of the artist (e.g. Chagall, Piper, Bazaine, Manessier, et al.), as designer of stained glass.
- 1.3.14 To examine the influence of technology on contemporary fenestration aesthetics, with particular reference to the glass wall.

1.3.15 To investigate the influence of double glazing techniques, mandatory under certain conditions for a variety of reasons, ranging from the need for protective screening in an age of vandalism and terrorism, to the requirements of central heating, and the prevention of noise pollution.

1.3.16 To establish contact with such specialist organizations as :

- International Institute for Conservation of Historic and Artistic Works, London,
- British Society of Master Glass-Painters, London,
- The Worshipful Company of Glaziers and Painters of Glass, London,
- The Scottish Glass Society, Kirkmichael, Perthshire,
- The Crafts Council, London,
- Corpus Vitrearum Medii Aevi - Great Britain, London,
- Centre International du Vitrail, Chartres and Paris,
- The Stained Glass Association of America, St. Louis, Minnesota,
- any any other organizations whose activities are related to the study of the history, preservation, techniques, aesthetics, or teaching of the medium of stained glass.

## 1.4 DEFINITION OF TERMS

1.4.1 "Stained Glass" is a phrase which requires attention. It is term which came into use during the nineteenth century as a contraction of 'painted and stained glass', that is to say, the process whereby the colour or tone of white or coloured glass may be modified by the application of silver oxide (which kiln-fired to 600 degrees Celsius changes white glass to yellow, blue glass to green, and so on, or painted with a vitreous iron oxide (similarly kiln-fired for permanence) to provide linear or tonal passages. It has also come to mean the basic colouring of the molten glass (i.e. a synonym for coloured glass).<sup>1</sup>

1.4.2 'Architectural Glass' has been defined as decorative (e.g. stained, engraved, sand-blasted) flat glass to be part of an overall structure.<sup>2</sup>

However, the implications of the term go further, for 'dalle-de-verre' (French, literally 'pavingstones' of glass) being cast roughly three to five centimetres thick, set in concrete or epoxy resin, enables the construction of glass walls, as in, for example, the First Presbyterian Church, Stamford, Connecticut, U.S.A.<sup>3</sup>

Before we consider stained glass itself as an art of painting, we must conceive of it "primarily as an art of the wall, an art of fenestration."<sup>4</sup> "Public architecture is the inescapable environment of stained glass."<sup>5</sup>

- 1.4.3 'Autonomous Stained Glass', that is to say, panels of glass displayed independently of the architectural frame, emerged as 'raison d'etre' in the 1960's.<sup>6</sup>

Historical precedents may be traced back to the trade in stained glass panels after the Reformation. During the seventeenth and eighteenth centuries, too, Swiss enamelled roundels were all the rage in England,<sup>7</sup> and during the French Revolution much twelfth century stained glass passed across the English Channel. Some fragments later found their way across the Atlantic to collections in the U.S.A.<sup>8</sup>

The development of collections of stained glass<sup>9</sup> housed in museums with special lighting arrangements for their display<sup>10</sup> has enabled the close study of the art of glass-painting - "immensity in miniature."<sup>11</sup> In some countries it is standard practice to produce a sample panel as a detail of a larger architectural commission.<sup>12</sup>

Free-standing glass panels are also used as a vehicle for experimentation in aesthetics and technique, while a proliferation of stained glass exhibitions,<sup>13</sup> teaching programmes and workshops has further stimulated the fabrication of autonomous panels.

- 1.4.4 'Current Practice' in an art in which the primary techniques reach back into the mists of time, is perhaps more difficult to define satisfactorily.

In an assessment of contemporary stained glass, therefore, it has been assumed necessary to trace in outline the history of the medium from the start of the twentieth century.

'Current practice' may also be defined here as the examination of contemporary attitudes to the promotion of stained glass through architectural commissions as well as restoration and conservation programmes, and an assessment of literature on the topic, as set out in 1.3, Aims and Objectives, above.

## 1.5 REFERENCES AND NOTES - CHAPTER 1

1. Partly defined in : LEE, L. (1977). The Appreciation of Stained Glass. pp. 7-8.
2. ABRAHAMS, A. and SHAW, P. (1983). Survey of British Glass in the 1980's. p. 6.
3. Architect : Wallace Harrison. Stained Glass design : Gabriel Loire. Completed 1958.
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5. LEE, L. (1977). p. 9.
6. RICKE, H., POENGEN, J. (et al.). 1983. New Glass in Germany. H.G. von Stockhausen on 'The Glass Panel'. p. 63.
7. LEE, L., SEDDON, G. and STEPHENS, F. (1976). Stained Glass. p. 144.
8. HAYWARD, J. (1971). Stained-Glass Windows. Bulletin Metropolitan Museum of Art. December 1971/January 1972.
9. For example, the Burrell Collection, Pollok Country Park, Glasgow. Refer HENDERSON, S.M.K. (1965). Stained and Painted Glass : Burrell Collection.
10. The Victoria and Albert Museum in South Kensington, London, is the most famous example. Other significant collections include the Cloisters of the Metropolitan Museum of Art, New York; Ely Cathedral Museum of Stained Glass; the Burrell Collection Gallery, Glasgow; the Suermondt Museum, Aachen; the Museum for Contemporary Glass, Ebeltoft, Denmark; the Corning Museum, Corning, New York; the Pilkingtons Museum, St. Helens Merseyside; the Mellon Collection, University of Pittsburgh.
11. H.G. Von Stockhausen in RICKE, H. (et al.). 1983. p. 63.
12. For example, one of a series of panels by Ludwig Schaffrath for the Chapel of St. Antonius Hospital, Eschweiler, West Germany. (1976), is now in the collection of the Victoria and Albert Museum, London.
13. For example, 'Mille ans d'art du Vitrail', Strasbourg, 1965; 'Salon du Vitrail, Chartres, 1980; New British Glass and Vitrail Français Contemporain, Chartres 1982; 'Vitrail en Eclat', Reims, 1983; 'Vitrail Labyrinthes', Chartres, 1983; 'Glass/Light', London, 1978; 'Glass in the Environment', London, 1986; 'Vitraux et tapisseries en liberte', Paris, 1979. (See also Bibliography).

14. For example, the Summer School at Pilchuck, Seattle; Patrick Reyntiens's teaching programmes at Beaconsfield, England, in the 'seventies; Paul San Casciani at Oxford; 'Gloed van Glas', Brussels, 1986.



## CHAPTER 2 : THE BRITISH ISLES : HISTORIC OUTLINE

### 2.1 FOREBEARS

Most contemporary stained glass artists in the British Isles can trace their immediate descent from the innovative glass-makers and artist/craftmen of the mid-nineteenth century, sharing with these forebears a concern for the quality and character of the glass as well as abiding fascination with the use of vitreous paint, used both as a design element and a means of controlling light.<sup>1</sup>

The Victorian period witnessed a succession of art movements : Gothic Revivalism, Pre-Raphaelitism, Classical Revivalism, Aesthetic and Queen Anne.<sup>2</sup> All of these movements were born out of the unease of the artist to the inroads of the industrial revolution which for a century had dominated life in England. By the 1880's industrial innovations and mass-production techniques had overwhelmed many of the traditional crafts, and threatened the remainder, including stained glass.<sup>3</sup>

Even the firm of Morris & Co., established by William Morris and Edward Burne-Jones in 1861, had by this time developed an assembly-line approach to the fabrication of the many windows that were being commissioned to fill the churches

both at home and abroad in the Colonies, and the United States of America.<sup>4</sup>

To combat the increasing estrangement of the artist from the final product (which might bear his signature but little resemblance to the original design, or suffer from inadequate and clumsy translation into glass), three Societies were formed : the Century Guild of Artists (1882), the Art Workers Guild (1884), and the Arts and Crafts Exhibition Society (1888).<sup>5</sup> The chief aim of these organizations was to maintain control over the product from design to installation.<sup>6</sup>

The Century Guild of Artists comprised architects, artists and craftsmen, and included such figures as Clement J. Heaton, founder of the firm Heaton, Butler & Bayne, the eccentric architect A.H. Mackmurdo, a protégé of John Ruskin,<sup>7</sup> the author H.P. Horne<sup>8</sup> and the stained glass artist, Selwyn Image. The Century Guild was short-lived, although their magazine 'The Hobby Horse' continued until 1892.<sup>9</sup> It was superseded by The Art Workers Guild, which included such leading figures as the architect J.D. Sedding, the designer/author Lewis F. Day,<sup>10</sup> Selwyn Image and Christopher Whall.

The committee of the new Arts and Crafts Exhibition Society in 1888 included Edward Burne-Jones, W.R. Lethaby - the great apologist for, and thinker on the subject of Industrial Design<sup>11</sup> - Sedding, Day, Morris and N.H.J. Westlake,

all of whom, at one time or another, had been closely connected with stained glass.<sup>12</sup>

Walter Crane (1845-1915), the illustrator and Principal of the Royal College of Art (1888-1898),<sup>13</sup> later became President of the Society. He designed windows in a decidedly 'fin-de-siècle' manner, with brooding dense glass - the result of the heavy 'plating'<sup>14</sup> much favoured by his collaborator, Silvester Sparrow. Crane's most striking works may be found at Stamford Hill, London, carried out in 1897.<sup>14</sup>

Selwyn Image (1849-1930) also produced forceful designs that were unlike the dominant Pre-Raphaelite models.<sup>15</sup> This dominance was undoubtedly due to Edward Burne-Jones (1833-1898), life-long designer for Morris & Co., who was also, perhaps, the strongest influence of all on Arts and Crafts stained glass design.<sup>16</sup> His earliest protégé was Henry Holiday (1839-1927). Holiday collaborated with the London firms of Lavers & Barraud and Heaton, Butler and Bayne while chief designer of James Powell & Sons, of Whitefriars. In 1891 he set up his own workshop, and had become a leader in the Victorian stained glass renaissance.<sup>17</sup> Highly articulate, he wrote Stained Glass as an Art in 1896, and an autobiography, Reminiscences of My Life, in 1914. Holiday also crossed the Atlantic and produced a substantial body of work in the U.S.A., including New York City, Albany, Boston, Buffalo, Philadelphia, Richmond (Va.), Utica and Washington D.C.<sup>18</sup>

Another important Victorian glazier whose influence extended into the twentieth century was the prolific Charles Eamer Kempe (1834-1907), and the firm which he founded in 1869. This survived until 1934 under the control of his nephew, Walter Ernest Tower (1873-1955).<sup>19</sup> His most notable pupil was Ninian Comper, of whom more later.

The 1880's were thus a time of great activity in the applied arts in England. Art Congresses at Liverpool and Edinburgh added to the general crusade against the evils of commercialism, and in the words of the undisputed leader of the Arts and Crafts Movement, Christopher Whall (1849-1924) :

"... a little Byzantium of the crafts setting itself to learn from the beginning how things are actually made, how built, hammered, painted, cut, stitched; casting aside theories and academic thought, and founding itself upon simplicity, and sincerity, and materials."<sup>20</sup>

Whall's work was enhanced by his use of a new type of slab glass developed by E.S. Prior in 1889, in collaboration with the Southwark firm of Britten and Gibson.<sup>21</sup> This glass possessed a brilliancy of colour and depth with irregularities, flaws, bubbles and striations as well as uneven streaky colours, all very much like thirteenth century glass after which it was named 'Prior's Early English Glass'.<sup>22</sup>

Whall's accomplishments in stained glass, murals, altar pieces and decorative plasterwork attracted a large number of followers. Private pupils received their training in his studies as well as students of the Royal College of Art and the London County Council's Central School of Arts and Crafts.<sup>23</sup>

Whall's work was prolific and can be viewed in most parts of Britain; furthermore, after the publication of his book Stained Glass Work in 1905, commissions came in from all parts of the English-speaking world, including Cape Town<sup>24</sup> and Pretoria, and churches in such far-flung places as New Zealand, Australia and the United States of America. There his work influenced, for one, the American stained glass pioneer, Charles Jay Connick.<sup>25</sup>

In 1897 two glaziers, Mary Lowndes and Alfred Drury had helped to set Whall up in business, and in 1906 they built the 'Glass House' in Fulham, with the purpose of providing stained glass artists with studios and workshop facilities run on 'Arts and Crafts' principles. These facilities, coupled with the unrivalled quality of Prior's glass, had a profound effect on stained glass in England for the first forty years of this century.<sup>26</sup>

Among those who worked there and who received their training either under Whall himself, or under one of his pupils,

were Hugh Arnold,<sup>27</sup> Margaret Chilton, Mabel Esplin, Joseph Nuttgens, Karl Parsons, Margaret Rope, Caroline Townshend, Martin Travers and Paul Woodroffe.<sup>28</sup> Others who passed through the Glass House workshops, produced important windows and transmitted the philosophy of the Arts and Crafts Movement, included Henry Payne (at Birmingham), Arnold Robinson (Bristol), Lilian Pocock, Douglas Strachan (Scotland), Robert Anning Bell (both Scotland and England), Baron Arild Rosencrantz, Gerald Moira and Lilian Pocock.<sup>29</sup>

## 2.2 THE ARTS AND CRAFTS MOVEMENT : FIRST HALF OF THE TWENTIETH CENTURY

Karl Parsons (1884-1934) is described by Patrick Nuttgens as "the dream artist personified - with wavy black hair and beard and refined features."<sup>28</sup> Parsons brought a new intensity of colour to the medium and frequently made use of the technique of plating (described in the References and Notes). There are fine examples of his work in South Africa, including churches in Cape Town, Johannesburg, Potchefstroom and Brakpan.<sup>30</sup>

Both Parsons and Robert Anning Bell (1863-1933) taught at the Royal College of Art in London. Bell was also a link with the thriving stained glass community at Glasgow, where he had previously been a lecturer.<sup>31</sup> An impeccable craftsman and consummate draughtsman, his work was often lauded in

such magazines as the Art Journal, and The Studio, which did much to forward the aims of the Arts and Crafts Movement.<sup>32</sup>

In 1903 Whall's influence extended further afield to Ireland, where he was persuaded to set up a stained glass department in the Metropolitan School of Art, Dublin. At the same time a local artist, Sarah Purser, set up 'An Tur Gloine' (the Tower of Glass), which became the centre of exciting developments in Irish stained glass in the twentieth century.<sup>33</sup> Unable to perform the function himself, Whall sent his leading craftsman, A.E. Child, to teach at both institutions; this service he performed until his death in 1939. His most famous pupils were Harry Clarke, Wilhelmina Geddes and Evie Hone.<sup>34</sup>

At this point let us pause to consider the significant contribution of some of the women artists to the Arts and Crafts Movement. Mary Lowndes (1857-1929) designed and made over a hundred windows; her contribution to the next generation of designers through the establishment of the Glass House was inestimable. Throughout the 1900's and the years of the Great War, she was also active in the movement for Women's Suffrage.<sup>35</sup>

Florence Camm (1874-1960) in 1912 took over the running of her father's stained glass studio in Birmingham, with her brothers Walter and Robert, and together with Henry Payne (1868-1940), himself a pupil of Whall, and lecturer in

stained glass at the progressive Birmingham Municipal School of Art, ensured the design and fabrication of windows of the highest quality.<sup>36</sup>

Margaret Chilton (1875-1962) attended the Royal College of Art where she studied under Whall and Alfred J. Drury (Mary Lowndes' partner). In 1918 she moved to Glasgow to join the Abbey Studio. There she met Marjorie Kemp (1886-1975). They formed a partnership and established themselves in Edinburgh.<sup>37</sup>

Caroline Townshend (1878-1944) was one of the original tenants of a studio at the Glass House in Fulham. In 1912 she formed a partnership with Joan Howson (1885-1964), who had studied at Liverpool City School of Art. They collaborated in the fabrication of windows designed by Caroline, while Joan specialized in the repair of medieval glass.<sup>38</sup> Mabel Esplin (1874-1921), Margaret Rope (1882-1953), Lilian Pocock (1883-1974), Joan Fulleglove (1886-1947) and Rachel Tancock (1891-1961), all studied under Whall; Parsons or Drury were actively involved in the Women's Suffrage Movement, as well as carrying out artistic commissions in stained glass and other media.<sup>39</sup>

Veronica Whall (1887-1967) on her father's death, took over the studio and workshop with her eldest brother Christopher, and undertook a large number of commissions both in England



and abroad, particularly in New Zealand and Australia. The Whall studio continued to practice until 1953.<sup>40</sup>

Wilhelmina Margaret Geddes (1887-1955) studied at the Dublin Municipal Art School under William Orpen (drawing) and Alfred Child (stained glass). In 1919 she carried out her first major commission, a war memorial window for Ottawa, Canada. In 1925 she moved to London and joined the Glass House in Fulham. Her work is characterized by strong expressive drawing and powerful craftsmanship - talents which she expressed in a number of media besides stained glass.<sup>41</sup>

Margaret Rope (b. 1891) studied under Parsons and Drury and was a prolific designer for some fifty years up until the 1960's.<sup>42</sup>

Now let us consider the unusual contribution of Harry Clarke (1889-1931), a fine illustrator in the Beardsley manner and the outstanding Symbolist artist of that troubled land.<sup>43</sup>

"Clarke's work has certain things in common with Gustav Klimt (1862-1918)", the Austrian Symbolist of the Vienna Sezession, "for both men loved a richly patterned, Byzantine sumptuousness."<sup>44</sup> Clarke, perhaps more than anyone of his day, or since, understood the far-reaching possibilities of the acid etching technique,<sup>45</sup> which, combined with a subtle use of silver stain,<sup>46</sup> and a framework of delicate paintwork and strong design, resulted in works of unparalleled rich-

ness and invention. Most of Clarke's windows are to be found in Ireland, particularly the Honan Chapel in Cork,<sup>47</sup> while windows made by 'An Tur Gloine' over a period of some thirty years may be seen at Loughrea Cathedral.<sup>48</sup>

Evie Hone (1894-1955) trained with Wilhelmina Geddes, and studied painting in Paris during the 1920's and '30's with Albert Gleizes (1881-1953) and André Lhôte (1885-1962). At this time she almost certainly became aware of the work of Georges Rouault.

HARRISON writes, "... compared to her glass, always direct, simple and primitive, the work of her contemporaries looks distinctly anaemic."<sup>49</sup>

One of her greatest works is the East window in Eton College Chapel. Although it suffers from a certain disunity of scale,

"Its first impact is almost too overwhelming. Her style with its violence of colour was devised largely from the twelfth and thirteenth centuries, and may be thought ill-suited to a fifteenth century building. The window makes the rest of the interior look flimsy,"<sup>50</sup>

this window is an intelligent marriage of the past with the present, and a link with the later work of John Piper and Patrick Reyntiens.

Indeed Patrick Reyntiens says of her window at Eton,

"By (this) ... commission ... Evie Hone contributes more towards the liberation of stained glass from the straight-jacket of archeology than any other person. In Evie Hone the tradition in Ireland of the importance of content in a work of art combined with the formal discipline of her Parisian training ... to produce an artist of exceptional talent in the field of stained glass."<sup>51</sup>

The most powerful propagandist in England of Post-Impressionist painting was the English painter and critic Roger Fry (1866-1934). In 1913 Fry founded the Omega Workshops where furniture, fabrics, ceramics and stained glass were designed and decorated in the style of current fashions in painting. A large roundel designed by Fry in 1914, after a landscape by Cezanne, is in the collection of the Victoria and Albert Museum.<sup>52</sup>

Another isolated window in the Vorticist tradition is that produced in 1915 by Sir Alfred Wolmark for St. Mary's Church, Slough. Commissioned by Ellerman of 'Ellerman's Embrocation', who insisted that it should be wholly abstract,<sup>53</sup> the completed window caused a furore, and ever since has been cited as an example of clergy and laity alike failing in appreciation and the courage to admit new artistic ideas into the church.<sup>54</sup>

Returning to the Arts and Crafts influence let us now consider the Scottish connection. Towards the end of the nine-

teenth century, Glasgow was known as the second city of the Empire, and the tastes of Scottish connoisseurs was more advanced than their English counterparts.<sup>55</sup> A 'Glasgow style' emerged, led by W.Y. Macgregor (1855-1923); James Paterson (1854-1932); the Englishman Joseph Crawhall (1862-1913); James Guthrie (1859-1930) and E.A. Walton (1860-1922).<sup>56</sup>

Later members of the 'Glasgow Boys' as they were known, were the artists John Lavery (1856-1941); George Henry (1858-1943); E.A. Hornel (1864-1933); William Kennedy (1859-1918); Harrington Mann (1864-1937); David Gauld (1865-1936); T. Millie Dow (1848-1919) and D.Y. Cameron (1865-1945).<sup>57</sup> Of this group Henry, Hornel, Millie Dow, Cameron and Guthrie contributed stained glass designs, while both Harrington Mann and David Gauld designed large numbers of windows for the Glasgow firm of J. & W. Guthrie, in a variety of moods, some rugged, others delicate or elegant.

The Guthrie firm was a flourishing business dealing in interior decorating, and after 1888, stained glass.<sup>58</sup> It ceased to make stained glass in the early 1960's.<sup>60</sup> J. Gordon Guthrie (1874-1961), William Guthrie's son, emigrated to the United States in 1896, and more will be said of his activities there in a later chapter. Their most prolific designer, before he joined the staff of the Royal College of Art, was Robert Anning Bell.<sup>61</sup>

Douglas Strachan (1875-1950) who, as we have seen, was a pupil of Whall's, won a considerable reputation for his work in Scotland (including the impressive Scottish National War Memorial in Edinburgh Castle), The Hague, at Winchelsea, and Tyneham, Dorset.<sup>62</sup> Strachan's style was pervasive and affected two generations of designers. His affection for thick clear quarries, lightly painted, and mosaic patterns of small jewel-like pieces of glass ensured the continuance of the Arts and Crafts 'look'.<sup>63</sup>

Another 'independent' was the Scottish art nouveau architect, Charles Rennie MacKintosh (1868-1928). Although he designed little stained glass, the few pieces for the Glasgow School of Art (1897-1899) and the comprehensive scheme of mirrors, french doors and so on for the Willow Tea-Rooms (1904), were enormously influential, and are still today masterly divisions of two-dimensional space through the manipulation of the lead-line that can rival those of the other architect-designer of the period across the Atlantic, Frank Lloyd Wright. MacKintosh brings us right into the twentieth century.<sup>64</sup>

James Powell's Whitefriars Glass Works and Studio, London (1834-1973), played a central role in the English stained glass renaissance. Charles Winston (1814-1864) had partly carried out his glass research,<sup>65</sup> and Burne-Jones was designer there until 1861, when he joined Morris. Henry Holiday took over in 1863 and under his guidance, Powell's

became one of the most progressive firms making stained glass.<sup>66</sup>

Powell's had a well-organized system of glass-making with clear divisions between the functions of designers, cartoonists, cutters, painters and those who assembled the glass. J.W. Brown, a disciple of Burne-Jones and Holiday, joined the firm as designer in 1877,<sup>67</sup> and collaborated in his later years with James Hogan (1883-1948), the designer of the great windows in the central space of Liverpool's Anglican Cathedral.<sup>68</sup>

Hogan developed a style in which an emphatic painted line and little or no half-tone, combined with exceptionally wide lead emphasized the luminous and rich mosaic or cloisonné 'feel' of his windows. There are further examples of his work in Cairo Cathedral's Eighth Army window,<sup>69</sup> and in St. Thomas' Church, New York City, the latter completed after his death by his successors at Whitefriars, Carl Edwards and Alfred Fisher.<sup>70</sup>

Ninian Comper (1864-1960), the architect, was a notable designer of stained glass. He had studied with Kempe for a short period in 1881-2, and through his powerful influence the historicist approach was perpetuated by his many followers to the present day.<sup>71</sup> Comper evolved an academic style based on medieval glass which depended on good draughtsmanship of a highly representational, almost photo-

graphic kind, light colours including much yellow stain, and the extensive use of white glass.<sup>72</sup> There are examples of his work at Canterbury Cathedral (the Royal Family), and St. Albans Cathedral (War Memorial, 1925) in the Great West window).

Martin Travers (1886-1948), like his mentor Comper, was trained as an architect, and went on to teach at the Royal College of Art. Of him, Lee said,

"The contribution of a man like Martin Travers was, perhaps, of special consequence in that he taught us really to look at the early glass to clear from our minds the clutter of much current medievalism, artistic posturings, bogus theories, and dessicated scholarship. We see, therefore, in his work and in that of his immediate followers, a general simplicity of design and colour, clear use of line and a little tone in painting, and often a charmingly casual attitude in the use of saintly symbols, heraldic emblems, etc., which in most of the work of his contemporaries was deadened by too great a respect for ecclesiastical and heraldic protocols."<sup>73</sup>

Travers, together with the two brothers Geoffrey Fuller Webb (1879-1954), Christopher Rahere Webb (1886-1966), and Hugh Easton (died 1965), all produced pictorial windows described by HARRISON as having "at best ... a quiet sincerity, at their worst they are impoverished in design and far too pale - they simply let in too much light."<sup>74</sup> Whereas there is a certain asceticism in the stained glass of Travers, Easton's figurative panels are highly realistic, as is evidenced in his Royal Air Force Memorials in Westminster Abbey, Durham Cathedral and the Rolls Royce

Works at Derby, all of which demonstrate his considerable glass-painting skills.<sup>75</sup>

### 2.3. THE 'LINE' STUDIOS

By the middle of the twentieth century, few of the many stained glass firms that were formed in the nineteenth century still operated.<sup>76</sup> Burliston & Grylls; Heaton, Butter & Bayne; Lavers, Barraud & Westlake; Ward & Hughes; William Wailes of Newcastle; Morris & Co.,<sup>77</sup> had all closed down. Those that survived were shadows of their former selves : John Hardman & Co. of Birmingham continues under Patrick Feeny, Clayton & Bell of London under Charles Farrar Bell,<sup>78</sup> Joseph Bell & Son of Bristol is now run by Geoffrey A.K. Robinson, and Shrigley & Hunt of Lancaster is run by Joseph Fisher.<sup>79</sup>

James Clark - Eaton of Bristol claim in a brochure that "the origin ... dates back to 1788 when a group of craftsmen in Bristol began restoring windows and making leaded lights for local churches."<sup>80</sup> There is no confirmation of this in HARRISON. The Clark-Eaton Studios are under the direction of their chief artist Roy W. Coomber, a skilled glass-painter in the 'Travers' tradition.<sup>81</sup> Clark-Eaton also have a glass-processing works at Bracknell where flat glass is decorated through a variety of mechanical and chemical means.<sup>82</sup>



The largest firm in Britain is Goddard & Gibbs Studios, London, which claims to have been founded in 1868,<sup>83</sup> although HARRISON fails to mention them. Presumably they had connections with one of the firms established by Isaac Alexander Gibbs<sup>84</sup> (1802-1851), and his three sons, Charles Alexander Gibbs (1825-1877), Alexander Gibbs (1832-1886), and Isaac Alexander Gibbs Jr. (1848-1899). HARRISON records<sup>85</sup> that Alexander Gibbs's firm was still functioning in 1915, nearly thirty years after his death.

Operating from spacious studios in Shoreditch, London, they possess the infra-structure to undertake the largest of commissions. From the 1970's the firm has conducted a thriving business in the Arab Emirates, supplying intricate geometrical-inspired stained glass domes, roof and wall panels for the palaces of the Middle East.<sup>86</sup> The largest Rose window in the United Kingdom, namely, that in the Chapel of Lancing College,<sup>87</sup> Sussex, and numerous other works in Westminster Cathedral; Westminster Abbey; St. Paul's Cathedral, and so on, proclaim their expertise.<sup>88</sup> John Lawson is their chief artist. At Goddard & Gibbs the work distribution follows the pattern established by the 'line' studios in the nineteenth century, namely, insistence on the separate functions of designer, cartoonist, glass-painter, fabricator and the teams that install the finished panels. The firm is also very active in the field of restoration and has recently completed an extensive project at Arundel Castle, Sussex.<sup>89</sup>

## 2.4 THE REPRESENTATIONAL TRADITION

The representational tradition has always been firmly entrenched in the visual arts in Great Britain, especially in the ecclesiastical field, for church authorities have tended to be conservative, shying away from unorthodoxy.<sup>90</sup>

After the second World War, opportunities existed for the replacement of windows destroyed in bombing raids, although the destruction was not on the scale wrought on the European Continent. Many war memorial windows were, however, called for, and some of these have already been the subject of comment.

Through the system of Master Glass-Painter and Apprentice working side-by-side, we have noted the continuing tradition of the Arts and Crafts Movement, and the refined if somewhat ascetic type of Comper and his "myriad proselytes."<sup>91</sup>

Joseph Edward Nuttgens (1892-1982) was an important link with Christopher Whall, under whom he studied at the Central School of Arts and Crafts, Southampton Row, London, the ladies of the 'Glass House' in Fulham, and Karl Parsons, whose assistance he became before also falling under the spell of Martin Travers.<sup>92</sup> His son Patrick relates that Nuttgens had a particular facility for translating other artists' drawings into stained glass. His initial success in interpreting a window by R. Anning Bell, then head of Design

at the Royal College of Art, resulted in him being put up for membership of the Art Workers Guild. At this time he carried out commissions by Herbert Hendrie, who later became head of the School of Design at Edinburgh. Hendrie had done much work for the architects Herbert Baker, Giles Gilbert Scott (designer of Liverpool Anglican Cathedral), and Reginald Fairlie. Nuttgens was later also influenced by Eric Gill near whose home on Pigott's Hill he opened a studio. During a working life of seventy years he designed and made about three-hundred windows, mostly for churches, in the British Isles, South Africa,<sup>93</sup> Canada, New Zealand and Hong Kong.

Central to his philosophy (as to the Arts and Crafts Movement of his formative years), was the necessity that he should carry out every part of the stained glass process, from the first sketch to the final fixing, and this he carried out for the vast majority of his work.<sup>94</sup> One of his students (1952-4) was Patrick Reyntiens.<sup>95</sup> Joseph Nuttgens, one of his twelve children, carries on the family business at Piggotts Hill, Buckinghamshire.<sup>96</sup>

The 'Whitefriars' tradition was perpetuated by Carl Edwards (1914-1985), who had studied under James Hogan. Carl Edwards was chief designer at the James Powell & Sons, Whitefriars Glass Works from 1948 to 1952, after which he started his own studio at Lowndes & Drury's 'Glass House', from which his daughter Caroline Benyon now operates.<sup>97</sup>

His finest window is undoubtedly the Great West Window of Giles Gilbert Scott's Liverpool Anglican Cathedral. The three tall lancets, each nearly fifty-three feet high and seven feet wide (16,17m x 2,13m) and surmounted by a semi-circular fanlight, the whole a total area of glass of 1 600 square feet (149 square metres), is one of the largest windows in the British Isles.<sup>98</sup> The subject is inspired by the canticle 'Benedicite' ('O all ye works of the Lord, bless ye the Lord'), and in its brilliant colouring depicts the infinite variety of God's creation.

The female saints connected with national and local history in the Lady Chapel of the Cathedral are also by Edwards.<sup>99</sup> His distinguished body of work includes representation in Cairo Cathedral; House of Lords, London; Lambeth Palace, London; Temple Church, St. Clements Dane, London; and abroad in New Zealand, Australia, the U.S.A. and South Africa. (There are two small windows by him in St. Saviours, Walmer, Port Elizabeth).<sup>100</sup>

The representational tradition is powerfully represented in the work of Frederick Cole (date of birth unknown).<sup>101</sup> Cole served a five-year apprenticeship with Morris & Co., following study at Camberwell College of Art and the Lambeth School of Sculpture.<sup>102</sup>

Good design and awareness of the importance of the architectural framework with which the window interacts, ex-

quisite and original figure drawing, a subtle colourist and outstanding glass-painter, all go to make Cole's windows a memorable experience.

Cole has expressed strong feelings about 'modern' stained glass, the autonomous panel, and the imposition of the artistic personality on architecture. He maintains that a stained glass designer's first responsibility is to the building and its function and not to the client, who after all, is in a privileged position in being able to pay for it.<sup>103</sup> He goes on to say that the medium of stained glass is both an extension and part of architecture, whatever its function, either secular or ecclesiastical, and

"... no individual should be in a position to impose upon a house of worship whims based upon emotion or self-agrandisement."<sup>104</sup>

"Designers must learn to design for architecture and not use the medium as a means of expressing their personalities, often of dubious merit. If architects do not use stained glass in their buildings, the fault lies with the stained glass designer. There is no hope of gaining a wider acceptance while some studios continue trying to exploit ancient traditions and art schools encourage self expression in a medium that demands strict discipline. Both have a diminishing appeal. I have little optimism while the present cult of the 'with it' young designers hide their shortcomings behind pieces fit only as gallery exhibits with a shock element and commercial studios continue to make mock Gothic sugar-plums."<sup>105</sup>

In 1971 Cole established the Stained Glass Studio of Canterbury Cathedral, a studio concerned solely with the conservation and restoration of the superlative heritage of

twelfth and thirteenth century glass,<sup>106</sup> as well as glass of other periods. He ran this studio with distinction until November 1984 when he retired to concentrate his efforts once again on his own creative work.<sup>107</sup> Cole is the author of a number of papers on the Cathedral, the restoration of its stained glass, and technical papers on such subjects as epoxy resins and hydrofluoric acid.<sup>108</sup>

The 1972 Directory of Master Glass-Painters lists the numerous windows that he had designed (up to that date) throughout England, the Channel Islands, Northern Ireland, Austria, Canada, Iceland, New Zealand, North Africa, Rhodesia, South Africa, St. Helena, Uganda and the U.S.A.<sup>109</sup>

The South African commissions include two 2-light windows in Holy Trinity Anglican Church, Port Elizabeth, namely, the Leonard Marks window, executed while an apprentice at Morris & Co., in 1952, and the Alan Handsley Mowbray window of 1969 (both South windows).<sup>110</sup>

As regards Cole's remarks, NEWTON<sup>111</sup> (in another context, but still apposite, I fear here) reminds us of the jingle,

"There are three sides to every question, your side, my side and the right side." ANON

Harcourt M. Doyle (birth date unknown) studied under Martin Travers at the Royal College of Art, and was his assistant for three years. An excellent figurative draughtsman in the Travers tradition with a flair for space-filling compositions, Doyle's work at times is similar to Cole's, except for his use of lighter tones than is customary in the bolder work of the latter glass-painter.<sup>112</sup>

Alfred Fisher (b. 1933), the present chairman of the British Society of Master Glass-Painters, trained at the Liverpool College of Art and at Whitefriars, where he worked in the studio under Carl Edwards and Liddall Armitage.<sup>113</sup> Fisher ultimately rose to the position of chief designer and manager. Through Edwards he was exposed to the Hogan tradition, who, together with Erwin Bossanyi for whom he worked at intervals, greatly influenced the development of his style.<sup>114</sup>

Fisher did much research at Whitefriars in the field of fused glass and its successful architectural application.

When Whitefriars closed down in 1973, Fisher went into partnership with Peter Archer to found a studio at King's Langley, Hertfordshire. This studio has established a reputation as a leading conservation and restoration centre.

There is an example of his work in St. Peter's Church, Hermanus.

Another designer with links to the Arts and Crafts Movement is Paul Quail (b. 1928).

After study at the Chelsea School of Art and Brighton School of Arts and Crafts, and some training under Frances Spear, he joined Joseph Nuttgens at Pigotts Hill. From 1957-1959 he worked at Lowndes and Drury and has since practised as a freelance designer while taking on a variety of teaching assignments, such as the thrice yearly residential courses at Flatford Mill and West Dean College, Chichester. He is well-represented in England and Wales, as well as South Africa (St. Nicholas' Church, Charlo, Port Elizabeth, 1968), Japan, Canada and the U.S.A.<sup>116</sup>

In the catalogue for the Tate Gallery's exhibition "The Hard-Won Image", which took place from 4 July - 9 September 1984, Richard MORPHET writes :

"It is, however, both false and dangerous to assume that the art of a period is adequately represented by the work of its avant-garde alone. The contention of this exhibition is that the finest art of a more traditional and less self-consciously innovatory kind not only has a place in the art of its period but that, even if not alone, it lies actually at its centre. The claims made for the art shown here are made not against the art which is currently causing the greatest sensation, but in favour of art of distinctive achievement, whatever its idiom - and in the belief that today, as always, some of the best of this is to be found in more established modes."<sup>117</sup>



This statement is important because it says something about the nature of English art as well as the contemporary mood of the English scene. The Representational tradition has always played a major role in the mainstream of art in the British Isles, and this is no less true of stained glass.

## 2.5 THE MODERN TRADITION : THE WATERSHED

We have already commented on the pioneers of the modern tradition in England, namely, Alfred Wolmark, Roger Fry and Evie Hone.

Twentieth century artists in their search for a new dynamic form turned to Primitive Art as a source of inspiration. One such artist, who like Chagall had his roots in the peasant art of his native land was Ervin Bossanyi (1891-1975). Born in a small Hungarian village, he retained all his life that love of simple things and wonder of nature and appreciation of such homecrafts as pottery, dyeing and weaving.<sup>118</sup>

East Europeans have an instinctively rich colour sense (look, for example, at the glorious Art Nouveau window for Prague Cathedral by Alphonse Mucha (1860-1839), better known for his innovative poster-design),<sup>119</sup> and Bossanyi is no exception.

Bosssanyi took his Diploma at the Budapest Academy of Arts and Crafts where he was granted a travelling scholarship to further his studies in Paris, London and Rome. During the First World War he was interned in France for the duration, after which he worked for fifteen years in Germany as a stained glass designer, ceramic muralist, sculptor and painter. A proscribed artist by the Hitler regime, he fled to England in 1934.<sup>120</sup>

His early commissions there were confined to heraldic design; his first major commission was for the stairwell of the Tate Art Gallery, London. This in turn led to another commission - a set of windows for Michaelhouse School Chapel in Natal, South Africa. Before they were despatched to South Africa these windows were exhibited in King's College Chapel, Cambridge, and in Rochester Cathedral. These 'exhibitions' led directly to his most important commissions, namely, those of Canterbury Cathedral, Kent, and the National Cathedral of St. Peter and St. Paul, Washington, D.C., U.S.A.<sup>121</sup>

"... and from every shires end  
Of Engeland to Caunterbury they wende,  
The Holy blisful martyr for to sete,  
That hem hath holpen, when that they were sete, ..."

122

Canterbury Cathedral is the Mother Church of English Christianity; The Archbishop of Canterbury is the Primate of the English Church. The site upon which the Cathedral

stands is one of the most sacred and historic spots in England.

The stained glass of the Cathedral is among the richest in all England, much of it dating from the late twelfth and thirteenth centuries. During the Second World War, the buildings miraculously escaped major damage, although the town itself was heavily bombed. However, some less-important windows were blown out in the south-east transept, and Bossanyi was commissioned to fill them with designs based on the theme 'Peace' and 'Salvation'. To design windows for such a cathedral is a formidable task.

HAYES captures admirably the meticulous attention to theme and detail of this humble yet consummate craftsman and man of passionate faith. In a letter (1955) to the Dean of Washington Cathedral, Bossanyi confirms his own conviction of the principles held so dear by Whall and his followers :

"When I design I am like a swift bird, when I execute I am like an ant struggling through a world of mountains and canyons. The more experienced I get in my art the clearer I see that honestly. There cannot be a question of entrusting even the making of the full size cartoon to a second person. The design of the cartoons must not leave one single point to equivocal interpretation. They must be worked out so that every detail is clear by telling the master's will. This elaborate work needs great concentration and calmness of mind. I feel this is a super Diogenes task. Perhaps my lamp is not valid in a place like our modern world, so terribly full with neons, flood-reflectors, search lights and atomic flashes."<sup>123</sup>

In his 'Peace' window, children of many races sit at the feet of the seated Christ. A flower is offered to the Lord who raises both hands in a poignant blessing. To either sides of his body are the symbols of Alpha and Omega, and above, a nimbus of brilliant rays.

Bossanyi was given to inserting faceted or bevelled fragments of slab glass in his windows which intensify the sparkle and glitter on the surface of the glass. His 'Salvation' window is dedicated to Justice through the love of Christ, Saviour of Mankind.<sup>125</sup>

Bossanyi's dense Eastern European patterning redolent of the hand weaving and embroidery of his peasant background, his ebullience of colour, together with a certain Byzantine feel to the quality of his drawing but which has, alas, a certain sentimentality and sweetness quite out of sympathy with the contemporary age, and raises the hackles of critics, although they recognize, albeit reluctantly, his very individual contribution. LEE, for example, is critical of their scale and strident colours (we must remember, however, that Lee was a Travers' man), and claims that they spoil the architectural whole of the north wall.<sup>126</sup>

In the Zouche chapel at York Minster, the easternmost window contains two panels painted by Bossanyi, depicting scenes from the life of St. Francis of Assisi, presented by personal friends of the artist a year before his death. The

lancet heads above the two scenes were executed by Alfred Fisher and Peter Archer to Bossanyi's designs.<sup>127</sup>

Whatever the opinions of the 'officianados', Bossanyi's work remains evergreen in the appreciation (and at times adulation) of the tourists that throng the great cathedrals of Canterbury, York and Washington.

### COVENTRY

In 1940, the beautiful fourteenth century perpendicular style cathedral at Coventry was destroyed by fire bombs during the longest air raid of any one night on any British city during the Second World War.<sup>128</sup>

Seven years later, the Reconstruction Committee was entrusted by the Cathedral Council with the task of rebuilding the cathedral. A design competition was declared; there were two-hundred-and-nineteen entries.<sup>129</sup> In 1951 the winning design was submitted by (Sir) Basil Spence (Architect for the Festival of Britain in 1950).<sup>130</sup>

At the Royal College of Art, Martin Travers died suddenly in 1948.<sup>131</sup> Robin Darwin, the Principal,<sup>132</sup> invited Lawrence Lee, who had trained under Travers before the War (1927-1931), and who had acted as his assistant, as well as teaching Mural Decoration at the College, to take charge of the Stained Glass Department. At the same time two talented

students joined the Royal College to take their post-graduate studies in stained glass: Geoffrey Clarke and Keith New.<sup>133</sup>

In 1950, as part of the Festival of Britain, the Royal College of Art held a comprehensive exhibition in the galleries of the Royal Society of British Artists. The stained glass exhibit, dominated by the work of Clarke and New, set people talking. Soon after, a further exhibition was held at the entrance to the Hyde Park Underground Station and an article on the Stained Glass Department was published in the Royal College of Art's magazine, Ark.<sup>134</sup>

Basil Spence was interested, viewed the exhibition, and invited the College to put in a tender, in open competition, for the new windows that would be required for Coventry. Their tender was successful, and the team of Lawrence Lee, Geoffrey Clarke and Keith New set about the design and fabrication of the ten windows,<sup>135</sup> that would later be judged to be the strongest expression of post-war non-figurative decorative art in England.<sup>136</sup>

In REYNTIENS'S view,<sup>137</sup> the two purple windows by Geoffrey Clarke are the most beautiful and unified, if a little heavy in colouring and leading, while the multi-coloured window by Geoffrey Clarke is a masterpiece in colouring and in the very simple method of painting. Six of the ten windows, with the help of the Arts Council,<sup>138</sup> were exhibited at the

Victoria and Albert Museum prior to their installation at Coventry in 1945. Of them the architect Basil Spence writes,

"I believe these windows represent a return to tradition in stained glass, vigorous colour, strong design, and like the old windows, absolutely contemporary."<sup>139</sup>

Lee was head of the Department of Stained Glass at the Royal College of Art for twenty years (1948-68). He is a member of several committees concerned with the promotion and restoration of stained glass, notably the Stained Glass Restoration Committee of Canterbury Cathedral. He is a Master of the Worshipful Company of Glaziers of the City of London, and the author of three books on the subject.<sup>140</sup> He has, over the years completed a distinguished body of work in England, including the cathedrals of Southwark and Guildford; Magdalen College School, Oxford; Glasgow University Chapel; Church of St. Andrew and St. Paul, Montreal; in South Africa, a staircase window for Rondebosch Boys' High School.<sup>141</sup>

Keith New taught at the Royal College of Art in 1954 and at the Central School of Art from 1957 to 1964. He became Principal Lecturer in charge of Foundation Studies at Kingston Polytechnic in 1968. He practises as a painter as well as a designer of stained glass and has exhibited on many group exhibitions, including John Moore's of 1968, and a One Man Show at the Thumb Gallery in 1983.<sup>142</sup>

In the author's estimation, Keith New's ecclesiastical stained glass compositions are invariably successful, for their message is simple and direct (and do not require a guide book to explain their symbolism); they are painterly in conception and distinctly of this century.

Two such windows can be seen in the Baptistry of All Hallows by the Tower, London, and the 'Holy Spirit' (1965) South Choir window of Bristol Cathedral. In the latter example we see how admirably modern glass 'marries' with the ancient stone mullions of the cathedral, with the composition stretching across the three lights and up into the tracery above.<sup>143</sup>

Of the much praised Geoffrey Clarke the author can find no further record, other than one window listed in COWEN, namely, "a dynamic Trinity window by G. Clarke, 1961.", at Stratford in the Greater Manchester area.<sup>144</sup>

John Piper wrote,

"Good artists can be trusted: So clergy, be bolder!  
Until you become so, I can only end as I began:  
there is good stained glass, but only a little.  
The great windows are all the works of artists  
working with collaborative craftsmen."<sup>145</sup>

John Piper (b. 1903), after a spell in his father's solicitor's office, studied first at the Royal College of Art and then at the Slade. During the 1930's he came into contact with the main body of European art, responding parti-



cularly to the work of Braque, Léger, Brancusi, as well as the two avant-garde English artists of the period, Ben Nicholson and Barbara Hepworth.<sup>146</sup>

By the 1950's Piper was recognised as an artist of stature; his watercolours of bombed buildings while as a commissioned war-artist were of considerable distinction. In his work he attempted to combine successfully the conceptual European approach with the more perceptive and Romantic English tradition.<sup>147</sup>

In 1951, the artist received a visit by a young man who had trained at the Edinburgh College of Art and later under the expert guidance of the stained glass designer, J.E. Nuttgens. This young man was Patrick Reyntiens (b. 1926).

In Piper's studio there was a gouache of two foliate heads, and Reyntiens asked whether he could translate them into stained glass. The result was pronounced a success, and thus began a collaboration between artist and master-craftsman that would last for nearly thirty years, and result in a significant body of truly modern work in the English Romantic tradition.<sup>148</sup>

In 1954, the Master of the Glazier's Company,<sup>149</sup> Leonard Dent, visited Piper's studio. He was particularly impressed by the Two-Heads stained glass panel, and asked the Piper-Reyntiens team to produce a trial panel for a projected

series of windows for the East End of Oundle Chapel, Northamptonshire. The completed panel was exhibited, first at Phaidon Press and then at the Grocery Company Hall, and as a result, three windows, each of three lights, were commissioned for the Chapel.<sup>150</sup>

These windows, in the context of contemporary stained glass in England, were radically modern. REYNTIENS claims that as an extension of the English Romantic tradition they have great relevance, combining thirteenth century colours of "the prophetic windows at Bourges with the romanticism of the Burne-Jones, Pre-Raphaelite tradition."<sup>151</sup> The nine lancets at Oundle are each filled with a single, tall, hieratic figure of heraldic appearance, "not unlike the knights of medieval tomb effigies."<sup>152</sup>

The subjects are: The Way, The Truth, The Life;

The Wine, The Water, The Bread;

The Shepherd, The Teacher, The Judge.

In his treatment of the figures, the influence of the French painter George Rouault (1871-1958), as in the earlier 'foliate heads', is apparent.<sup>153</sup>

Even as a student Piper had developed the habit of using church glass as a reference point when thinking about pictures, and after he was presented with opportunities to design for stained glass, he returned to France in order to carry out a close study of the Ile-de-France, as "well as thoughtful attention to the modern stained glass in con-



temporary French churches, and what was being done in Germany and Switzerland."<sup>154</sup>

The Oundle windows were immediately followed by two windows for St. Andrew's, Plymouth (between 1957 and 1968 a further five windows followed), then a staircase window for the showrooms of Arthur Sanderson & Sons, London.<sup>155</sup>

From 1958 to 1960 John Piper and Patrick Reyntiens were at work filling the four bays each side of the perpendicular style chapel at Eton College, to complete the powerful statement already made in the East window by Evie Hone (described above). The north side windows are on the theme of the four major miracles of Christ; in the south, the four major parables.<sup>156</sup>

Like those at Oundle, these windows show a compromise between medieval and modern idioms, but demonstrate Reyntiens's versatility and competence in such modern stained glass fabrication techniques as plating, acid etching and expressive "running paintwork".<sup>157</sup> Indeed, in praising Piper's innovative design, the viewer must not lose sight of the talents of his collaborator, without whom the stained glass would not have been possible.

Architects throughout the world, no less in England, have much to answer for as regards the excising of ornament and decoration from twentieth century architecture. This pheno-

menon can be traced back to the Bauhaus School, founded in 1918 at Weimar, Germany (and later moved to Dessau) by Walter Gropius (1883-1969), known as the "Silver Prince".<sup>158</sup> The Bauhaus profoundly affected thinking on architecture and the applied arts, for with the rise of National Socialism in Germany and the dispersal of its members in 1933, the ideas spawned by it spread throughout the world. The Bauhaus stressed pure functional rationality of space and form unencumbered by decoration,<sup>159</sup> although it is interesting to note that it at first also had a stained glass department, albeit short-lived.<sup>160</sup>

Meanwhile, Gropius and his successor Ludwig Mies van der Rohe (1886-1969) set about altering the face of the United States of America while at the same time dominating inter-continental architectural thought for over thirty years.<sup>161</sup> 'Modern architecture' in all its sterility did not die, at least symbolically, until the implosion of the infamous Pruitt-Igoe housing scheme in St. Louis, Missouri at 15h32 on 15 July 1972.<sup>162</sup> But that, as they say, is another story, although it goes a long way to explain the dearth of stained glass in 'modern' secular buildings.

In his search for a design for Coventry Cathedral, Basil Spence had visited August Perret's Notre-Dame du Raincy (1924), in which the French architect/contractor had perfected his pioneering work with ferroconcrete.<sup>163</sup> This church, with its elegant proportions and its use of per-

forated, prefabricated wall screens and wide flat vaulting, greatly influenced the final form of the great Cathedral.<sup>164</sup>

Basil Spence had seen the Oundle windows, still incomplete, in Piper's studio back in 1955, and resolved then that the Piper/Reyntiens team would be commissioned to execute the great Baptistry window of the new Coventry Cathedral.<sup>165</sup> And so in 1959 they began work on the most famous modern window in England.

This window, measuring 21,9 metres in height and consisting of 198 lights (small windows) set in a chequer-board system of Ashlar masonry mullions, has the abstract theme (for the assertive architectural frame precluded any representational one) of the Power of the Holy Spirit.<sup>166</sup>

"John's design shows a pool of gold light hovering over the font above the celestial colours, purple, ultramarine and other shades of blue; and under the pool of gold the earthly colours reach up - reds, green and dark brooding colours. The whole window is shot with streaks of very light or brilliant glass. It is a staggering design and to my mind a masterpiece."<sup>167</sup>

The Coventry Baptistry window was finished in 1962, but even before it was unveiled the artist/craftsman team were at work on a veritable flood of commissions all over England.

In 1964 Reyntiens also collaborated with the Welsh painter Ceri Richards (1903-1971), on a pair of windows depicting 'All Souls' and 'All Saints' for Derby Cathedral.<sup>168</sup>

Although interesting highly personalized statements (does Cole, one wonders, approve of them), both LEE,<sup>169</sup> and REYNTIENS,<sup>170</sup> who interpreted them from gouache drawings 91.4 centimetres (36 inches) high,<sup>171</sup> agree that the result has certain deficiencies, arising out of the inexperience of the artist designing for a medium in which light is the over-riding factor. Thus the left-hand corner of the 'All Souls' window is "distressingly blank."<sup>172</sup> Nevertheless, REYNTIENS defends it:

"When the window is seen in relationship to the eighteenth century grilles and the architecture of Derby Cathedral, it confirms, as the French have constantly asserted, that the employment of first-rate modern artists to contribute to old buildings does not constitute a violation, but is, in fact, an enhancement of the whole building."<sup>173</sup>

One is also reminded of the words of Henri Matisse:

"Composition is the art of arranging in a decorative manner the various elements at the painter's disposal of the expression of his feelings. In a picture every part will be visible and will play the rôle conferred upon it, be it principal or secondary. All that is not useful in the picture is detrimental. A work of art must be harmonious in its entirety; for superfluous details would, in the mind of the beholder encroach upon the essential elements."<sup>174</sup>

More than any other designers for stained glass of the period, Piper and Reyntiens were intensely aware of current

trends in the visual arts. This is particularly evident in the experimental panels and ecclesiastical windows that Patrick Reyntiens was making on his own, as in, for example, the nineteen small windows for Hucknell Church, Nottingham, 1961-62. Reyntiens claims that they were the most complicated windows from a technical point of view that he had ever designed, involving aciding, painting and enamelling, and showing the influence of abstract expressionist painting.<sup>175</sup>

Piper used abstraction but rarely in his stained glass. However, at Eton, and later at St. Andrew's Church, Wolverhampton in Staffordshire (1973-74), we see a well-developed code of symbols and references used to articulate each story. At Wolverhampton a large rectangular window of six mullions, is divided into a bold abstract arrangement of blues, pierced by a graphic outlined reminiscent of the drawing of Raoul Dufy (1877-1953), and symbolic of a view down into the sea, such as St. Andrew might have seen from a boat.<sup>176</sup>

## LIVERPOOL

The Cathedral of Christ the King, the Roman Catholic Cathedral of Liverpool, was consecrated in 1967. Designed by Sir Frederick Gibberd, the design departs radically from the traditional concept of worship in which clergy and congregation are segregated, for here they worship together

around a central altar. The design is circular and tent-like; the dominant feature is the central lantern tower with slender, spiky pinnacles, some seventy-five metres above the aluminium roof and its graceful flying buttresses.<sup>177</sup>

This lantern, constructed in heavy slab glass ('dalle-de-verre') by the Piper/Reyntiens team from 1965-67, symbolizes the Trinity in three bursts of colour against gradations of the Spectrum. There are sixteen lights divided each into twelve or so panels of unequal height, so that the horizontal divisions are staggered. These lights taper in by a third of a metre in twenty-one metres, the height of the lantern from roof to pinnacles. Each panel of glass is made of a framework of concrete, reinforced and bonded to an outer skin of epoxy resin and fibre glass in which the heavy 'dalle-de-verre' is embedded.<sup>178</sup>

From within, the lantern illuminates the interior of the cathedral with a pool of coloured light over the centrally-placed altar; at night the lantern is illuminated from within and the three bursts of colour, primarily red, yellow and blue, shine out over the city of Liverpool.

Chapels of varying shapes and sizes radiate from the circular nave. These are separated by narrow slab glass windows some twenty-one metres high, in blues, blue-greens and grey-blues.<sup>179</sup>



This commission is the largest stained glass construction in England and has been widely acclaimed as a milestone in a difficult medium.<sup>180</sup>

After the great expanses of glass for Coventry and Liverpool, numerous commissions followed, many of them for small parish churches. These commissions must have been particularly interesting to Piper, who, after all, has recorded so many of them in his watercolours. The lyrical window of 1976, a memorial to the explorer and traveller Peter Fleming, in St. Bartholomew's, Nettlebed, and the Benjamin Britten memorial window for Aldeburgh Church (1979), are two of his most successful. In the latter three-light window are subjects inspired by Britten's church operas : 'Curlew River', 'The Burning Fiery Furnace' and the 'Prodigal Son'. For his interpretation of the 'Prodigal Son', Piper has used Rembrandt's late painting on the same subject. Later in 1982 he turned to Botticelli, whose famous painting of the 'Annunciation' in the Uffizi he chose to adapt for a three-light window for the Church of St. Peter and St. Paul, Abington (1982).<sup>181</sup>

Two windows for the Robinson College Chapel, Cambridge must be mentioned; the first executed between 1978 and 1980, the second in 1982. The new Robinson College has at its centre an Ecumenical Chapel which contains some rather MacKintosh-influenced features. The main chancel window is a high, stepped five-light shape which the Piper/Reyntiens team

have filled with an opulent hanging garden with dripping garlands of plant-form and flowers, in a 'fin-de siècle' spirit not unlike the rich tapestries of La Farge or Tiffany.<sup>182</sup>

At the entrance to the Robinson Chapel is a small, dark, antechapel used for meditation and private prayers. Its window relates directly to Piper's watercolour oeuvre, with a design based on the Romanesque tympanum at Neuilly-en-Donjan, Allier.<sup>183</sup> The window portrays the Adoration of the Magi, flanked by trumpeting angels. Two green monsters, the beasts of paganism, are beneath their feet, while below them (as on the lintel of a Romanesque tympanum) is depicted the beginning and end of the Christian story; on the left, Adam, Eve and the Serpent, and on the right is the Last Supper.<sup>184</sup>

It is apparent that in tune with the spirit of the times, both artists have returned to figurative styles in their stained glass designs. In Reyntiens's work this is to be seen in his series of small panels on the theme of the Greek Myths, shown at the 'Glass in the Environment' Exhibition at the Royal College of Art in London, in April 1986.<sup>185</sup>

Piper is generally accepted as being Britain's leading designer of stained glass. Forging a highly idiosyncratic path over a thirty year period during which he was also

producing a major body of work as a painter, and with a sensitive, highly skilled and intelligent collaborator, able to find the means to subtly translate his designs into glass, his work is sure to stand the test of time.<sup>186</sup>

Patrick Reyntiens, O.B.E., must rank highly in his own right on any list of important designers of the Twentieth Century. He is represented in many private and ecclesiastical collections in England and the U.S.A. (including two major windows in the National Cathedral in Washington, D.C.), and in South Africa (the Unicorn Building and St. George's Anglican Church, Parktown, Johannesburg).<sup>187</sup>

As a teacher his influence has been considerable. He was the first English designer to realize the importance of the German contribution to the art of stained glass, and to organize visits by their exponents to the British Isles. For ten years (1972-1982) the Stained Glass School which he ran in collaboration with Joseph Nuttgens, ARCA, at Beaconsfield, Buckinghamshire, was the mecca for aspiring young designers from all over the world. Of his teaching, Reyntiens says:

"Contrary to what is generally thought, the teaching of Stained Glass is one of considerable complexity. The craft alone is difficult enough, as a glance at any Stained Glass manual will indicate, but the placing of craft knowledge into context, so that the result will truly be art, and have relevance to architecture today, and at the same time relate to current visions in painting and design, is particularly difficult."<sup>188</sup>

Reyntiens is the author of two books, the definitive book on the craft of stained glass, The Technique of Stained Glass 1967 (Revised 1977), and an appreciation, The Story of Stained Glass (1977). He is also a member on the advisory panel of Decoration to Westminster Cathedral and the Brompton Oratory, the Crafts Council's Advisory Committee, the Court of the Royal College of Art, and is Head of Fine Art at the Central School of Art and Design, and St. Martins School of Art, London.

He has contributed to two Arts Council of Great Britain exhibitions, the City of London Festival, 1968 and 1978 and has held one-man shows in London, Edinburgh and Oxford. He has also taught at the summer schools held regularly at Pilchuck, Seattle, U.S.A.<sup>189</sup>

Before we turn our attention to the younger generations of modern stained glass designers, mention must be made of interesting independents : John Hayward (b. 1929), Anthony Holloway (b. 1928), Alan Younger (b. 1933), and Ray Bradley (b. 1938). Work by the first three was chosen for the exhibition 'New British Glass and Vitrail Français Contemporain' at the Centre International du Vitrail, Chartres, France, in 1982.<sup>190</sup> All three have executed distinguished bodies of works too extensive to list here, and are accomplished draughtsmen and impeccable designers, well-versed in both figurative and abstract styles as dictated by the demands of the commission.

Hayward has done much work in London where the author responded particularly to the three large east windows in St. Michael, Paternoster Royal (1969). Another fascinating work is the ten-light window in the south transept of St. Andrew Cathedral, Blackburn, Lancashire, made entirely from re-cut painted Victorian glass and reminiscent of the 'fragment' windows at Wells Cathedral - a subtle tapestry of both abstract and realistic motifs.

It is interesting to see that he completed an early window (1956) for St. Cuthbert's Church, Tsolo in the Transkei.

Holloway spent a year at the Royal College of Art in 1953 under Lawrence Lee, and entered private practice as a stained glass designer in 1957.

His most significant contemporary works are the three great windows for Manchester Cathedral (1973, 1976, 1982). Damaged during the Second World War, windows of the nave of the Cathedral were reglazed with uncoloured Norman slabs. When it was decided to fill them with stained glass, Holloway was commissioned to work out a glazing scheme in order to provide a means of controlling the light within the building and thus establish a conceptual framework within which individuals could exercise their own idiosyncratic tendencies.<sup>192</sup> Two of these, the St. Mary Window (1982) and St. Denys Window (1976), are reproduced in ANGUS.<sup>193</sup> Both concepts are abstract with symbolic references. Thus, in the

former, the theme of the Magnificat is related through the incorporation of the written word in a predominantly blue-green composition. The St. Denys Window incorporates themes connected with the history of France. Included are the lions of Lorraine and an impression of St. Sernin of Toulouse "with which the cathedral entered a twinning in 1968 as an ecumenical venture."<sup>194</sup> The predominant colour of this great window is red.

Since 1979 Holloway has been Head of Department of Three Dimensional Design at Trent Polytechnic, Nottingham, while continuing to run his own consultancy firm.<sup>195</sup>

Younger studied with Carl Edwards and Lawrence Lee. His painterly style is admirably demonstrated in his window in the Galilee Chapel in Durham Cathedral, commemorating the 1300th anniversary of the Venerable Bede's birth in circa 672. The three lights contain images of Aidan and Bede with the names Jarrow and Wearmouth, and Benedict Biscop and Ceolfrith.<sup>196</sup>

Younger, like many contemporary English stained glass designers, has completed secular glass commissioned by private patrons in the Arab Emirates.

Both Younger and Bradley use, on occasion, the appliqué technique, where painted and stained glass is bonded to 6mm sandblasted float glass with an epoxy resin.<sup>197</sup>

Younger is also an active Fellow and Council member of the British Society of Master Glass Painters.<sup>198</sup>

Bradley did his post-graduate studies at the Royal College of Art from 1959-1962, and is a versatile manipulator of all the traditional and modern stained glass techniques. These include an etched and sandblasted Baptistry Screen for the Bar Hill Church, Cambridge (1974), a glass appliqué screen wall in the Post House Hotel, Hampstead, London (1970), and a great deal of work for private residences in Dubai, Lagos and Bahrain (1978).<sup>199</sup>

When the author visited him in 1984 he was working on a series of 'Beach Girls' - exquisitely painted and fired tiny panels of stained glass which effectively demonstrated his total mastery of an intransigent medium.<sup>200</sup>

Bradley teaches at the Chelsea School of Art, Shepherd's Bush, London.<sup>201</sup>

## 2.6 THE YOUNGER GENERATION

Since the 1970's, a vociferous and articulate group of younger stained glass artists has come to the fore. Some of these are the products of the teaching programmes at Beaconsfield,<sup>202</sup> the West Glamorgan Institute of Higher Education,<sup>203</sup> or the other handful of educational institutions that have, since the Second World War, offered courses

in stained glass design in the British Isles. Some of them received their basic training in Fine Arts and Ceramic Design courses before establishing themselves in stained glass. Few of them are the products of the Master/Apprentice pattern, with the exception of isolated young designers who found employment with the 'line' studios (already discussed), in order to obtain experience before setting themselves up as professional freelance designers in their own right. Some of them have subsequently followed on the heels of their commissions to the United States of America, New Zealand and Canada, to work and settle in stimulating new environments.<sup>204</sup>

Let us consider the few who have established important reputations.

Brian Clarke, born 1953 in Oldham, Lancashire, the son of a miner, is also the author of a controversial book on stained glass<sup>205</sup> and the subject of a biography by Martin Harrison.<sup>206</sup> This latter work contains an important introduction by his friend (and stained glass genius in his own right), Professor Johannes Schreiter of Frankfurt.<sup>207</sup> Schreiter claims :

"... Clarke belongs to the few important talents of the young English art scene",  
and (the book)  
"... demonstrates the high esteem he enjoys from international critics and artists."<sup>208</sup>



A lonely and introverted child, the young Clarke directed all his efforts towards the development of what was to become a "remarkable and precocious talent."<sup>202</sup>

Educated at Oldham School of Art on a junior scholarship from the age of eleven, the Burnley College of Art, and later the North Devon College of Art, where he enrolled for an Architectural Stained Glass course run by James Paterson,<sup>210</sup> Clarke, since qualifying in 1972, has worked independently as a painter and stained glass designer. He was awarded a Churchill Fellowship in 1974 for study in Paris, Rome and West Germany, and an Extension Fellowship to the U.S.A. in 1976, and has subsequently practised in London, New York City and Western Germany.<sup>211</sup>

His major stained glass commissions include windows for Longridge Parish Church (1974); Thornton Cleveleys Parish Church (1976); Habergham Parish Church, Burnley, Lytham St. Anne's (1976); the University of Nottingham and the Queen's Medieval Centre, Nottingham; the Victoria and Albert Museum, London (1979); Olympus Optical GmbH, Hamburg, West Germany (1981); Covent Garden, Endellstreet, London (1981); Paul and Linda McCartney, London (1983); Clerestory windows in the Mosque at the New Airport Riyadh, Saudi Arabia (1983). His stained glass since 1976 has been fabricated exclusively by the Wilhelm Derix GmbH at Taunusstein-Wehen in West Germany.<sup>212</sup>

The most influential art movements on the 'new' generation of the 1960's-1970's were Action Painting, Photo-Realism, and the ideas and theories of the Dada Movement - a form of 'Neo-Dada'.<sup>213</sup>

Brian Clarke was drawn primarily to the ideas and principles of the De Stijl aesthetic, although in his paintings (as in the 'brand-collages' of Schreiter) and mixed media works there are specific Dada allusions. It is therefore no wonder that Clarke found in contemporary German stained glass a sympathetic chord.<sup>214</sup> However, his mature vision is uncompromisingly his own, and his stained glass is quite unlike either that of English or German contemporaries.

David Wilson, born in 1941 at Stockton-upon-Tees, County Durham, and educated at Middlesborough College of Art, Yorkshire and the Central School of Arts and Crafts, London, joined the Rambusch Decorating Company, New York City, in 1963.<sup>215</sup>

Through Robert Sowers, whose influential book Stained Glass: The Lost Art (1954), he had read as a student, and with whom he became friendly in New York, he was introduced to German stained glass. The influence of Ludwig Schaffrath and Johannes Schreiter in particular, is to be seen in his work as for example the Calvary Presbyterian Church, Charlotte, North Carolina (1978), and the Braniff Airlines Chapel, Dallas/Fort Worth Airport (1978).<sup>216</sup>

Working almost exclusively in an abstract style, Wilson particularly favours German antique flashed<sup>217</sup> and 'opak'<sup>218</sup> glass types as well as introducing at times, a variety of commonly used industrial rolled and figured obscure glass.<sup>219</sup>

Wilson remained with Rambusch until 1971, when he left to work independently on various commissions for four years. He returned to Rambusch again in 1976, and continues to collaborate intermittently with them. He now lives and works in South New Berlin, New York State.<sup>220</sup>

Mark Angus, born in 1949, first qualified as a Chartered Surveyor in 1968. After seven years of practise, stained glass had become an over-riding passion. In 1976 he enrolled for the Architectural Stained Glass course at the Swansea School of Art (the West Glamorgan Institute for Higher Education, but known affectionately by alumni as 'Swansea'), and qualified in 1978.

The following year he was awarded the Sir Arthur Evans Travelling Scholarship by the Worshipful Company of Glaziers, and like Brian Clarke before him, he used the opportunity to visit artists and studios in West Germany.<sup>221</sup>

On his return to England and his studio at Bath, he was soon busy with important commissions in the neighbourhood, including the Bristol Synagogue (1978); St. Batholomew's Church (1980) and St. Stephen's Church (1982), Bath; St. Edmund's Church, Edmonton (1982); Wayland Prison Chapel, Griston (1983); St. Mary the Virgin, Claverton, Avon (1983).<sup>222</sup> He completed his most important commission in 1984 : the 'Daily Bread' window in the north-west nave aisle.<sup>223</sup>

In the same year he published a controversial book, Modern Stained Glass in British Churches in which he expressed rather undiplomatic opinions concerning the work of his contemporaries.<sup>224</sup> He also possesses a talent for self-promotion, which hardly endears him to his colleagues.<sup>225</sup>

Angus's early work frankly apes the German model<sup>226</sup>; his later work still contains many mannerisms picked up from the same source, as for example, the extension of the lead for a period over the surface of the glass quarry (piece), and the mannered accent obtained by the insertion of pieces of thick lead - particularly at the end of the lead-line - in the Schreiter fashion.<sup>227</sup> However, his windows have strong Romantic overtones (as in the 'St. Stephen' window in Bath, the 'Daily Bread' window at Durham and the 'I will lift up mine eyes' window at Claverton) peculiar to the English vision, developed perhaps by his fascination for the opu-

lence richness of English streaky and reamy 'antique' glass, not at all popular with the more austere German Masters.<sup>228</sup>

Clarke is represented in the collections of the Victoria and Albert Museum, London, and the Ely Cathedral Museum of Stained Glass.<sup>229</sup>

## 2.7 THE STAINED GLASS OF FOREIGN DESIGNERS

Mention must be made of the contribution of contemporary foreign stained glass artists to the rich heritage of the medium in England. We have already discussed Bossanyi, who, after all, settled and worked in England. However, two French and five German designers have windows in the British Isles.

The windows of Marc Chagall (1889-1986) are another instance of successful collaboration between artist and designer/craftsman, for Charles Marg of Reims fabricated Marc Chagall's designs.<sup>230</sup>

Chagall's first stained glasswork in England is to be found in the east window of the remote country church of All Saints, Tudeley, in Kent (1968). A memorial to Sarah d'Avizdor-Goldsmid who was drowned in a sailing accident, it includes Christ on the Cross with a girl (shown more than once) in the waters below. Predominantly blue with accents of green and red enamel and yellow stain, and with much

evidence of aciding, all contribute to the water nature of the image.<sup>231</sup> The window is complemented by a Chagall-designed glazing scheme for the rest of the church.<sup>232</sup>

Chagall explores the theme of Psalm 150, 'O Praise God in His Holiness' in his window for Chichester Cathedral, this time a predominantly red composition in the south aisle of the nave.<sup>233</sup> Once again, (as in his paintings) his figures float, here as if on the surface of the glass, and it is apparent that here too, his collaborator Charles Marq has taken immense pains to transfer the Master's every mark to the glass, involving elaborate etching (aciding), staining and leading techniques.<sup>234</sup>

Gabriel Loire (b. 1094) the Chartres artist, is famous for his dalle-de-verre<sup>235</sup> compositions all over the world, and the windows of St. Richard's Chichester are decorated throughout by him in this manner. At All Saints, Southampton, there is a fine 'Christ as Alpha and Omega', and at St. Mary's College, Strawberry Hill, Richmond,<sup>236</sup> dalle-de-verre lights in the main chapel explore the Mysteries of the Rosary.<sup>237</sup>

His most famous work is the 'Prisoners of Conscience' group in Trinity Chapel, Salisbury Cathedral, this time executed in the traditional leaded flat glass manner. Iconoclasm during the period of the Reformation and again during the Commonwealth, and bouts of restoration in the eighteenth and

nineteenth centuries had all but deprived the great Cathedral of its ancient stained glass and it was resolved in 1979 that this should be remedied and that colour should be returned to the interior of the Cathedral.<sup>238</sup>

Taking into account the ancient history of the Cathedral, it seemed fitting that an artist from Chartres should be chosen for the commission and that the finished five-light fenestration should be dedicated in 1980 - the 800th Anniversary of the death of John of Salisbury, who in 1176 had become Bishop of Chartres.<sup>239</sup>

The window is predominantly blue with a complete iconography, that at this time is somewhat pervasive. However, in due course, as the grisaille windows elsewhere in the Cathedral are filled, colour balance will be restored.<sup>240</sup>

Very different are the abstract windows of the contemporary German masters, Wilhelm Buschulte (b. 1923), Joachim Edgar Klos (b. 1931), Jochem Poensgen (b. 1931), Ludwig Schaffrath (b. 1924) and Johannes Schreiter (b. 1930), which are to be seen at the Bridgend Crematorium, on the Coity Road near Swansea, Glamorgan.<sup>241</sup> An original and dignified building in stone by Maxwell Fry, it contains a cloister that sweeps up to the main chapel, and must contain one of the largest collections of windows by students and distinguished artists in the British Isles. Forty-five people have participated to date in the scheme which was organized and developed by

the outstanding Head of Architectural Stained Glass at Swansea (WGIHE), Tim Lewis.<sup>242</sup>

This project arose out of the exhibition, 'Glass Masters - Contemporary Stained Glass from West Germany', which was shown at the Glyn Vivian Gallery, Swansea (immediately opposite the Swansea Art School), in 1980, and in due course visits on "Rotating Visiting Fellowships" by the masters, above, resulted in windows for the Crematorium.<sup>243</sup>

Later, Professor Johannes Schreiter (1981) was commissioned by the Welsh Arts Council and the West Wales Arts Association to produce three designs for a window to be placed in the Swansea Art School as a memorial to the founder of the Stained Glass Department, the late Howard Martin.<sup>244</sup> A design was selected and Tim Lewis and Rodney Bender were invited by Schreiter to fabricate the window to his instructions at the Wilhelm Derix GmbH Studios at Taunusstein-Wehen. The finished window is displayed in the stairwell of the School.<sup>245</sup>



## 2.8 REFERENCES AND NOTES - CHAPTER 2

1. MOLE, S. (1982). Introduction to the Exhibition Catalogue New British Glass and Vitrail Français Contemporain. p. 9.
2. HARRISON, M. (1980). Victorian Stained Glass.
3. COWEN, p. (1985). A Guide to Stained Glass in Britain. p. 64.
4. CHARLES SEWTER (1974) exhaustively covers the subject in The Stained Glass of William Morris and His Circle.
5. COWEN. p. 64.
6. HARRISON. p. 63.
7. FRAMPTON, K. (1980). Modern Architecture, a critical history. p. 45.
8. Joint author with Selwyn Image of 'The Hobby Horse'.
9. HARRISON. p. 64.
10. HARRISON. pp. 50, 86. Day was the author (1897) of Windows : A Book about Stained and Painted Glass. London : Batsford, as well as designer for the firm Lavers & Barraud from 1864.
11. NESBIT, H. (1982). Port Elizabeth School of Art, A History 1882-1982. p. 11.
12. HARRISON. p. 64.
13. NESBIT. p. 10.
14. COWEN. p. 65; HARRISON. p. 67; plate 87.  
'Plating' is the process whereby two pieces of glass of different colours are sandwiched in very wide leads.
15. COWEN. p. 65.
16. HARRISON. p. 66.
17. SACKS, B.H. (1981). Henry Holiday : Practitioner and Theoretician of Stained Glass. Stained Glass. (SGAA) Vol. 78, No. 2. pp. 141-143.
18. Ibid.
19. HARRISON. p. 80.
20. CORMACK, P. (1981). Christopher Whall, Founder of the English Glass Renaissance. Stained Glass (SGAA) Vol. 76, No. 4. pp. 318-322.

21. ARCHER, M. (1985). English Stained Glass. p. 41.
22. CORMACK. p. 320.
23. Five fine typological windows in the Apse, and one completed by his assistant Karl Parsons.
24. CORMACK. p. 320. Connick was influential, in his turn, both for his book (1937) Adventure in Light and Colour, and through his own teaching in the U.S.A.
25. CORMACK. p. 322.
26. CORMACK. p. 322.
27. Hugh Arnold (1872-1915), designer and co-author with Lawrence Saint of Stained Glass of the Middle Ages in England and France.
28. HARRISON. p. 68.
29. COWEN. p. 67.
30. CORMACK, P. (1986). In a letter to the author : St. George's Cathedral, Cape Town : Apse windows (with C.W. Whall) 1907-11, and St. David window, St. Mary's Cathedral, Cape Town : Apse ad epiphany windows 1928-30; St. Peter's Church, Auckland Park, Johannesburg : Window(s) 1933-34; St. Mary's Church, Potchefstroom : Three windows at east end 1932.
31. ARCHER. p. 41.
32. HARRISON. p. 67.
33. Ibid. p. 68.
34. NUTTGENS, P. (1982). Seventy Years Work. The Stained Glass of J.E. Nuttgens 1892-1982. The Journal of Stained Glass. Vol. XVIII, No. 1. 1983-84. p. 61.
35. The subject of an exhibition held at the William Norris Gallery. Walthamstow, England, 7 December 1985 - 2 March 1986.  
  
CORMACK, P. (1985). Women Stained Glass Artists of the Arts and Crafts Movement.
36. Ibid.
37. Ibid.
38. Ibid.
39. Ibid.

40. Ibid.
41. GORDON-BOWE, N. (1980). Wilhelmina Geddes. Ireland's Extraordinary Artist. Stained Glass (SGAA), Vol. 76, No. 1. 1981.
42. CORMACK. p. 24.
43. GORDON-BOWE, N. (1979). Harry Clarke. pp. 47-49.
44. Ibid.
45. The use of hydrofluoric acid to eat away flashed glass, that is to say, glass of a white base which has a 'flash' or layer of another colour on one side of it. Sometimes the base is itself of another colour, for example, blue with a red flash is common.
46. Silver Chloride, painted onto glass and kiln-fired at about 600 degrees Celsius, produces a yellow glass.
47. CORMACK, P. Correspondence with the author (1 September 1986).
48. MOLE. p. 11.
49. HARRISON. p. 73.
50. LEE. p. 47. Quoting from : A Tribute to Evie Hone and Maimie Fellett, edited by Stella N. Frost. Brown & Nolan, 1957.
51. REYNTIENS, p. (1976). The Story of Stained Glass. 5. The Renewal of Vision - 20th Century. pp. 4, 8-9.
52. ARCHER. p. 44.
53. OSBORNE, J. (1981). Stained Glass in England. p. 93.
54. MOLE. p. 11.
55. HARRISON. p. 69.
56. Ibid.
57. Ibid.
58. Ibid.
59. PAPANICOLAOU, L.M. (1982), J. Gordon Guthrie. Stained Glass. (S.G.A.A.), Vol. 77, No. 4.
60. HARRISON. p. 71.
61. op. cit.

62. HARRISON. p. 70.
63. OSBORNE. p. 93.
64. PIPER, J. (1978). Foreword to the Catalogue Glass/ Light.
65. SEWTER. pp. 5-9 tell in detail of Winston and Chance's experiments in glass chemistry and manufacture.
66. HARRISON. p. 52.
67. op. cit.
68. HARRISON. p. 54.
69. ARMITAGE, E.L. (1959). Stained Glass. p. 70.
70. MOLE. p. 10.
71. HARRISON. p. 72.
72. ARCHER. p. 44.
73. LEE, L. (1977). The Appreciation of Stained Glass. p. 90.
74. HARRISON. p. 72.
75. LEE. p. 79.
76. HARRISON. pp. 75-89.
77. Ibid.
78. Ibid.
79. Ibid.
80. Brochure : CLARK-EATON, The Bristol Studios.
81. ROY COOMBER served his apprenticeship immediately after the Second World War. He worked with a succession of well-known artists, such as Claude Kinder, Jimmy Blackford, Tom Dixon, Francis Skeat, Tom Shapland, Charles Knight, Arthur Buss, Frederick Cole, George Cooper, Claude Howard and James Crombie.

He also designs independently of Clark-Eaton, for such studios as George Payne of New Jersey; Perry Studios, Washington; Advent Glass, Florida; Lamb Studios, New York.

He has also taught: Design, cartoon and glass painting seminars in Boulder, Colorado; Jekyll Island, Georgia; Philmont, New York and Issaquah, Washington, all U.S.A.

The author was given a demonstration of his painting skills, a tour of the Clark-Eaton Studios, a visit to the SGS stained glass supply firm in Avon, and a tour of some of Bristol's churches by this very agreeable man.

82. LINCOLN, K. (1982). Making the most of flat glass. Brief. 82-12.
83. Refer : TRESIDDER, M. (1983). Tinted Glass. Goddard & Gibbs, Britain's biggest stained glass studio. World of Interiors. pp. 15-21.  
HAILEY, J. (1983). Goddard & Gibbs. England's largest stained glass studio. Stained Glass (SGAA) Vol. 78, No. 4. pp. 360-365.
84. HARRISON. p. 77.
85. Ibid.
86. HAILEY. p. 365; numerous Brochures. See Appendix V.
87. COWEN, P. (1979). Rose Windows. p. 38.
88. GODDARD & GIBBS. (198 ). Colour Brochure.
89. Ibid.
90. LEE, SEDDON & STEPHENS. p. 158.
91. HARRISON. p. 72.
92. NUTTGENS, P. (1982). Seventy Years Work, the Stained Glass of J.E. Nuttgens 1892-1982. Journal of Stained Glass. Vol. XVIII, No. 1. 1983-4. pp. 58-77.
93. Cambridge, East London, Anglican Church.  
St. Andrew's Anglican Church, East London.  
Cape Town, Johannesburg, Mbizeki, Pretoria (unspecified).  
NUTTGENS. pp. 76-77.
94. Ibid.
95. THOMAS, B. and RICHARDSON, E. (1972). Directory of Master Glass-Painters. p. 83.
96. BRITISH SOCIETY OF MASTER GLASS PAINTERS. (1984). List of Craftsmen in Stained Glass.
97. MOLE. pp. 9, 36.
98. DEAN and CHAPTER. (1982). Liverpool Cathedral. pp. 17, 22.
99. Ibid.

100. MOLE. p. 36.
101. THOMAS & RICHARDSON. pp. 18-23.
102. MILLARD, R. (1984) (Editor). Nativities of Frederick W. Cole. Stained Glass. Vol. 79, No. 4. pp. 345-349.
103. Ibid.
104. Ibid.
105. Ibid.
106. Refer : The publications of the Corpus Vitrearum Medii Aevi, in particular, CAVINESS, M. (1981). The Windows of Christ Church Cathedral. Canterbury. Also : GRODECKI, L. and BRISAC, C. (1984). Gothic Stained Glass.
107. On his retirement, the post of Director of Stained Glass Restoration at Canterbury was filled by June Lennox, formerly of the stained glass restoration studio at the Victoria and Albert Museum. (See Acknowledgements).
108. Refer : NEWTON, R.G. (1982). The Deterioration and Conservation of Painted Glass : A Critical Bibliography. (Corpus Vitrearum Medii Aevi). pp. xxi, 20, 95, 96.
109. THOMAS & RICHARDSON. pp. 18-23.
110. The author knows these windows intimately as he worships at Holy Trinity. It is noted that THOMAS & RICHARDSON refer to them as 'Aisle' windows, and one of them as a 'North light'. Correctly they are both south light windows.
111. NEWTON. p. (XX).
112. FISHER, A. (1986). (Foreward). Stained Glass for Contemporary Interiors. An exhibition of work by members of the British Society of Master Glass Painters at Sandersons Exhibition Gallery, London. p. 17.
113. ARMITAGE, L. (1959). Stained Glass.
114. MOLE. p. 38.
115. Ibid.
116. FISHER. p. 25.
117. MORPHET, R. (1984). The Hard-Won Image. p. 10.

118. HAYES, D. (1970). Erwin Bossanyi, The Splendour of Stained Glass. pp. 5,6.
119. LEE, SEDDON & STEPHENS. p. 63.
120. HAYES. p. 6.
121. Ibid.
122. GEOFFREY CHAUCER (c.1340-1400). The Canterbury Tales. (c.1380-1400).
123. HAYES, P.
124. Ibid.
125. Ibid.
126. LEE. pp. 99-101.
127. GIBSON, P. (1979). The stained and painted glass of York Minster.
128. WILLIAMS, H.C.N. (1984 revised). Coventry Cathedral. p. 22.
129. Ibid.
130. Ibid.
131. SPENCE, B. (1962). Phoenix at Coventry, the Building of a Cathedral. p. 12.
132. YEARBOOK OF THE ROYAL COLLEGE OF ART 1980-82. p. 13.
133. DARWIN, R., SPENCE, B. (et al.) (1956). Windows of Coventry.
134. Ibid.
135. Ibid.
136. Ibid.
137. REYNTIENS. pp. 12-13.
138. Ibid.
139. DARWIN. p. 3.
140. MOLE. p. 54.
141. THOMAS & RICHARDSON. pp. 69-72.
142. FISHER. p. 23.

143. REFER ARCHER, M. (1979). Stained Glass. p. 30.
144. COWEN. p. 11.
145. PIPER, J. (1968). Stained Glass : Art or anti-art.
146. WEST, A. (1979). John Piper.
147. Ibid.
148. COMPTON, A., LEWISON, J., HARRISON, M. (1982). John Piper - painting in coloured light. p. 3.
149. The Worshipful Company of Glaziers and Painters of Glass.
150. REYNTIENS. p. 9.
151. COMPTON. (et al.). p. 3.
152. Ibid.
153. George Rouault began his artistic career as a stained glass apprentice to the Parisian designer, Hirsch. WEST, p. 27, relates the story of Piper's copy of a book in the Gallimard series, Les Peintres français nouveaux, devoted to Rouault's work.
154. Ibid.
155. COMPTON. p.6.
156. REYNTIENS. pp. 9-11.
157. Ibid.
158. For the history of Gropius and Van der Rohe, read NERVI, P.L. (et al.) (1979). Modern Architecture.
159. Housing, in modern architectural terms was conceived in terms of the major metaphor : The factory born of Walter Gropius' Fagus Factory (1911), and Le Corbusier's 'home as a machine for living in' (1922). It is not clear, from a distance of time (and experience!), why it was expected that houses should adopt "the imagery of the mass-production line and the white purity of the hospital."  
Refer JENCKS, C. (1978). The Language of Post Modern Architecture. p. 31.
160. KNIGHT, A. (et al.). (1980). Glass Masters. Contemporary Stained Glass from West Germany. p. 4.

More will be said of these pioneers of contemporary stained glass at the Bauhaus in a later chapter.



161. op. cit.
162. JENCKS. p. 9.
163. FRAMPTON. pp. 105-108.
164. REYNTIENS. p. 6.
165. SPENCE. pp. 52-53.
166. REYNTIENS, p. 11, says 250 "small windows".  
SPENCE, p. 53, says 198 "lights". (The architect should know!).
167. SPENCE. p. 53.  
In STEPHANY, E. (1983). Licht Glas Farbe. pl. 69, there is an interesting screen of masonry blocks in the Lourdesheim Church at Aachen, West Germany, with stained glass by Maria Katzgrau (1961). One wonders whether the architectural source was the same, i.e. Auguste Perret at Raincy.
168. REYNTIENS. p. 13.
169. LEE. pp. 76-77.
170. op. cit.
171. Ibid.
172. Ibid.
173. Ibid.
174. Originally published as "Notes d'un peintre" in La Grande Revue. Paris, 25 December 1908. Quoted in CHIPP, B.H. (1970). Theories of Modern Art : A Source Book.
175. REYNTIENS. p. 14.
176. COMPTON. pp. 7-8.  
ANGUS, M. (1984). Modern Stained Glass in British Churches. p. 12, shows a detail in colour, of this window.
177. LEE, SEDDON, STEPHENS. p. 17.  
REYNTIENS. pp. 9-10.
178. REYNTIENS. pp 9-10.
179. Ibid.
180. COMPTON. p. 9.

181. Ibid.
182. ANGUS. pp. 34-3; COMPTON. p. 9-10.
183. Ibid.
184. Ibid.
185. The author viewed these works in progress during his visit to the artist in 1984. (See Acknowledgements). A small section from one of these panels is reproduced in Crafts, No. 79, March/April 1986. p. 45.
186. COMPTON. p. 10.
187. THOMAS & RICHARDSON. pp. 83-87; Curriculum Vitae and List of Works from 1972-1984 sent to the author by the artist.  
CLARKE, B. (1979). Architectural Stained Glass. p. 193.
188. PROSPECTUS : Patrick Reyntiens Stained Glass Studios, The Old Church School, Windsor End, Beaconsfield, Bucks. England. 1980.
189. Ibid.
190. MOLE. pp. 44-46; 48-49; 60-67.  
FISHER. p. 19.  
ANGUS. pp. 72-73.  
THOMAS & RICHARDSON. pp. 62-67.
191. Ibid.
192. The Cathedral Architect, Harry M. Fairhurst, in ANGUS, pp. 70-71.
193. Ibid.
194. ANGUS. pp. 74-75.
195. MOLE. p. 48; FISHER. p. 19.  
A.H. Associates ltd., Grantham, Lincs.
196. NORRIS, R. (1984). The Stained Glass in Durham Cathedral. p. 12.
197. MOLE. pp. 66-67.
198. Ibid. Refer to Chapter 3 for the rôle of the BSMGP.
199. CLARKE. pp. 186-192.
200. See Acknowledgements.
201. See Chapter 3.

202. As we shall see, many of the success stories are due to Reyntiens's teaching at Beaconsfield.
203. See Chapter 3.
204. Ms. Michele Androu, a young New Zealander, is such an example. Born in Wellington in 1959, Ms Androu studied at the Chelsea College of Art and Design from 1978 to 1981, obtaining her London Diploma of Art and Design.

In 1982 she joined the firm of Goddard and Gibbs Stained Glass Studios, London, and in 1984 moved to the Wilhelm Derix Studio at Taunusstein-Wehen, in West Germany. She is represented in the permanent collection of Ely Cathedral Stained Glass Museum and Goddard and Gibbs Studios has numerous commissions to her credit, and was included in the 'New British Glass and Vitrail Français Contemporain' exhibition to Chartres, France, in 1982.

She now lives at: 4 Kiwi Road  
Devonport  
Auckland  
New Zealand  
Telephone : 457-259.

REFER : Philips Studio Glass Award 1986, Auckland, New Zealand, June 28 - July 13, 1986.

205. CLARKE, B. (1979). Architectural Stained Glass.
206. HARRISON, M. (1981). Brian Clarke.
207. Johannes Schreiter, b. 1930. Refer : CLARKE. pp. 83-102.
208. HARRISON. (1981). p. 9.
209. Ibid.
210. PATERSON, J. (1968). Stained Glass.
211. MOLE. pp. 30-31.  
Ibid.  
Also : DERIX CREATIVE GLASS (1984). Creative Glass enhances atmosphere.
212. HARRISON. p. 75
213. Ibid. p. 9.
214. CLARKE. p. 83.  
See also the Stained Glass Designers of the Bauhaus, in the Chapter on Germany.

215. MALARCHER, W. (1980). David Wilson. Stained Glass (SGAA), Vol. 75, No. 2, pp. 121-124.
216. Ibid.
217. SOWERS, R. (1981). The Language of Stained Glass. pp. 66-68.
218. A type of glass exploited in Western Germany and consisting of a colour flashed upon an opal base.
219. op. cit.
220. MALARCHER. p. 124
221. As HARRISON (1981) remarks of Clarke's German tour, "He was one of the very first to visit these leading stained glass designers - a pilgrimage which has since become apparently essential for most British and American students on the subject. ..." (p. 36).
222. MOLE. pp. 24-25.
223. NORRIS. p. 5 and colour plate.
224. For example : Descriptions of Patrick Reyntiens's window in St. Margaret's Church, Twickenham (1969), and Tim Lewis's window at Oystermouth, Wales (1977). pp. 60, 86. He also contrived to spell Reyntiens's name incorrectly throughout his book - this of the doyen of stained glass in England today!
225. In his defence it is necessary to recall that in a competitive age, an extrovert personality who is able to enlist the services of the multi-communications media possesses a distinct advantage over more reticent contemporaries.
226. See, for example, MOLE. p. 25.
227. As in the 'Daily Bread' window at Durham.
228. FISHER. p. 12.  
The author is reminded of a conversation with the great German designer Ludwig Schaffrath, in which he expressed his abhorrence of the over-lively surface of English streaky glass. (See Acknowledgements).
229. MOLE. p. 24.
230. AMIEL, L. (1982) (Edit.) Homage to Chagall.  
See also Chapter on French Stained Glass.
231. Reproduced in OSBORNE, J. (1981). Stained Glass in England. Plate XXXII, No. 86.

232. REYNTIENS is critical of the leading system in the Sarah d'Avigdor window, "... a loose fishnet system (which) cuts across the design rather arbitrarily." p. 15.
233. Reproduced in COWEN, p. 66.
234. COWEN. p. 67.
235. 'dalle-de-verre' (French, literally 'pavingstones') was first created in 1927 by the Parisian master glazier Jean Gaudin. Fernand Léger, at Audincourt (1951) and Loire at Stamford (1955), demonstrated the potential of the medium.
236. COWEN. pp. 113, 148.
237. Ibid.
238. EVANS, S.H. (1980). Prisoners of Conscience Window, Salisbury Cathedral.
239. Ibid. p. 5.
240. Personal observation.
241. Viewed by the author in 1984.
- REFER ALSO : SWASH, C. (1985). The Fiftieth Anniversary of the Stained Glass Department at WGIHE - Swansea. Stained Glass (BSMGP) Autumn. pp. 4-6.
242. Ibid.
243. Ibid.
244. BENDER, R. (1983). The Howard Martin Memorial Window. Journal of Stained Glass. Vol. XVIII, No. 1. 1983/4. pp. 81-83.

## CHAPTER 3 : EDUCATION IN THE BRITISH ISLES

### 3.1 BACKGROUND

The Royal Academy was founded in London in 1768, and under its first President, Sir Joshua Reynolds (1723-1792), a school was opened for the training of painters, sculptors and architects.<sup>1</sup>

With the advent of the industrial revolution, whereby within the space of a century Britain was transformed from being a predominantly agricultural society into the "workshop of the world", it became clear that design education was overdue. Finally, on 1 June 1837 the first national Art School, the Government School of Design, was established at Somerset House. By 1852 this school had been renamed the Central School of Practical Art, while over twenty new schools of design had been established in provincial centres like Manchester, Birmingham, Sheffield, Glasgow and Leeds.<sup>2</sup>

Not all schools established during the mid-nineteenth century were Government controlled; nor were all concerned with the teaching of design. St. Martin's School of Art and Design opened in February 1854 and the Slade in 1871. In 1857 the Central School of Practical Art was removed to South Kensington, where in 1896 it became the Royal College of

Art. In the same year the Central School of Arts and Crafts (not to be confused with the 'Central School of Practical Art') was established by the London County Council.<sup>3</sup>

Until the end of the Second World War, the primary accent was still on the teaching of drawing, painting, sculpture and printmaking, and such crafts as embroidery, weaving, leatherwork, pottery and metalwork. Stained glass too was taught at some art colleges, and the Royal College of Art (as we have seen), had an important department. Other schools with established reputations for stained glass included the Glasgow School of Art and the Edinburgh College of Art.<sup>4</sup>

After the Second World War, courses were developed in Graphic Design, Photography, Industrial Design, Glass, Furniture Design and others related to the new technology and the growth of light industries. "Design" as an important area of study in its own right, and not the occasional by-product of a fine art training had been recognized.<sup>5</sup>

The 1960's were difficult years for education, with student revolts and changes in social patterns. For these, and for stringent economic reasons, various rationalization programmes in the 1970's resulted in the demise of many smaller art schools and the loss of independence of others, who found themselves incorporated in new institutions known as Colleges of Further and Higher Education, Monotechnics and

Polytechnics.<sup>6</sup> Cook, writing in Neues Glass, New Glass, Verre Nouveau<sup>7</sup> claims that today twenty percent of all the polytechnics Degree students are on art and design courses.

### 3.2 COURSES AND AWARDS

All approved courses lead either to awards of the Business and Technician Education Council (BTEC),<sup>8</sup> or a B.A. (Hons) validated by the Council of National Academic Awards (CNAA), while the Royal College of Art, a college for post-graduate studies alone, issues its own degrees at Master of Arts, Master of Design, Ph.D. and Dr. levels.<sup>9</sup>

BTEC courses are vocational, that is to say, they have as their goal the placement of diplomates in employment.<sup>10</sup>

The BTEC two-tier system of Certificate and Diploma, Higher Certificate and Higher Diploma.

Although both Certificate and Diploma courses are two years' full-time study, or three years' part-time study or day release, the Certificate candidates have lower entrance qualifications and follow a more streamlined course.<sup>11</sup>

The Higher Certificate course requires one year or full-time study or two years of part-time study beyond Certificate level (i.e. three years of full-time study or five years' part-time study or equivalent); the Higher Diploma requires two years' full-time study beyond the National Diploma level



(i.e. four years' full-time study or part-time equivalent).<sup>12</sup>

B.A. (Hons) Degree courses are all of three years' duration and are full-time courses.<sup>13</sup>

### 3.3 COURSES IN STUDIO GLASS

There are twelve educational institutions which offer full-time (no part-time or modular) courses in GLASS,<sup>14</sup> namely:

3.3.1 ROYAL COLLEGE OF ART Tel : 01 5845020

Kensington Gore

London SW7

No. of students per annum : 7

Qualification : M.A.R.C.A.

Course Leader : Jim Roddis

3.3.2 EDINBURGH COLLEGE OF ART Tel : 031 2299311

Lauriston Place

Edinburgh E.H39DF

No. of students per annum : 5

Qualifications : B.A. (Hons) Design

: Diploma of Post-

Graduate Studies

in Design

Course Leader : John Lawrie

**3.3.3 COLLEGE OF ART & DESIGN    Tel : 0384378531**

**Hagley Road**

**Stourbridge**

**West Midlands**

**No. of students per annum            : 17**

**Qualification                            : B.A. (Hons) Speciali-  
zation in 3 D Design  
(Glass)**

**Course Leader                            : Bryan Fradzley**

**3.3.4 LEICESTER POLYTECHNIC    Tel : 0533551551**

**School of Industrial Design**

**P O Box 143**

**Leicester LE19BH**

**No. of students per annum            : 12-14 Ceramics  
Specialization**

**(most students exhibit some glass)**

**Qualification                            : B.A. (Hons)(Speciali-  
zation) in 3 D Design  
(Ceramics)**

**Course Leader                            : John Cook**

**3.3.5 WEST SURREY COLLEGE OF**

**ART & DESIGN**

**Tel : 0251322441**

**The Hind**

**Farnham**

**Surrey**

No. of students per annum : 14  
Qualification : B.A. (Hons) Speciali-  
zation in 3 D Design  
(Glass)  
Course Leader : Ray Flavell

3.3.6 NORTH STAFFORDSHIRE

Polytechnic Tel : 078245531

College Road

Stoke-on-Trent

No. of students per annum : 14

Qualification : B.A. (Hons) Speciali-  
zation in 3 D DEsign  
(Glass)

Course Leader : Liz Swinbourne

3.3.7 BUCKINGHAMSHIRE COLLEGE

OF HIGHER EDUCATION Tel : 049422141

Queen Alexandra Road

High Wycombe

Buckinghamshire

No. of students per annum : 10

Qualification : B.A. (Hons) Speciali-  
zation in 3 D Design  
(Ceramics with Glass)

Course Leader : Sam Herman

- 3.3.8 MANCHESTER POLYTECHNIC Tel : 0612286171  
 Dept. of 3 D Design  
 Chatham Building  
 All Saints  
 Manchester M15 6BR  
 No. of students per annum : 16  
 Qualification : B.A. (Hons) Speciali-  
 zation in 3 D Design  
 (Wood, Metal,  
 Ceramics)  
 Course Leader : Michael Brown
- 3.3.9 PLYMOUTH COLLEGE OF  
ART & DESIGN Tel : 975221312  
 Tavistock Place  
 Plymouth  
 Devon  
 No. of students per annum : 16  
 Qualification : BTEC (Glass)  
 (Diploma only)  
 Course Leader : Gary Hammond
- 3.3.10 MIDDLESEX POLYTECHNIC Tel : 01 440 7431  
 Cat Hill  
 Cockfosters  
 East Barnet  
 Herts.

No. of students per annum : unknown  
Qualification : B.A. (Hons) Speciali-  
zation in 3 D Design  
(Glass)  
Course Leader : Maureen Robinson

3.3.11 SUNDERLAND POLYTECHNIC Tel : 078341211

Faculty of Art and Design  
Backhouse Park  
Ryhope Road  
Sunderland

No. of students per annum : 23  
Qualification : B.A. (Hons) Speciali-  
zation in 3 D Design  
(Glass with Ceramics)  
Course Leader : vacant

3.3.12 HULL COLLEGE OF HIGHER

EDUCATION Tel : 0482 224311

Faculty of Design Studies  
Wilberforce Drive  
Kingston upon Hull  
North Humberside

No. of students per annum : unknown  
Qualification : B.A. (Hons) Speciali-  
zation 3 D Design  
(Sculpture)  
Course Leader : Phil Lowrie

### 3.4 COURSES IN STAINED GLASS

The only fully-fledged four-year Stained Glass course offered in the United Kingdom is the HND BTEC (Architectural Stained Glass) at the West Glamorgan Institute of Higher Education. Stained Glass is otherwise an option (in those institutions listed below) in Mural Design, 3-Dimensional Design or other area of specialization, (e.g. Central School of Art) or is part of a two-year course (e.g. Chelsea School of Art; Tuson College). SHAW<sup>15</sup> gives us to us to understand that the Royal College of Art proposes the re-establishment of their once famous (viz-a-viz Coventry Cathedral) Stained Glass department.

#### 3.4.1 WEST GLAMORGAN INSTITUTE

OF HIGHER EDUCATION

Tel : 0792469004

Alexandra Road

Swansea

Glamorgan

No. of students per annum : 15

Qualification : HND BTEC

Course Leader : Timothy Lewis

3.4.2 W R TUSON COLLEGE Tel : 0772716511  
Division of Creative Arts  
Department of Stained Glass  
St. Vincents Road  
Fulwood  
Prestor PR2 4UR  
No. of students per annum : 5  
Qualification : BTEC  
Course Leader : Ian D. McCormick

3.4.3 EDINBURGH COLLEGE OF ART  
(See 3.3.2)  
No. of students per annum : 10  
Qualification : B.A. (Hons) Speciali-  
zation in Design  
(Applied Arts)  
Stained Glass  
Course Leader : Douglas Hogg

3.4.4 GLASGOW SCHOOL OF ART Tel : 04413329797  
167 Renfrew Street  
Glasgow G3 6RQ  
Scotland  
No. of students per annum : unknown  
Qualification : unknown  
Course Leader : George Carson

- 3.4.5 CENTRAL SCHOOL OF ART Tel : 01405 1825  
 Southampton Row  
 London WC1B 4AP  
 No. of students per annum : unknown  
 Qualifications : B.A. (Hons) Fine Art  
 M.A.  
 Course Leaders : Patrick Reyntiens;  
 Almal Ghosh
- 3.4.6 CHELSEA SCHOOL OF ART Tel : 01749 3236  
 Lime Grove  
 Shepherds Bush  
 London W12 8RA  
 No. of students : unknown  
 Qualifications : BTEC (Mural Design)  
 Course Leader : Ray Bradley
- 3.4.7 REIGATE SCHOOL OF ART Tel : 0737 66661  
 Blackborough Road  
 Reigate  
 Surrey RH2 7DE  
 No. of students : unknown  
 Qualification : Higher Surrey Diploma  
 (two-year course)  
 Stained Glass  
 Specialization  
 Course Leader : unknown



### 3.5 INFORMAL STAINED GLASS COURSES

Part-time day and evening classes are offered at a number of institutions across the United Kingdom. Independent designers also offer courses in their studios, or teach part-time at a teaching institution. Some of these adult education or informal tuition courses are listed below:

3.5.1 JOSEPH NUTTGENS, AMGP      Tel : Naphill 3352

The Stained Glass Studio  
Piggotts Hill  
North Dean  
High Wycombe  
Bucks. HP14 4NF

Four courses between May and September, each lasting a six days.

3.5.2 PAUL SAN CASCIANI, AMGP      Tel : 0865727529

11 North Parade Avenue  
Oxford OX2 6LX

and

PAUL QUAIL, AMGP  
Boundary Farmhouse  
Gunthorpe  
Norfolk NR24 2NS

teach both individually, and at :

WEST DEAN COLLEGE

Chichester

West Sussex PO18 0QZ

Courses are presented in March, June, July and September.

3.5.3 PAUL QUAIL also presents two courses annually (12 - 30 May and 26 September to 3 October)

at the

FLATFORD MILL FIELD CENTRE Tel : 0206298283

East Bergholt

Colchester

Essex CO7 6VL

3.5.4 ALMAL GHOSH at the

CENTRAL SCHOOL OF ART &

DESIGN

Tel : 014051825

Southampton Row

London WC1B 4AP

Summer Master Stained Glass workshop.

3.5.5 ALMAL GHOSH at

The City Lit. Art

Department

Tel : 01242 9872

Keeley House

Keeley Street

London WC2B 4BA

Design for Stained Glass course, 10 June - 15 July.

3.5.6 CLAPHAM-BATTERSEA

INSTITUTE

Tel : 0622 2965

6 Edgeley Road

London SW4 6E1

Day and evening courses.

3.5.7 HAMMERSMITH AND NORTH

KENSINGTON INSTITUTE

Tel : 01 969 4171

Isaac Newton Upper School

Wornington Road

London W10 5QQ

Day and evening courses.

3.5.8 MARYLEBONE-PADDINGTON Tel : 01 286 1900/7792

Amberley Adult Centre  
Amberley Road  
London W9

Day and evening courses.

3.5.9 MORLEY COLLEGE Tel : 01 928 8501

61 Westminster Bridge Road  
London SE1 7HT

Day and evening courses.

3.5.10 SOUTH LEWISHAM INSTITUTE Tel : 01 698 4113

Malory School  
Lancelot Road  
Downham  
Bromley BR1 5EB

Evening course 1.

3.5.11 STREATHAM AND TOOTING

INSTITUTE

Tel : 01767 5315

Ernest Bevin School  
Beachcroft Road  
London SW17 7DF

Evening course.

3.5.12 HOUNSLOW BOROUGH COLLEGE Tel : 01 568 0244

London Road  
Isleworth  
Middlesex TW7 4HS

Day and evening courses.

3.6 INDUSTRIAL TRAINING SCHEMES

3.6.1 GODDARD AND GIBBS STUDIO Tel : 01 739 6563

49 Kingsland Road  
London EC2

This training scheme is geared to qualify a student as a leaded light maker; the company awards its own certificate. The firm also conducts a shorter training scheme - practical stained glass design for those who have already completed a course at a stained glass school.

3.6.2 GLASS TRAINING LTD.

BGIRA Building  
Northumberland Road  
Sheffield

This organization has taken over the rôle of training apprentices for the glass industry from the Government's Industrial Training Scheme.

### 3.7 COURSE CONTENT

Let us examine the course content of a cross-section of courses, namely : a Degree of B.A. (Hons) Design and Diploma of Post-Graduate Studies majoring in Stained Glass (Edinburgh College of Art),<sup>16</sup> the Higher National Diploma BTEC (West Glamorgan Institute for Higher Education),<sup>17</sup> and the M.A. (RCA) Glass Specialization (Royal College of Art).<sup>18</sup>

#### 3.7.1 EDINBURGH COLLEGE OF ART

Entrance requirements for the Degree of B.A. (Hons) Design, validated by Heriot-Watt University, are:

Scottish Certificate of Education - passes in three subjects at Higher Grade and any two other subjects at 'O' Grade. One of the passes at Higher Grade must be English. Passes obtained in the 'O' Grade subjects must be at 'C' band or better.

General Certificate of Education - passes in two subjects at 'A' level and any three other subjects at 'O' level. If one of the passes at 'A' level is not English, the 'O' level passes must include both English Language and English Literature.

DATEC Ordinary plus English 'A' level or two 'O' levels in English Language and Literature and the submission of a portfolio of work, or SCOTEC Diploma/Certificate plus Higher English and the submission of a portfolio of work.

Note - Grade 3 passes (60-69%) or above would be required in Diploma/Certificate courses.

The Central (Art) Institutions are empowered to admit a very small number of students annually who do not hold the requisite academic qualifications, but whose portfolios of work are of an exceptionally high standard.

In support of applications for courses in Art, candidates are required to submit a portfolio of their own unaided work. The college's assessment of the standard and promise indicated by the portfolio of works is of great importance in arriving at the final selection of candidates.

**First Year Course :** All students who intend to study for a Degree in Design, Painting or Sculpture follow a general course of study in their first year.

The course is intended to be one of breadth of study and aims :

- i) to develop the student's aesthetic responses, attitudes and skills into two and three dimensions through

practical work in drawing, painting, sculpture, design and crafts, and

ii) to extend the student's education and experience through courses in Humanities and Complementary Studies in order to provide an understanding of the context out of which painting, sculpture, architecture, music and literature are created.

### **Foundation Design**

An introduction to observation and analysis is undertaken through creative and experimental work.

Staff from all areas of the School of Design and Crafts contribute to this programme and arrangements exist for co-ordination. The syllabus requires a variety of exercises to be undertaken which are not ends in themselves, but rather as experimental explorations under the following headings :

Analytical study of shape and form;

Technical (measured) and perspective drawing;

Pattern and Textures;

Colour and Light;

Structures;

Anthropometrics/Ergonomics



## **Design and Crafts**

The School of Design and Crafts has three areas of studies, i.e. Applied Arts, Applied Design and Visual Communication. These three areas contain thirteen sections.

During the first year in Design Studies a student is given the opportunity to select, during the course of the year, five sections from the thirteen offered, for an introduction to the working methods and skills used in these sections. A student must normally choose at least one section from each area. A member of staff, assigned as an area co-ordinator, will assist students in their choice of section. It is intended that through the acquisition of basic skills and an awareness of different simple materials, tools, equipment and standards, students are able to see the creative potentials that exist within sections of specialized study. Here the students first come into contact with their future major subject (e.g. Stained Glass).

## **Drawing**

The main emphasis is placed on drawing from the figure. Students are taught to appreciate the basic principles of form and structure, using various techniques, e.g. pencil, chalk, wash, pen and ink, mixed media, etc., towards an exploration of line, tone, attention to detail, perspective and composition.

## Painting

The course is designed to introduce and cover the wide range of basic skills that a student needs to experience in painting. These are materials and their use; an introduction to various methods of working and a personal development of language of tone, colour and drawing.

Students are asked to limit their materials to water-base media, i.e. gouache, poster or acrylic paint with paper or card supports. These media dry quickly, enable students to amend statements promptly and bring their ideas to a conclusion more rapidly.

Students are required to evolve a personal method of gathering information from sources such as landscape, the city, domestic situations, etc., in the form of drawings and tone and colour studies. They are also required to produce drawings from specific sources from which they then develop paintings.

Still-life and figure groups are used for study throughout the year, presenting specific problems of tone and colour relationships for investigation.

Through discussion, reproductions and slides and visits to exhibitions, the students' awareness is broadened.

## **Sculpture**

The course aims at providing opportunity to experience sculpture through a variety of approaches to form imagery and media.

Each student works in sculpture for one day per week throughout the year and is expected to produce a number of sculptures from a range of sources.

Creative and expressive potential is encouraged through working in life and still-life, clay modelling, plaster, wood, metal and plastics construction, and stone and wood carving.

## **Humanities and Complementary Studies**

The Humanities and Complementary Studies Course is an integral and mandatory part of the College curriculum. It is designed to extend the students' education and experience by providing a broadly based survey of the history of art from the Renaissance until the present day. The course occupies four hours per week and consists of lectures, seminars, tutorials and occasional visits to galleries and exhibitions. Students are continually assessed by their written essays and project work.

The first year course introduces students to the subject of art history and deals with painting, sculpture, architecture and the applied arts from the fifteenth century to the French Revolution. Art is seen in its full social and historical context, with reference being made to such considerations as patronage, technique, symbolism and politics and the interconnection between art and music and art and literature.

### **Second and Third Year**

The Head of School advises students in their choice of subjects and approves the courses which they intend to follow in the Design School. Initially, in second year, students follow a general course in each area of study, thus being allowed the opportunity to work in the various subjects within the area of study. Subsequently, they begin to specialize in one subject while also studying a subsidiary subject, either in another area of design, or in drawing and painting or in sculpture. In third year, students can either continue to study their chosen main and subsidiary subjects or specialize in their main study only. These options continue in the final year but students specializing in one subject must also prepare a thesis related to their design study. All students in their final year must compile a workbook of related studies to their design subjects for assessment.

## Stained Glass

The Stained Glass Section is furnished with basic equipment; tables for cutting and leading, screens of glass for colour selection and the kiln for firing paint into the surface of the glass.

The tools are simple. Glass cupboards are stocked each year with a large selection of glass from the Sunderland Glass makers.

The education programme in the Stained Glass room is intended to teach the principles of design through the disciplines of the materials used, and the methods of production. The primary concern is with problem solving in terms of glass and light in the architectural environment.

During the three years in the studio, a student designs and constructs windows, makes a study of existing windows, writes a study report on some aspect of stained glass, spends time sketching and researching ideas. At the end of the course, a student is competent to join a firm of Stained Glass Makers, set up a studio, or to use the knowledge of design in teaching.

A good student should be a good draughtsman in the broadest sense, should enjoy the use of colour and have an orderly approach to the technical skills required. Above all, a

student should have a lively and enquiring mind capable of analyzing and solving problems.

### **Facilities**

Adjacent to the Stained Glass Department are the excellent facilities of the Glass Design Department, where students following the three-year B.A. (Hons) Glass Design option study such techniques as Sand-blasting, Decorative cutting and Intaglio, Carving, Copper Wheel Engraving and Blowing, Enamelling, Bending, Fusing and Casting.

By arrangement, students majoring in Stained Glass may make use of some of these techniques in their window design.

### **Degree Examinations**

The final assessment is of work carried out during the Degree examination together with a selection of studio work.

### **Diploma of Post-Graduate Studies**

Edinburgh College of Art provides opportunities for advanced study in all major areas including the subjects listed below. The courses are normally of one academic year's duration and lead to the award of the Diploma in Post-Graduate Studies. Applicants should hold, or be completing the final year of, a Degree or Diploma in Art or Design, and normally

should have had experience and achieved distinction in aspects of the art studies for which they are applying.

**Department of Applied Arts**

**Ceramics, Glass Design, Jewellery and Silversmithing,  
Stained Glass, Tapestry**

**Stained Glass**

Lecturer in charge, Douglas Hogg, DA(Edin)FMGP

The course creates the opportunity for a specialist study of advanced techniques in stained glass design, for developing an experimental approach to the craft and new ways of using glass with materials other than the traditional use of lead. Studies in restoration work are encouraged as well as documentation and research into the rich tradition of stained glass in Scotland.

**Bursaries**

A number of awards are made annually from its Andrew Grant Bequests for post-graduate study and travel grants.

### 3.7.2 WEST GLAMORGAN INSTITUTE FOR HIGHER EDUCATION

#### **Higher National Diploma in Architectural Stained Glass (BTEC)**

##### **Entrance Qualifications**

Applicants will normally be eighteen years old or above and have :

- i) Three or more 'O' level passes or C.S.E. Grade 1, together with one or more at 'A' level
  
- or ii) Successfully completed a Foundation Course in Art and Design or relevant National Diploma
  
- or iii) Relevant industrial experience (at the discretion of the interviewing panel).

A Foundation course is considered to be the preferred route towards a CNAA Honours degree in Art and Design and/or a Higher National Diploma.

The aim of the course is to provide the broadening of experience necessary to allow the student to proceed from school to professional studies. It is a diagnostically-based course which will allow the students the widest possible opportunity to develop their personal attitudes and their



intellectual, analytical, manipulative and observational skills.

#### **Entry Requirements (First-year course)**

Students must be at least seventeen years of age by 31 December in the year of entry with five 'O' levels passes (or CSE Grade 1), three of which must be in academic subjects. Students would preferably have completed a sixth form or tertiary education period.

Consideration is given to mature students, particularly if their work is exceptionally promising and whether or not they are academically qualified.

#### **Studies include:**

Objective and analytical drawing. Colour, colour therapy and practice. Two- and three-dimensional Design including basic photography, graphics and ceramics.

Fine Art studies.

Fashion and Textile design.

History of Art and Design and Complementary studies.

Regular visits to National and local exhibitors.

#### **Awards and Examinations**

Continuous assessment of course work forms the basis of a confidential report which accompanies a student's applica-

tion for the continuation of study in the student's chosen area on a degree or Higher National Diploma Course.

Architectural Stained Glass is a unique course by many of today's standards (and is the only course of its kind in Britain). The demands made on the designer by the complex techniques involved, and the necessity for the designer also to be the craftsman responsible for the execution of the work create a singular situation in the Art world. While influenced by, and influencing the wider world of the Visual Arts it stands as a distinct area of Art, having its foundations firmly in the Visual and Fine Arts but displaying its own Architectural permanence and allegiance.

#### Second - Fourth Year

Course Leader : Tim Lewis, ATD,ARCA,AMGP

The aim of the course is that students should learn to create Architectural Stained Glass work from conception through all the design processes to the completion of the full-scale pieces of work.

The Course has three interrelated disciplines, all of which have equal importance :

- i) To enable students to develop their creative ability as artists in both two- and three-dimensional studies;

ii) To give students the opportunity to acquire the skills of manufacturing their own work in a wide range of glass materials and techniques;

iii) To develop the student's spirit of enquiry and to promote the skills of recording, analysis and communication.

### **Course Content**

#### **Diagnostic Studies**

Analytical Drawing and Life Drawing

Design Analysis

Visual research including exploration in drawing, colour, shape, light and texture. Three dimensional studies using glass, plastics, clay, wood and metal

Photography.

#### **Studio and Workshop Skills**

Applied design; workshop techniques and understanding materials and processes.

Practical Studio Projects and Assignments.

Medieval Restoration and Reproduction.

Cartoon Drawing.

Live Projects, Commissions, Competitions and Bursaries.

## **Supporting Studies**

Visual perception and colour theory

Design theory

Architectural and Building studies

History of Architecture and Design:

Medieval, Renaissance to present day

History of Stained Glass in Europe

Professional Practice and Business Studies

## **Awards and Examination**

Higher National Diploma (BTEC).

Membership of British Society of Master Glass Painters  
(AMGP).

### **3.7.3 ROYAL COLLEGE OF ART**

The RCA is a post-graduate university institution empowered by the Royal Charter to award the degrees of Master of Arts (RCA), Master of Design (RCA), Ph.D.(RCA) and Dr.(RCA). All Master's degree students follow a two-year full-time course. An increasing number of students propose specific schemes of study or research and take the two-year degree by project or thesis. There are also facilities for mid-career courses for artists, designers, industrialists or teachers with at least five years' professional experience.

### **Entrance requirements**

Candidates should be over twenty-one and under forty years old and have obtained the B.A. in Art and Design, or a first degree of a British University or an equivalent overseas qualification. The upper age limit does not apply to mid-career students.

About three hundred places are available each year. Entry is by competitive examination and candidates are required to send portfolios of recent work at the beginning of February. Selected candidates are invited to the College for interview between February and March. Application forms and detailed submission requirements for each Department are available from the Registry.

No applications for an academic year will be accepted after 31 January of that year.

### **Overseas students**

Applications by students from overseas countries are encouraged and candidates will be expected to attend for interview. Exceptionally, candidates unable to attend for interview may be offered a one-year non-degree course.

Fees :

Overseas students are not eligible for state bursaries. At least £8 500 per annum is needed to cover fees and living expenses.

The composite fee for all courses in 1985/6 was :

UK and EEC students £1 632 per annum;

Overseas students £4 250 per annum;

Mid-career students : One full year's composite fee and a third of the composite fee for each year of part-time study.

A fee of £150 is also payable for the Ph.D. examination.

The composite fee includes the Student's Union subscription.

**Department of Ceramics and Glass**

Course Leader : Jim Roddis, Dip.AD

There is a long tradition in Ceramics and Glass at the Royal College. This tradition is one of continuous change in teaching, concepts and methods of working. The adaptability of the media has kept them alive for designers, artists and craftsmen, as well as collectors, industry and retailers. Orthodoxy of ideas, applications and technology is stifling for students and staff. The Department looks for students

who show a mixture of originality, motivation, talent and intelligence.

Graduating students have established careers as consultant designers, in-house designers, buyers for major retailers, designers for major retailers, designers/makers, lecturers in Further and Higher Education, artists and craftsmen, and various combinations of these.

### **Course organization**

The courses are designed to provide a post-graduate study period following first degree courses in this country or overseas. Great attention is paid to graduate careers within one developing field, and a continuing programme of supportive research and studies into workshop technique, business planning and opportunities.

Departmental lectures on the Theory of Ceramics and Glass are compulsory one-hour lectures each week in the first year. Drawing is considered a vital tool for each student. Teaching includes skills projects, e.g. a plaster model and mould-making course. Group projects vary from year to year.

Assessment is continuous, by individual and group tutorials, with formal review points during each year.

Students studying for a degree by project, submit to the Professor and the supervising tutor an interim report at the end of the first year, and progress to the second year will depend upon satisfactory completion of this report.

The course in Glass aims to produce and assist in the development of high standards in industrial design and artist-craftsmanship.

Recent successful activities in research and design for architecture and interiors have enabled us to expand these into the course.

Students normally specialize in one or more of the following: Artist- or designer-craftsmanship in hot glass techniques, kiln forming, cold-working and decorative processes, architectural and interior glass design, industrial applications including small-workshop practice, and research into general or detailed aspects of historical or contemporary glass.

#### **Syllabus - Glass. Year 1.**

Students will study :

- \* Techniques of working glass materials by studying on short courses within the Department and through appropriate industrial visits.



- \* The techniques of decorating by hot working, enamelling and cold working.
- \* The use of all equipment within Glass, and Ceramics where appropriate, its safe and effective operation.
- \* Group projects on topics developed within the Department or with outside clients. These topics are designed to illustrate the range of opportunity open to graduates, where their skills, talents and experience can become the basis of a career or a facet of a wide ranging practice.
- \* The scientific theory of Glass materials.
- \* Research into traditional and novel glass techniques.
- \* Methods of presentation of designs and concepts to clients.
- \* Management Studies.

Students studying for a degree by project will participate in one or more of these units where appropriate.

## Year 2.

Students who successfully complete the first year programme proceed into a second year. The course of study is made up of extensions of those topics developed in the first year, including one or more of the completed projects. This programme is agreed between the student, his or her Tutor and the Professor at the end of the first or the beginning of the second year. It is subject to reappraisal at tutorials and reviews throughout the year. Joint projects, long or short term, are encouraged from other Departments within the College.

## Syllabus - Architectural Glass. Year 1.

Students will study :

- \* Current techniques for manufacturing and finishing all types of Glass products, with particular emphasis on architectural components and performance requirements, and the safe and effective use of facilities in the Glass Department. This is taught by group and individual technical design projects, industrial visits and theory lectures.
  
- \* Design and research projects in the area of interior/ exterior components.

- \* Design and research projects on structural and decorative components.
- \* Competitive Art/Design commissions from real and invented projects for free standing and cladding proposals.
- \* Management Studies.
- \* Art/Design/Craft history course from within the currently available Cultural History programme.
- \* Techniques of presenting design and commission proposals.

## Year 2.

Each student proposes a number of projects based upon the first year work as agreed with the Professor of Ceramics and Glass and the Course leader. At least one project is team-based to provide a joint solution. Proposals can be expected to range across the following topics :

- \* Glass finishes for external glazing and cladding.
- \* Glass finishes and decorations and colour for interior use.

- \* Glass in interior structure; partitions; shower screens, etc.
  
- \* Glass in furniture - decorative glazing, Stained Glass fenestration.
  
- \* Lighting.

### **Cultural History requirement**

All students are required to take courses in the Department of Cultural History, including a course in Management Studies.

### **Staff**

The staff are all practising designers, artists, craftsmen or material scientists.

### **Facilities**

The Ceramics workshops have comprehensive facilities for model and mould-making, mixing clay bodies, casting, throwing, extruding, turning and glazing. Kiln facilities include a 90x90x120 cm trolley hearth glass kiln (maximum temperature 1350°C), a top hat electric kiln with ramp controller and small gas and electric kilns.

The Glass workshops have facilities for hot-glass working including an industrial twin-pot furnace and a smaller twin crucible furnace. A wide variety of lehrs and kilns exist for glass forming and decorative processes. Cold glass machining equipment, cutting, engraving lathes and sandblasting booths are available for working hard and brittle materials. An acid etching and plating studio with attendant safety equipment supplements general studio and workshop space.

#### **Research and development**

The Department maintains close links with major manufacturers. Professional projects are usually research or development initiatives and include :

The design and prototyping of decoration for tableware, Crown Suppliers.

A range of tiles, Homebase Ltd.

Computing cutting of Glassware, Colin Mayers Ltd.

Design and prototypes using the Mirrorspot technique, Havelock Europa.

#### **Sponsored bursaries**

The Department has bursaries available from the following sponsors :

Josiah Wedgwood and Sons Ltd.  
Staffordshire Potteries Ltd.  
The Estates of the late Vernard Cayzer.  
Royal Doulton Tableware Ltd.  
Pilkington Bros. Ltd.  
Royal Brierley Crystal, and  
Sekon Glass.

### 3.8 THE HETLEY-HARTLEY WOOD COMPETITION<sup>19</sup>

This annual competition, sponsored jointly by the sole manufacturer of antique glass in England, Hartley-Wood of Sunderland,<sup>20</sup> and one of the oldest and most reputable of retail suppliers of antique glass and materials for the stained glass industry, James Hetley and Company Ltd.,<sup>21</sup> of Wembley, is, together with the complementary annual competition of the Worshipful Company of Glaziers,<sup>22</sup> one of the most important events of each academic year.

Originally the prize money was awarded to students of the Royal College of Art, but with the closing of their stained glass department in 1970, an open competition was arranged. To date, ten competitions have been held. In each case the theme of the competition concerns a real window in a real building, and on two occasions the designs have resulted in completed schemes.

Full-scale sectional panels are a prerequisite. These panels are exhibited publicly, and winning panels join the Permanent Collection of Stained Glass Museum at Ely.

The competition is primarily aimed at students and new craftsmen who are either self-employed or who have joined a large studio.

### 3.9 REFERENCES AND NOTES - CHAPTER 3

1. MacCARTHY, F. (1972). All Things Bright and Beautiful - Design in Britain 1830 to Today.
2. Ibid.  
Also : ROYAL COLLEGE OF ART, YEARBOOK 1980-82. p. 12.
3. HUBBARD, H. (1951). A Hundred Years of British Painting. p. 172.
4. HARRISON, M. (1980). Victorian Stained Glass. pp. 69-71.  
Also : HUBBARD. pp. 145-149.
5. MINISTRY OF EDUCATION (1960). First Report of the National Advisory Council on Art Education 1960. p. 5. (Named the 'Coldstream' Report, after its chairman, Sir William Coldstream, C.B.E., D.Litt.).

Also : NATIONAL COUNCIL FOR DIPLOMAS IN ART AND DESIGN (1969). Courses leading to the Diploma in Art and Design approved by the Council.  
(The 'Summerson' Report, after its chairman, Sir John Summerson, OBE, FBA).

See Also : BRITISH INFORMATION SERVICES (1970). The Promotion of the Arts in Britain. pp. 15-17.

Stained Glass is not mentioned at all as a subject option in the thirty-four Colleges of Art list. However, the Royal College of Art (as an independent College) offered a post-graduate course (as we have seen in Chapter 2), and at the Swansea School of Art, Howard Martin had begun a Stained Glass Department at Swansea in 1935. Gerald Moira (1867-1959), Principal of the Edinburgh College of Art (1924/1932) and a fine muralist and illustrator, as well as stained glass designer, had encouraged the teaching of the medium. (Refer HARRISON (1980), p. 67; also EDINBURGH COLLEGE OF ART PROSPECTUS, 1984-86, p. 7); the Glasgow School of Art continues to train stained glass artists.

6. GANN, A.S. (1974). The Report of the Working Group on Vocational Courses. Coombe Lodge Report : as reported in THOMAS, C. (1986). The Relevance of Some Aspects of BTEC Art and Design Courses in the United Kingdom for South Africa. pp. 9-24; Appendix, p. 1-19.

Refer also : COOK, J. (1986). Education in Glass, Glass in Education. Neues Glas, New Glass, Verre Nouveau. July/September. pp. 198-203; October/December. pp. 276-279.



7. Cook explains that a Monotechnic concerned only with Art and Design will have between 450-600 students. Larger Polytechnics like Manchester and Leicester have more than 1000 full-time First degree and Masters degree level students in the Faculties of Art and Design. (p. 199).
8. THOMAS. P. 16.
9. COOK. pp. 199; 202.
10. THOMAS. pp. 5-6.
11. Ibid. pp. 28-29.
12. Ibid.
13. COOK. p. 199.
14. COOK. pp. 202-203; 278-279.

Refer also : ABRAHAMS, A. and SHAW, P. (1983). Survey of British Glass in the 1980's. pp. 79-90.

15. SHAW. p. 80.
16. Prospectus 1984-1986, Edinburgh College of Art.  
Also : SHAW. pp. 81-82.  
  
The author visited the College in 1984 (See References and Notes (Introduction), and Acknowledgements).
17. Prospectus 1984/85, Faculty of Design, Swansea (WGIHE).  
  
Also : SHAW. pp. 88. and  
SWASH, C. (1985). The Fiftieth Anniversary of the Stained Glass Department at WGIHE - Swansea. Stained Glass (BSMGP). Autumn. pp. 4-6.  
  
The author visited the Institute in 1984. See References and Notes (Introduction), and Acknowledgements.
18. ROYAL COLLEGE OF ART, YEARBOOK 1980-82. Information Sheets and Syllabi, Dept. of Ceramics and Glass, Royal College of Art, 1985;  
  
Also : SHAW. pp. 79-80.
19. MOLE, S. (1984). The Hetley-Hartley Wood Competition. Stained Glass, Autumn. pp. 4-6.
20. See Appendix.
21. See Appendix.
22. See Chapter 4.

## CHAPTER 4 : CORPORATE BODIES

There are a number of important corporate bodies and societies in the United Kingdom whose primary concern is design and decoration in glass. The function of some of them is the preservation and/or restoration of stained glass of historical and/or artistic interest, others, the commissioning and/or marketing of contemporary art in glass. The keeping of national archives and the publication of occasional papers and monographs; the function of specialized museums; the promotion of high standards of craftsmanship and creative design - all these and others are the aims of the bodies that are listed below. It should be noted that this list is by no means comprehensive; only those that deal primarily with stained glass or decorative glass related to architectural or autonomous glass work are dealt with here.

### 4.1 CORPUS VITREARUM MEDII AEVI - GREAT BRITAIN<sup>1</sup>

The Secretary  
Corpus Vitrearum Medii Aevi  
Great Britain  
20-21 Cornwall Terrace  
London NW1 4QP

The British Academy's Corpus Vitrearum Medii Aevi Committee was established in 1956. It is part of the International Corpus Vitrearum sponsored by the Union Académique Internationale and the Comité International d'Histoire d'Art.

### **Aims**

It has as its primary aim the publication of an illustrated catalogue of the medieval window glass in Britain. The Committee is also concerned to monitor and assist with current restoration in this field and to sponsor the establishment of research archives. (The terminus date for British CVMA coverage is 1540).

### **National Archive**

In 1981 it was decided to centralize and consolidate this material and to make it available to scholars and the public in a National Archive. The Royal Commission on Historical Monuments (England) provided an ideal situation in its National Monuments Record at Fortress House, Savile Row, London W1, and the British Academy provided an Archivist. The ultimate aim is comprehensive coverage of the surviving medieval glass in Britain; the Archivist would welcome information concerning photographs and records of glass not represented in the collection.

## **Library**

The Corpus' Reference Section at Fortress House is open to the public 10.00 - 5.30 p.m. Monday - Friday.

The CVMA Great Britain provides scholarly assistance and documentation for all workshops engaged on conservation work for Medieval glass in the U.K. Liaison is maintained with those researching the deterioration of glass and other relevant subjects.

## **Publications**

The British Academy publishes the CVMA volumes, the Bibliography on the Conservation of Stained Glass, and other occasional papers and monographs. The Corpus Vitrearum newsletter is produced quarterly. Copies are kept at Fortress House. Information is also published in regional newsletters.

## **Enquiries**

Enquiries from the U.K. and abroad are answered or passed to the appropriate experts, whether on conservation, post-medieval glass or related subjects such as heraldry and iconography.

#### 4.2 THE INTERNATIONAL INSTITUTE FOR CONSERVATION OF HISTORIC AND ARTISTIC WORKS (IIC)<sup>2</sup>

6 Buckingham Street                      Tel. : 01-839 5975  
London WC2N 6BA

The Institute is concerned with the whole field of inanimate objects considered worthy of preservation, whether in museums and libraries or exposed externally, their structure, composition, deterioration and conservation. Founded in 1950, it now has over 3 000 members in 60 countries and includes in its membership professional conservators working independently, outside the ambit of governments and institutions. Members are enabled to keep abreast of technical advances and in personal contact with their colleagues at home and overseas through ICC's publications, congresses and groups.

##### **Publications**

There are two principal journals, Studies in Conservation, published quarterly, contains original work and reviews on advances in conservation and restoration, covering both practical and scientific aspects, together with technical research on materials and methods of fabrication. Art and Archaeology Technical Abstracts - IIC (AATA), published twice yearly, contains abstracts of the world's technical literature, not only in the field of conservation but also

on science and technology generally, where relevant. A bi-monthly Bulletin summarizes current information on membership matters, together with appointments vacant. The Institute also publishes books on aspects of conservation, mainly in connection with its international congresses, and sponsors books on specialized subjects within its field.

### **International Congresses**

International congresses are held at intervals of two years and papers commissioned from leading specialists within a chosen field are read and discussed. The general aims of the congresses are, firstly, to summarize the present position of technical progress in the particular field, both for advanced specialists and as educational material for younger members, and secondly, to present recent advances and research. The subjects of the congresses are: Recent Advances in Conservation (Rome 1961), Textile Conservation (Delft 1964), Museum Climatology (London 1967), Stone and Wooden Objects (New York 1970), Paintings and the Graphic Arts (Lisbon 1972), Archaeology and the Applied Arts (Stockholm 1975), Wood in Painting and the Decorative Arts (Oxford 1978), Conservation Within Historic Buildings (Vienna 1980), Science and Technology in the Service of Conservation (Washington 1982), Adhesives and Consolidants (Paris 1984).

## **Regional Groups**

With the approval of the Council, regional groups with their own structure and by-laws operate autonomously in Austria, Canada, France, Holland, Mexico, Poland and the Scandinavian countries. The former American and United Kingdom groups have been independently incorporated, while retaining friendly relations with the parent body. These groups form centres for the exchange of professional information between members and hold periodic meetings, whose proceedings are circulated. Membership of all groups is available to all members of IIC on payment of the group subscription.

## **Organization and Membership**

There are four categories of membership: Fellow, Associate, Supporting Institution and Honorary Fellow. Fellows, who are conservators of standing, scientists in the field of conservation, or administrators with a special concern for conservation, are elected by ballot of the existing Fellows. Associateship is open to all who are involved in conservation. Institutional membership is available to museums and interested corporate bodies. Honorary Fellowship is awarded by the Council to senior Fellows who have rendered conspicuous services over a long period. The Institute is administered by an international Council of twenty members who are drawn from and elected by the Fellows.

#### 4.3 INTERNATIONAL ASSOCIATION FOR THE HISTORY OF GLASS<sup>3</sup>

The International Association for the History of Glass was founded in 1958 to promote the study of all periods of glass from historical, archaeological, artistic and museological angles, as well as the problems of conservation. It does not however deal with contemporary industrial production. Membership is open to anyone, individuals or organizations, interested in the aims of the Association.

The main activity of the Association is centred on the congresses which are normally held every three years. Past locations have been Liège (1958), Leiden (1962), Damascus (1964), Ravenna-Venice (1967), Prague (1970), Cologne (1973), Berlin-Leipzig (1977), and London (1979). To coincide with each meeting an illustrated survey of the glass and glass collections of the host country is produced, while all the papers are published to form the Annals of the Association.

Conference sessions are normally devoted to the following topics:- Pre-Roman, Roman and Medieval, Byzantine and Islamic, 16-18th Centuries, 19-20th Centuries, and Analysis and Conservation. After each conference there is normally a tour of the collections in other major towns.



Membership of the Association, essential before attendance at a Conference, is 400 Belgian Francs per annum, or 1 100 Belgian Francs for three years.

Full details of the Association may be obtained from :

Secrétariat de la Présidence

A.I.H.V.

Musées Curtuis et du Verre

Quai de Maastricht 13

LIEGE

Belgium

OR

Secretary General

I.A.H.G.

L.D.P. Lamnon

Corning Museum of Glass

CORNING, NY 14830

U.S.A.

#### 4.4 INTERNATIONAL COUNCIL OF MUSEUMS<sup>4</sup>

##### ICOM COMMITTEE FOR CONSERVATION WORKING GROUP

##### "GLASS, CERAMICS AND RELATED MATERIALS"

Dr. N.H. Tennent

Co-ordinator, ICOM Conservation Committee

Working Group, Glass, Ceramics and

Related Materials Art Gallery and Museum

Kelvingrove

Glasgow G3 8AG

Scotland

In 1982 the Directory Board of the Conservation Committee of ICOM (International Council of Museums) approved the formation of a new Working Group whose remit, "Glass Ceramics and Related Materials", is intended to extend the range of Working Group activities to cover this field of conservation. Accordingly, areas of activity of the Group will include for example the problem of stained glass and vessel glass conservation, examination of suitable materials for conservation of glass and ceramics (including the side-effects of some conservation procedures), and research into the relationship between composition and deterioration.

The prime function of the Group will be to act as a means of stimulating and co-ordinating research and development in this branch of conservation. Progress on a programme of ongoing projects conducted by members of the Group can be re-



groups. Individual artists and small groups join by obtaining membership of one of the affiliated societies.

The English-speaking region of SIAC has affiliated societies in Australia, Korea and India. In England the region embraces the Society which SIAC itself founded : SIAC UK., The Society of Catholic Artists, The Council for the Care of Churches and various Galleries and Trusts. Much of the work of SIAC (UK) is involved in managing events for the Region within England, through Area Groups notably in Bristol and the S. West, the London area and smaller groupings elsewhere. Chief of these events is a weekend study conference, at an annually changing venue, and frequent soirees. The Region also arranges exhibitions such as those recently at Bath and Crediton. Through its contacts SIAC is usually able to give advice on specialists to design or execute commissions. In the future it is expected that there will be established several permanent Galleries for the display of work in regional centres.

The function of the organization is more than just bringing together Christian artists, societies and groups. It is that of bringing art and the artist back into the mainstream of the life of the churches. SIAC's role is consequently to help the churches to become more aware of the part that the arts should be playing in their life. This is done primarily through both conferences and exhibitions of work, as well as encouraging the opening of galleries for the showing of work

of Christian themes. Every four years an international conference takes place.

So far four regional secretariats have been formed, for the German-speaking countries and Eastern Europe, for the French-speaking countries, for the English-speaking, and for the Latin countries. The International Committee is made up of delegates from all affiliated societies. As new groups affiliate from outside of Europe, moves are afoot to set up new secretariats.

#### 4.6 THE BRITISH SOCIETY OF MASTER GLASS-PAINTERS<sup>o</sup>

6 Queen Square

London WC1

The Honorary Secretary :

Christine Kirby

Tel. : (0293) 36188

28 Westfield Road

West Green

Crawley

Sussex RH11 7BT

## **Aims**

Inaugurated in 1921, the BSMGP aims to promote the contemporary prosperity of the art of stained glass and to maintain its scholarly study.

The term 'glass-painting' is interpreted in its broadest sense, and includes slab glass work, copper foil, appliqué and other techniques.

## **Information**

An annual journal and twice-yearly magazine are published. Exhibitions, lectures, discussion and competitions are held. The Secretary acts as a contact point for information on materials, pigments, etc., books and courses.

## **Representation**

The Society represents glass-painters in dealing with Government and other institutions.

## **Membership Numbers**

About 450 members, comprising 150 professionals, of whom about 50 are fellows, and 100 associates.

#### 4.7 THE SCOTTISH GLASS SOCIETY?

Secretary :

J.A. Bains

Tel. : 025-081 324

Dorich

Glen Derby

Kirkmichael

Perthshire PH10 7NA

#### Aims

- To promote the development of art or craftsmanship in the making of glass, stained glass, engraving of glass, and any other techniques or forms of decoration (the 'Craft') that the Committee may determine.
- To foster links with glass manufacturers or workshops, engraving studios or other bodies, also persons employing craftsmen, persons or institutions otherwise interested in the Craft.
- To promote and advance public education in and stimulate a knowledge of the Craft and its history by means of exhibitions, lectures, meetings, demonstrations, discussions, publications and other methods.

- To establish an index of craftsmen, and a newsletter as a positive link between members, particularly for those working in more remote areas of the country.
- To establish links with interested bodies throughout Scotland and the establishment of reciprocal exhibitions internationally.

The Society was formed in 1979 as a result of agreement between Scottish glass workers in all areas of the craft that a forum for exchange of ideas and information would be useful.

#### **Activities**

An annual general meeting is held in October/November, and other meetings and visits are arranged throughout the year (e.g. the Edinburgh College of Art Glass Department, the Royal Scottish Museum Glass collection, Museum & Art Gallery, Kelvingrove, Glasgow, and lectures from distinguished arts and crafts persons).

#### **Newsletters and Exhibitions**

A newsletter is published at frequent intervals. Exhibitions are organized.



#### 4.8 BRITISH ARTISTS IN GLASS<sup>a</sup>

BAG Secretariat  
c/o Coleridge of Highgate  
80 Highgate High Street  
Highgate Village  
London N6 5HX

##### Aims

To encourage and promote the highest standards of creative work in glass in diverse forms and to communicate this work to the public.

An annual conference/seminar is held.

An annual exhibition of members' work is held. (The 1983 exhibition commenced at the Commonwealth Art Gallery, London and toured to museums in the provinces).

This is situated at a studio glass gallery, Coleridge of Highgate. The owners of the gallery are presently entering on computer as much information as possible on glass - courses, collections, craftsmen, etc., - with a view to providing an information service covering the entire field of glass.

The BAG newsletter is produced three times a year, providing a useful contact point.

#### 4.9 SOCIETY OF DESIGNER-CRAFTSMEN<sup>9</sup>

24 Rivington Street

Tel. : 01-739 3663

London EC2A 3DU

The Society is organized by craftsmen for craftsmen and is administered by a Council comprising Fellows, Members, Licentiates and Associate members.

Membership of the Society is open to all individuals personally involved in the design, control and production of works of fine innovative craftsmanship. Liaison is maintained with industry.

#### 4.10 THE CRAFTS COUNCIL<sup>10</sup>

Administrative Offices :

8 Waterloo Place

London SW1Y 4AT

**Gallery and Information Services :**

11/12 Waterloo Place

Tel. : 01-930 4811

London SW1Y 4AU

**Information from the Crafts Council :**

**Index and Slide Library**

The Crafts Council (a Government body) aims to promote innovative excellence in the crafts and to this end maintains an index of craftsmen selected for originality and quality, together with a slide library, which may be consulted by the public and those wishing to commission work.

**Information**

The Crafts Council constitutes a valuable contact point for artist/craftsmen and others needing information on a wide range of subjects to do with any craft, including glasswork. Information is available on the following subjects :

**General Sources of Information :**

General literature;

Art and Design courses in UK (Vocational, Graduate,  
Post-graduate);

Post-graduate study/employment overseas;

Education grants and awards;

Grants and awards for professional artists/craftsmen;

Fund-raising;

Studio/workshop space;

Exhibitions;

Exporting work;

Law and the artist;

Workstyles : (i) Self-employment,

(ii) Co-operative,

(iii) Communities,

(iv) Job Sharing.

Specific Disciplines :

Arts administration;

Artist craftsman;

Art/design/craft teaching;

Art therapy;

Community Arts;

Conservation/restoration;

Design : (i) General,

(ii) Three-dimensional,

(iii) Fashion textiles,

(iv) Graphics,

(v) Design for advertising,

(vi) Publishing/print

## Fine Art :

Painting/Sculpture/Printmaking/Stained Glass;

History of Art;

Museums and Art Galleries;

Photography

Radio/TV/Film/Video;

Theatre.

## Craft Shops

Certain craft shops and galleries are also selected by the Crafts Council for the quality and display of work, and the shop's commitment to the craft.

## Grants and Loans

The Craft Council administers the following grants and loan schemes :

### Workshop Assistant Scheme

Financial Assistance is provided to enable established craftsmen to take on a trainee (1 or 2 years), the encouragement of a high standard of work being the main consideration. The quality of the employer's workmanship is a major criterion.

### Advanced Training Scheme

A grant for living expenses over 3-9 months is made to enable those intending to pursue careers as artist-craftsmen to benefit from intensive training and workshop experience with established craftsmen. The craftsmen may also be paid for extra time and effort involved.

### Loan Scheme :

Financial assistance can be sought by craftsmen with over two years' accounts, who wish to enlarge their workshops or improve facilities/equipment.

Bursaries and other loans are available on request from the Crafts Council.

### Conservation

The Council runs a Conservation Register which holds information on over 500 conservation workshops and co-ordinates the National Register of Conservation Crafts Skills in the Building Industry.

These registers offer a service to those with historic objects and buildings in their care.

Information on training, workshop space, the supply of materials is also held, and those seeking specialist or technical advice can be put in touch with informed sources.

#### 4.11 GLASS AND GLAZING FEDERATION<sup>11</sup>

6 Mount Row  
London W1Y 6DY

Tel. : 01-409 0545

Director : Mr. Bryan Hern

#### Aims

- To advise on and encourage the use of members' products and services;
- To maintain and enlarge the awareness of the environmental advantages of glass and glazing materials in buildings;
- To establish and supervise the implementation of ethical and technical standards;
- To represent the industry's point of view on trade matters, both within the UK and elsewhere;
- To provide advice to members on current and forthcoming legislation;

- To supply members with advice on Industrial Relations and, through the Flat Glass Council, to negotiate wages and conditions on behalf of signatories to the National Labour Agreement.

### **The Federation**

This represents the whole field of glass and glazing for new buildings, for maintenance and home improvements, and also for vehicle windscreens (including replacement windows and doors).

The Federation's interests, apart from normal window glass, extend to double glazing, safety glass, toughening and lamination, glass bending, decorative glass and mirrors.

### **Information**

The Federation provides one central source of advice to architects, builders, property owners and householder alike on all matters relating to the use of glass and glazing methods. A wide range of both technical and consumer advice literature is published by the GGF.

### **Promotion**

The Federation also brings new developments in glass and glazing directly to the attention of architects.



## **Competition**

Annual competitions are held (.e.g. the 1983 Competition was to demonstrate the effective use of flat glass in house design).

### **4.12 GMF : GLASS MANUFACTURERS' FEDERATION**

19 Portland Place

Tel. : 01-580 6952

London W1N 4BH

The Federation's members are the UK manufacturers and fabricators of glass products from containers to handmade crystal (but not flat glass or glass fibre). Associate membership is open to suppliers of machinery, plant and raw materials.

#### **Aims**

Formed in 1926, the Federation acts as spokesman for the British Glass Industry in dealing with Government and the EEC on all matters affecting the industry, from trade tariffs to taxation and energy supply.

Other concerns include marketing, conservation of the environment through glass recycling, safety and health at work, transport and education and training.

## **Education and Training**

The Federation produces numerous informative booklets on opportunities in the glass industry for use by Careers Officers and young people.

## **Films and Publications**

Education forms and publications, both technical and of general interest, include glass recycling. The GMF produces extensive lists of sources of information on the glass industry.

## **Library**

The Federation's library contains over 600 publications on all aspects of the glass industry in the UK and abroad, together with reference and business studies sections. Works on antique, craft and stained glass and architecture are also included. Several journals are taken.

The library is open to the public from 10.00 a.m. - 5.00 p.m. on weekdays except Thursdays.

The GMF provides a public information service.



## **Glaziers Hall**

A hall was used during the 17th Century and was destroyed by the Great Fire in 1666, and the Company met in a variety of other premises until in 1977 the lease for the present Glaziers Hall was signed.

## **Glaziers Hall Limited**

This Company acts separately from the livery company in running the property and organizing outside bookings for meetings and functions.

## **Aims of the Company**

### **Glaziers Trust :**

The Glaziers Trust was established in 1966, with the following aims :

- To further, for the benefit of the public, a knowledge, understanding and appreciation of the art of stained, etched, and other forms of decorative glass and glass mosaics, and for such purpose to provide and preserve fine examples of such art in places where such examples may be seen by members of the public;

- To organize excursions for members of the public to visit such places;
- To provide for and maintain a library;
- To arrange and hold lectures and discussions of all kinds.

### **Objectives**

The Trust's objectives were redefined in 1981 as follows :

- Assistance for the preservation and/or restoration of stained glass of historical and/or artistic interest. This in fact comprises the main part of the Trust's work;
- Commissioning of works of art in glass;
- Disbursements for the furtherance of the arts and crafts of stained and painted glass by the award of prizes and scholarships;
- Disbursements from the Boydell Library Fund.

The Trust also administers the Glaziers Charity for relief in Need, and the Sigismund Goetze Memorial Benevolent Fund for the relief of necessitous painters in stained glass and/or their dependants and/or for providing aid through scho-

larships or otherwise in the education, instruction and study of persons desiring to enter upon or engage in the art of painting in stained glass.

### **Stained Glass Repository Scheme**

This Scheme was established in 1981 in conjunction with the GLC and the Advisory Board for Redundant Churches, to salvage and secure the re-use of good (mainly Victorian) glass from church and other demolitions in Greater London.

Salvaged glass is stored in the basement of Glaziers Hall pending re-use.

### **Prizes and Scholarships**

- The Stevens Competition for stained/decorative glass window design;
- Sir Arthur Evans Travelling Scholarship;
- Practical Glazing Competition.

### **The Edward Boydell Library**

The library is housed at Glaziers Hall, and includes the library of the Master Glass Painters.

It comprises some 300 volumes, covering stained glass, the Livery Company and London generally.

The Honorary Librarian receives regular booklists on glass publications, and selects appropriate books for purchase.

Arrangements to consult the library are made through the Clerk, who will forward the application to the Honorary Librarian. An appointment is then made through the Hall Manager, as the library cannot be used when a function is in progress.

#### 4.14 MANUFACTURERS<sup>1 4</sup>

There is only one manufacturer of 'true' antique glass in England :

Hartley, Wood & Co., Ltd. Tel. : 0783 672506  
Portobello Lane  
Monkwearmouth  
Sunderland  
Tyne & Wear SR6 0DN

It is poetic that the last firm in England to make antique flat glass should be situated in Sunderland, for the first glass was probably made in the North East, where, according to the Venerable Bede's 'History of England' , Gauls, from

what is now France, were brought in to glaze a monastery at Monkwearmouth, Sunderland, in 674 A.D.

The Gauls, however, returned to France, and glass-making on a large scale was not renewed in the area until the 1600's. In the Nineteenth century the area was active in the glass-making art; today, only Hartley Wood survives.

With the demise of Hartley's Wear Glass Works (which had been unable to keep up with the changing technology of the times), James Hartley Jnr., formed a partnership in 1892, with an expert in coloured glass, Alfred Wood. The firm has now been in operation for ninety years, and because of the uniqueness of its hand-made 'antique' glass, made by the age-old mouth blown process, Hartley Wood glass enjoys a special position amongst contemporary glassmakers, not simply as the only remaining stained glass manufacturer in England, but as a world leader.<sup>15</sup>

Now a subsidiary company of the Pilkington's Group (1983), it exports to stained glass studios and designers all over the world.<sup>16</sup>



#### 4.15 REFERENCES AND NOTES - CHAPTER 4

1. BROWN, S. (1986). Corpus Vitrearum Medii Aevi, Great Britain. Stained Glass (BSMGP). Spring. p. 18.  
SHAW. pp. 37-39.
2. List of Members 1983. International Institute of Conservation of Historic and Artistic Works. pp. 1-2. The author is an Associate member of this body.
3. SHAW. pp. 41-42.
4. SHAW. pp. 43-44.
5. Information supplied by the President, Peter Kirby.
6. SHAW. pp. 46.  
The author is an Ordinary Member of the BSMGP.
7. SHAW. pp. 49-50  
and information supplied by the Secretary,  
Mr. J.A. Baines.
8. SHAW. p. 45.
9. Ibid. p. 51.
10. SHAW. pp. 54-57.  
Refer also : CRAFTS magazine, published by the Craft Council six times per year : Circulation Dept.  
8 Waterloo Place  
London SW1Y 4AT.
11. SHAW. pp. 70-71.
12. Ibid. pp. 73-74.
13. Ibid. pp. 61-65.  
The author is indebted to Phillida Shaw, Information Officer of the Worshipful Company of Glaziers and Painters of Glass, for much of the information contained in this chapter.
14. Modern technology and past crafts combine to re-create the handmade glass of a golden age. Brown, Hartley, Wood & Co., Ltd. (1984).
15. Ibid.
16. The author and his family were taken on a conducted tour of the factory and witnessed the fascinating glass-making process, illustrated in the Appendix.  
See References and Notes (Introduction) and Acknowledgement.

## CHAPTER 5 : CONSERVATION, RESTORATION, MUSEUMS AND GALLERIES

### 5.1 INTRODUCTION

NEWTON<sup>1</sup> defines Conservation as 'holding together what already exists' and Restoration as 'trying to make the window what it was like in the beginning'.

Since the Second World War, there have been many important developments in the field of restoration in Western Europe and America. The problems of ancient glass are being considered by experts and restorers of all nations who have a common forum in the Corpus Vitrearum Medii Aevi. This project, launched in 1951 by the International Committee of the History of Art to record the world's medieval windows, enables historians, scientists, technicians, artists and conservators to meet and exchange information of the composition and restoration of stained glass.

It is important that all who are involved in this important work are kept constantly up-to-date and informed about new materials and techniques, for as Mr. Peter Gibson, the Director of the York Glazier's Trust Workshops says, "It is impossible to make rules about conservation, each panel is a new problem."<sup>2</sup> In Europe there are particular problems relating to the preservation of ancient glass.

In the United Kingdom, York, Canterbury and Norwich, have their own stained glass workshops to care for the glass of the great cathedrals and parish churches, while in London, the Victoria and Albert Museum has an important conservation studio for its own collection, and to advise other bodies (for example, the Council for the Care of Churches; the National Trust).<sup>3</sup>

As we have seen, The Worshipful Company of Glaziers and Painters of Glass, and the British Society of Master Glass Painters are also individually, and through their members, deeply involved in the preservation of the priceless heritage of the past.<sup>4</sup> Clarke-Eaton of Bristol, and Goddard and Gibbs of London devote a great deal of time to restoration.<sup>5</sup>

Acknowledged authorities in the field are, amongst others, the scientist, Professor Roy G. Newton;<sup>6</sup> an historian, Dr. Peter Newton, FSA; Frederick Cole, RF, FMGP (formerly of Canterbury); Peter Gibson, FSA,<sup>7</sup> Secretary and Superintendent of the York Glaziers Trust; Mr. Dennis G. King, FSA, of Norwich,<sup>8</sup> and technical consultant to the Trust; and June Lennox,<sup>9</sup> formerly head of the Conservation Studio of the Victoria and Albert Museum, and now (on Cole's retirement in December 1984), Director of Canterbury Cathedral's Stained Glass Studio.<sup>10</sup>

It was apparent to the author that Conservation and Restoration is far from being an exact science, and indeed differing attitudes prevail from centre to centre towards both ethics and techniques.

"As much as necessary, as little as possible", can be said to be the first and greatest commandment of the stained glass conservator. Great sensitivity, wide cultural and art-historical knowledge, an awareness of the pitfalls likely to be encountered and the disasters of the past, an up-to-date and thorough scientific training - these are some of the talents demanded of a conservator.<sup>12</sup>

NEWTON says that three ethical principles are essential :

- i) any intervention must be the minimum necessary;
- ii) conservation must be carried out with respect for the integrity of the whole window;
- iii) whatever is done should be reversible, in case anyone in the future needs to undo the treatment.<sup>13</sup>

If 'conservation' can be controversial, 'restoration' can arouse strong passions, and there are conflicting opinions concerning almost all aspects.<sup>14</sup> Marked differences of approach exist between conservators of painted glass from different countries and dissimilar attitudes to the task of

restoration by museum as opposed to stained glass studio personnel. Thus, the author found in his visits to York, Canterbury and the Victoria and Albert Museum,<sup>15</sup> conflicting opinions concerning the replacement of missing painted glass fragments with simulated contemporary pieces in the style of the twelfth, thirteenth, fifteenth (et al.) century; the use of plating glasses; the fixing of loose paint; cleaning processes, and so on. What is pertinent, say, to a medieval panel which will be housed in museum conditions of controlled environment, will not necessarily be suited to the fenestration of a cathedral or parish church exposed to extremes of weather and temperature.

And then there is the client to be taken into account, for in Britain, it is the owner of the glass who must take the final decision as to whether the stained glass panel or window shall be restored, and to what degree. The conservator must also perform an educative rôle, for only thus will the panel in question survive for posterity.<sup>16</sup>

In the museum situation,

- the weather is not a consideration;
- time is not a factor;
- scientific assessment is more easily undertaken;
- size is not a factor, as it is in the church situation, where the logistics of size and weight of precious glass must be taken into account;

- synthetic resins which may weather or discolour in situ may be perfectly suitable to museum conditions and artificial light sources.

The studio or cathedral technologist must usually justify far more pertinently his time in financial terms. Logically, both approaches are complementary: research in the field and research in the museum environment both have inter-related values.

## 5.2 THE VICTORIA AND ALBERT MUSEUM

The Conservation Studio at the Victoria and Albert Museum at South Kensington, London, carries out a meticulous conservation programme. The team of experts consider that their main task is to conserve the glass, not to make aesthetic judgements about it.<sup>17</sup> Thus, the same time-consuming care might be put to the reconstruction of a section of a repeating border pattern which research had shown came originally from Abbot Suger's twelfth century Abbey of St. Denis, mausoleum of the Kings of France,<sup>18</sup> as for a Pre-Raphaelite masterpiece designed by William Morris in the 1860's.<sup>19</sup>

The Victoria and Albert Museum also administers a training programme for a limited number of serious conservation students. These students come from all over the world, many from Europe and the United States of America, some from further afield. During 1984, at the time of the author's

visit, Graham Stewart from Christchurch, New Zealand, was extending his skills and knowledge there.<sup>20</sup>

Candidates for studentships preferably have A-level Chemistry and Biology, and their training may include a day-release Chemistry course. Most candidates are graduates from Schools and Colleges of Art (and this is common for all conservation disciplines, not only for stained glass). Only students who are able to show that they will be able to enter the specialized labour market as conservators in museums, or as freelance designers and restorers, are considered for studentships. In 1984, twenty-four people were interviewed for four studentships in the whole range of conservation disciplines at the Museum. The candidates are tested in various ways to assess their abilities: these tests include intelligible quotients, spacial conception and colour perception.<sup>21</sup>

Studentships are funded by the Civil Service at the level of Assistant Conservation Officer - the lowest rank in the department - but, nevertheless, at a figure higher than a College student's grant.<sup>22</sup>

The Victoria and Albert Museum is the repository for a comprehensive collection of stained glass from the twelfth century to the present. The Contemporary section contains important examples of the most significant British artists

of the Age, as well as a selection of European artists, including the German Masters like Schaffrath and Schreiter.<sup>23</sup>

### 5.3 YORK MINSTER AND THE YORK GLAZIERS TRUST

The quiet, on-going conservation and restoration work of the York Glaziers Trust in the great thirteenth century York Minster was dramatically highlighted on 9 July 1984, when a fire, caused in all probability by a lightning bolt, devastated the south transept, causing damage estimated in excess of one million pounds sterling.<sup>24</sup> Miraculously, despite the total loss of the roof, the priceless stained glass of the south transept survived. Even the Rose Window, which dates back to the sixteenth century (the upper part severely blackened), came through the ordeal relatively unscathed, although careful assessment revealed many minor breakages.<sup>25</sup>

York Minster was the fifth church to be built on the Saxon and Roman foundations. Building began with the transepts in 1230. The nave followed in the fourteenth century and the central tower in 1472.<sup>26</sup> One of the special beauties of the Cathedral is the West front, which many experts claim rivals the great west fronts of the Cathedrals of the *file-de-France*.



The Minster has 128 windows and they contain nearly half the total medieval stained glass in Britain.<sup>27</sup> Glass painting representative of every century during the last 800 years, with particularly fine fourteenth and fifteenth century glass, make the Minster a treasure-house of stained glass.<sup>28</sup>

The great East Window, made by John Thornton of Coventry, between 1405 and 1408, measures 23.17 metres in height and 9.7 metres in width - the size of a tennis court. This is the largest extant medieval window in the world.<sup>29</sup>

During the 1939-1945 war, these irreplaceable panels were removed from the windows and placed in eleven different places of safety.<sup>30</sup> NEWTON relates in his bibliography on conservation<sup>31</sup> that careful studies have revealed that glass which is now in bad condition was stored in damp locations during the war, whereas the glass which is now in good condition, was stored in dry locations.<sup>32</sup>

After the war, the opportunity was used to clean all the glass, to re-lead it where necessary, and to carry out such rearrangements of glass that had been 'jumbled' during previous restorations. This work was carried out in the Dean's and Chapter's Glaziers' Workshop, under the guidance of Eric Milner-White, Dean of York 1941-1963 - a leading authority on stained glass. The small team which began the mammoth task of restoration was headed by the Clerk of Works of the Cathedral, W.J. Green, O.E., Lazenby, the head glazier, and

a young apprentice glazier who had just entered into the seven-year Glaziers' Apprenticeship of the time, Peter Gibson.<sup>33</sup>

During this great period of restoration of the glass, most of the work had been funded by the Pilgrim Trust, a British philanthropic organization set up by an American, E.S. Harkness of New York, who endowed it in 1930 with two million pounds sterling. As the restoration programme neared its end, a group of far-sighted people realized that the Minster glass workshop, with its rare experience of some twenty years of restoration of important medieval glass, should not be dismantled.<sup>34</sup> Instead, considerable research went into the re-equipment and extension of the facilities. To this end, the Pilgrim Trust in 1966 gave six thousand pounds sterling, and in 1967 the York Glaziers' Trust was formed for the purpose of preserving and repairing the glass of York Minster, and any other worthy Christian church or secular building, to educate the public by the promotion and publication of scholarly research, and to train apprentices in the craft of glazing, especially relating to historic glass.<sup>35</sup>

Since its formation, in addition to the on-going programme of work undertaken on the windows of the Minster, the Trust has carried out conservation projects in almost 200 churches and secular buildings.<sup>36</sup>

Peter Gibson, FSA, has worked on the windows of the Minster for thirty-five years and knows every one of the 128 windows intimately.<sup>37</sup> He has also led the teams on the projects mentioned above. Two interesting and diverse projects have been the glazing of the oldest glass in Europe - the seventh and eighth century glass excavated at the monastic site at Jarrow, Tyne and Wear; and the safe removal of the world's second largest collection of Swiss enamelled glass from nineteen windows in the Church of St. Michael at Wragby in West Yorkshire, threatened by subsidence caused by coal-mining activities in the area.<sup>38</sup>

He also participates in the affairs of the Corpus Vitrearum Medii Aevi and took part in the ninth Colloquium in Paris in 1975. He has made many broadcasts and television appearances, has given over 1 500 lectures and has amassed an important slide collection. He has also assisted with programmes for the setting up of Conservation centres elsewhere, including the Netherlands and Canada.<sup>39</sup>

#### 5.4 CANTERBURY CATHEDRAL STAINED GLASS STUDIO

At the time of the author's visit, the stained glass restoration programme at Canterbury, arguably one of the most important cathedrals in Christendom, was supervised by Mr. Frederick W. Cole, RF, FMGP, an outstanding stained glass designer in the 'traditional' style.<sup>40</sup>

The studio was founded in 1971 by Mr. Cole, and is concerned solely with the restoration and conservation of its medieval glass, as well as other edifices containing ancient glass. The author was particularly keen to meet Mr. Cole, for the church at which he worships - Holy Trinity in Havelock Street, Port Elizabeth, has two-light windows designed and made by the artist. Mr. Cole received the Nesbit family cordially, and while a secretary entertained the author's daughter, his wife and he were taken on a conducted tour of the studio where the methods pertinent to restoration were discussed.<sup>41</sup>

As a glass painter of exceptional facility, Mr. Cole favours the viewpoint (not held by museum purists) that ancient glass - and at Canterbury the stained glass dates from the twelfth century - should 'read' and, therefore, missing fragments must be simulated according to the stylistic requirements of the window in question. This simulation is made on plated glass, moulded to fit with its ancient companions, so that the total design is neither interrupted nor disturbed by gaps and breaks.<sup>42</sup> Furthermore, the final glazing is effected in such a manner so that the process can be reversed, should the original fragment be discovered, or other alterations be necessary. The role of epoxy resins in restoration was also discussed, and the importance of trace elements in lead calme.<sup>43</sup>

## 5.5 MUSEUMS AND GALLERIES

About thirty museums and art galleries in the British Isle have glass repositories. Seven include stained glass in their collections.<sup>44</sup> The most important collections are those of the Victoria and Albert Museum, London, (see 5.3), Ely Cathedral Stained Glass Museum, Cambridgeshire, and the Burrell Collection of the Glasgow Art Gallery and Museum, Pollok Park, Glasgow. From an educational point of view, the well-planned display at the Pilkington Museum, St. Helens, Lancashire is also of importance.

### 5.5.1 STAINED GLASS MUSEUM AT ELY CATHEDRAL

This Museum was established in 1972 to rescue and conserve important examples of stained glass of all periods from redundant churches and other buildings; it was opened to the public in 1979. The panels on display illustrate the history of stained glass from the twelfth century to the present day. This exhibition is housed in the triforium of the cathedral and is back-lit with artificial light. This collection includes examples of both English and Continental stained glass from the fourteenth to the seventeenth centuries, and works by some of the finest designers of the nineteenth century Gothic Revival, namely Auguste-Charles Pugin (1762 - 1832), Edward Burne-Jones (1833 - 1898) and Henry Holiday (1839 - 1927). Panels by the firms Clayton and

Bell, and Heaton, Butler and Bayne, are particularly meritorious.

There are also a number of examples of stained glass by nineteenth century Glasgow designers, notable for their fine figure drawing and original colouring.

The Arts and Crafts movement (established 1888) is represented by Karl Parsons. (See Chapter 2).

Also displayed are prize-winning exhibits of the Hetley-Hartley Wood Stained Glass Competition organized annually by the British Society of Master Glass-Painters, and featuring outstanding examples by diploma students, particularly from such institutions as the School of Art and Design of the West Glamorgan Institute for Higher Education, Swansea, and the Edinburgh College of Art.

Models show in miniature but life-life detail, how in a modern workshop a window is designed and constructed. A photographic display outlines the story of stained glass.<sup>45</sup>

#### 5.5.2 THE BURRELL COLLECTION, POLLOK PARK, GLASGOW<sup>46</sup>

This is one of the most unusual collections in the British Isles. The gift to the City of Glasgow by Sir William and Lady Burrell in 1944, of their paintings, sculpture, architectural fragments, tapestries, ceramics, stained glass,

furniture, silver, metal work and 'objets d'art' of every kind (8 000 objects in all) from three continents and virtually every period, leaves the viewer spellbound. There is no space to talk of here of the saga of his Will, nor the difficulties in housing such a gigantic personal collection. Suffice to say that all problems have now been overcome, and the collection is housed in a building which itself is a 'tour de force'.

There are more than 600 panels of stained glass in the Burrell Collection, ranging from the complete windows down to fragments and small roundels. The collection is particularly strong in Northern European glass of the fifteenth and early sixteenth centuries. His most important acquisitions were made in the year immediately preceding and following the Second World War, and include some fine windows from William Randolph Hearst's collection, and an extensive series of English sixteenth century heraldic glass which established his collection in the first rank. The heraldic glass in particular, is splendidly displayed against the sheets of glass through which the visitor looks out into the great park surrounding the building.

The collection is particularly rich in seventeenth century roundels, portraying religious themes set in the contemporary interiors and dress of that century. There are no modern works in the stained glass collection.

5.5.3 THE PILKINGTON STAINED GLASS MUSEUM, ST. HELENS,  
MERSEYSIDE

The author's appointment was with the Curator of the Museum, Mr. Ian M. Burgoyne.<sup>47</sup> The museum is sited in the Head Office of the giant Pilkington's organization, and was opened in 1964. The main aims of the museum are :

- To illustrate the evolution of glass-making techniques and to show how the product has been used since Ancient Egyptian times;
- To show the historical development of glass-making processes and the many applications of glass.

These aims are, therefore, primarily educational, and a statistic provided by the Curator showed that in 1980, the museum was visited by :

112	Public Relations Groups	:	2 010 people
107	U.K. Marketing Groups	:	1 254 people
196	Schools	:	7 021 children
205	Adult Groups	:	6 315 individuals
	Weekday Visitors	:	19 124
	Weekend Visitors	:	10 469
74	Pilkington Group personnel	:	1 921



The display begins with the raw materials which go to make glass, and the visitor is led through the evolution of glass-making, from the seventh century B.C. Phoenician amphorae, Roman glass from fifty B.C. to fifty A.D., and on through the ages to the present time.

Interesting models demonstrate the glass workshops of different periods, and each exhibit is accompanied by detailed verbal information in simple terms, so that visiting children can clearly understand them. The history of window glass is given special attention, with examples of quarry panes, broad glass, crown glass, cylinder glass, stained glass, double rolled wire-glass, and the flat sheet and float glass of the twentieth century. Glass for lamps and lighthouses, laminated glass and optical glass is also described in detail, with exhibits.

After a morning in the museum, a tour of the mighty Pilkington's Float Glass Factory was arranged. A particular feature of this Factory, is that at no time, from the mixing of the ingredients to the cutting of the sheets and their crating for delivery, is the glass actually manipulated by hand - all processes are computerized and mechanized.<sup>49</sup>

## 5.6 REFERENCES AND NOTES - CHAPTER 5

1. Author of the definitive Bibliography of the Corpus Vitrearum Medii Aevi (Great Britain - Occasional Papers II), The Deterioration and Conservation of Painted Glass : A Critical Bibliography (1982).
2. NEWTON. pp. 101, 425.
3. MOLE, S. (1984). The Conservation Studio at the Victoria and Albert Museum. Stained Glass (BSMGP). Autumn. pp. 8-10.
4. See Appendix.
5. See Chapter 2.
6. GIBSON, P. (1980). The Restoration of the Stained Glass of York Minster. pp. 1-2.
7. See References and Notes (Introduction) and Acknowledgements.
8. Wherever the author visited in England he was asked, "Have you met Dennis King?" Alas! the opportunity never occurred, but it illustrated the very high esteem felt by his contemporaries for his important contribution to conservation in the U.K.
9. See Acknowledgements. Ms. June Lennox gave much valuable time to the author, and introduced him to the International Institute for Conservation of Historic and Artistic Works, London.
10. See Acknowledgements and Chapter 2.
11. ULF-DIETRICH KORN, writing on restoration in STEPHANY, E. (et al.) (1983). Licht Glas Farbe. p. 157.
12. NEWTON. p. xix.
13. Ibid.
14. Ibid.
15. See Acknowledgements.
16. NEWTON. p. xx. The Charter of Venice (1964) laid down the ethical principles to be observed during the conservation and restoration of cultural objects. There are 16 Articles in the Charter, under the following headings : Definitions, Conservation, Restoration, Historic Sites, Excavations, Publications. NEWTON. p. 19.
17. MOLE. pp. 9-10.

18. Ibid. p. 10.

19. The subject of discussion during the author's visit in 1984. Refer also : HAYWARD, J. (1972) writing in The Bulletin of the Metropolitan Museum of Modern Art, December/January, p. 110, about a companion piece in the Cloister's Collection, NY., NY.  
The Victoria and Albert Museum.

This vast museum was the 'brain child' of Prince Albert, the Prince Consort, who planned a great complex of museums and colleges at South Kensington, London. With money derived from the Great Exhibition of 1851, the South Kensington Museum, a collective museum of science and art was opened in 1857. Because of the growth of the collection, the science section was moved to the new Science Museum adjacent, and in 1899 Queen Victoria laid the foundation stone of the present building, designed by Sir Aston Webb, stipulating that its name should be changed to the Victoria and Albert Museum. This vast complex, containing one of the world's outstanding collections of fine and applied arts, was opened by King Edward VII in 1909.

Today the exhibits have far outgrown the exhibition facilities: indeed the space allowed to stained glass is totally inadequate, and much of the collection is in storage. This is not to decry what is on show, however, for thoughtful displays of fragments of stained glass for each great period are shown (although for photographic purposes the light levels of the back lighting are far from satisfactory).

An appointment had been made on behalf of the author, by the Cultural Section of the South African Embassy, with Ms. June Lennox, the author of scientific papers on glass restoration, and head of the section.

20. Francis Graham Stewart

181 Geraldine Street

Christchurch

Tel. 851-895

- with whom the author corresponds regularly.

21. MOLE. p. 9.

22. Ibid.

23. For example, one of Schaffrath's six windows (a duplicate copy) for the Chapel of St. Antonius Hospital, Eschweiler, West Germany, 1976. (311 x 269 cm). Outstanding modern works by Patrick Reyntiens, Richard Posner, Ludwig Schaffrath and Johannes Schreiter were studied and photographed.

24. The author arrived at York a week after the fire. Needless to say, the fire was headline news, for example, RAIS, G. (1984). £1m Minster fire caused by lighting. Daily Telegraph, July 10, No. 40, 142. pp. 1, 3.
25. Pointed out to the author by Mr. Peter Gibson.
26. op. cit.
27. Ibid.
28. GIBSON, P. (1979) The stained and painted glass of York Minster. p. 5.
29. Ibid. pp. 24, 25.
30. NEWTON, R. (1982). Peter Gibson and the York Glaziers' Trust. Stained Glass (SGAA). Vol. 77, No. 3. pp. 252-254.
31. NEWTON, R. (1982). The Deterioration and Conservation of Painted Glass : A Critical Bibliography.
32. Ibid. p. xiii.
33. NEWTON. op. cit. p. 252.
34. Ibid.
35. GIBSON. p. 1
36. NEWTON. p. 252.
37. Despite the worry of the south transept fire and the urgent restoration work being carried out, this affable man devoted nearly two hours to the visitor from South Africa. The author was taken on a tour of the Minster and Peter Gibson pointed out the characteristics of the glass with the aid of binoculars. A tour of the workshops followed, and the external protective glazing methods used in the Minster were illustrated with the aid of models.

The restoration techniques observed at Canterbury were discussed, while the banks of ancient fragments - literally a library of spare parts from different centuries - and the way that these are used in restoration, was demonstrated.

Of particular interest were the light-box tables developed by Mr. Gibson. These tables, with a light source below of daylight-type neon tubes, have a table-top of 15mm perspex in which holes have been drilled at 10mm intervals. These tables facilitate the careful study of panels for restoration, under controlled lighting conditions, their dismantling and releading, with minimal of movement necessary, and although ini-

tially expensive, would be extremely useful in any stained glass facility.

At the end of the morning Mr. Gibson provided the author with an autographed copy of his book and gifts for his family from the Minster shop.

Further windows restored by the Trust were viewed in the parish churches of York, particularly the important window portraying "The Corporal Acts of Mercy" and the "Prykke of Conscience" in All Saints, North Street, York. Visits were also made to the major museums of this 'museum city'. These will not be described here as they are not specific to the study topic.

38. NEWTON. p. 254.
39. Ibid.
40. See Chapter 2 for biographical details.
41. Cole is the author of a number of treatises on restoration methods, including :
  - The state of "Adam Delving", Compte rendu du 8<sup>e</sup> Colloque du CVMA, Canterbury, 30 Sept. 1972. pp. 31-32.
  - Reversibility of an epoxy resin, CVMA Newsletter No. 15, 23 June 1975, item 1.6, p. 4.
  - Use of hydrofluoric acid for polishing medieval glass, as 'Contrary Opinions', CVMA Newsletter No. 19, 5 April 1976, item 2, p. 2, and No. 21, 'Contrary Opinions', 27 August 1976, p. 3.
  - Problems of conservation and restoration at Canterbury Cathedral, CVMA Newsletter No. 30, Nov. 1979, item 1-3, pp. 2-3.
42. 'Plating' or 'doubling' is an important technique for strengthening very fragile pieces of glass or for assisting in the repair of many cracks. A 1mm thick piece of modern glass is cut to the same shape as the fragile piece and moulded to the same contours by heating on a plaster mould.  
See NEWTON, p. xxv.
43. "TENNET, N.H. (1979). Clear and pigmented epoxy resins for Stained Glass Conservation : Light Ageing Studies. Studies in Conservation, 24 (1979), pp. 153-164.  
"Refer also : BROMMELLE, N.S. (et al.) (1984). Adhesives and Consolidants. (IIC).  
Trace elements in lead calme were the subject of research by Mel Greenland.

\*Refer : AVIDON, R. (1980). The Greenland Studio and the quest for quality. Stained Glass. (SGAA). Vol. 75, No. 3. pp. 201-205.

Note: \* indicates stained glass.

- 44. - Bowes Museum, Barnard Castle, Durham (08 333-37139).
- Victoria Art Gallery, Bridge Street, Bath (0225-28144).
- Cecil Higgins Art Gallery, Castle Close Bedford (0234-211222).
- Ulster Museum, Stranmillis, Belfast (0232-668251).
- City Museum and Art Gallery, Congreve Street, Birmingham (021-235-2834)
- Museum and Art Gallery, Queen's Road, Bristol (0272-299771).
- Fitzwilliam Museum, Trumpington Street, Cambridge (0223-69501).
- National Museum of Wales, Cathays Park, Cardiff (0222-397951).
- Art Gallery and Museum, Clarence Street, Cheltenham, Glos. (0242-37431).
- Broadfield House Glass Museum, Kingswinford, Dudley, W. Midlands (03844-3011).

The only museum in the country devoted entirely to glass, covering the Roman period to the present, including Continental glass. Special emphasis is placed on cut, engraved, etched and coloured 19th Century Stourbridge glass. A glassmaking studio and engraver's workshop are attached to the museum.

- \* - Royal Scottish Museum, Chambers Street, Edinburgh (031-225-7534).
- Huntly House Museum, 142 Canongate, Edinburgh EH8 8DD (031-225-2424).
- \* - Stained Glass Museum, Ely Cathedral, Ely, Cambs.

Explanation of the development and processes of stained glass illustrated by examples from medieval to modern.  
See text.

- Royal Albert Memorial Museum and Art Gallery, Queen Street, Exeter (0392-56724).

- Shipley Art Gallery, Gateshead, Tyne and Wear.
- \* - i) Art Gallery and Museum, Kelvingrove, Glasgow (041-334-1134).
- \* - ii) Burrell Collection, Pollok Park, Glasgow.  
Medieval to seventeenth century stained glass.
- \* - iii) The People's Palace Museum, Glasgow.

A collection of cartoons, artwork, tools and examples of Glasgow stained glass mainly between 1880-1914, but also including contemporary material.

- Museum and Art Gallery, High Street, Ipswich, Suffolk (0473-213761).
- Victoria and Albert Museum, South Kensington, London SW7 2RL (01-58906371).

A vast range of glass of all periods, including The National Collection of Stained Glass, part of which is contemporary stained and painted glass, mostly European and American. A small amount on display, most in the reserve collection.  
See text.

- British Museum, Bloomsbury, London (01-636-3699).
- Museum of London, Barbican, London (01-600-1555).
- The Glass Gallery, The Science Museum, South Kensington, London.
- City Art Gallery, Mosley Street, Manchester (061-236-9422).
- Laing Art Gallery and Museum, Higham Place, Newcastle upon Tyne, NE1 8AG (0632-27734).
- Art Gallery and Museum, The Castle Nottingham (0602-411881).
- Ashmolean Museum, Beaumont Street, Oxford (0865-512651).
- Harris Museum and Art Gallery, Market Square, Preston, Lancs. PR1 2PP (0772-58248/9).
- \* - Pilkington Museum of Glass, Prescot Road, St. Helens, Lancs. (0744-28882 ext. 2499).

The museum aims to cover the principal technical advances in glassmaking over 4 000 years. Examples in the collection illustrate the varieties

of forming, colouring and decorating glass over the centuries.

- City Museum, Weston Park, Sheffield (0742-27226).
- Yorkshire Museum, Museum Street, York 0904-29745).

SHAW. pp. 105-110.

45. Visited by the author in 1984.  
Refer MOLE, S. (1986). The Stained Glass Museum at Ely.  
Stained Glass. (BSMGP). Spring. p. 21.
46. Visited by the author in 1984.  
Refer HENDERSON, S.M.K. (1965). Figure and Ornamental Studies, Stained and Painted Glass, Burrell Collection.  
NORWICH, J.J. (et al.) (1983). The Burrell Collection.
47. See Acknowledgements.
49. See Appendix.  
The Pilkington Museum has produced a number of useful publications on glass and glassmaking - See Bibliography.



## CHAPTER 6 : FRANCE : HISTORIC OUTLINE

### 6.1 FOREBEARS

The eighteenth century, which produced only a few hundred square metres of stained glass, mostly in the form of coats-of-arms, cartouches, scrolls, borders and allegorical figures of a pious nature, did, however, manage to destroy thousands of ancient works, which had become out of fashion.<sup>1</sup> Amongst those that vanished at the dictates of the clergy, were the twelfth century stained glass treasures of Notre Dame de Paris, including a dozen rose windows on the south aspect that had been commissioned six centuries before by the Abbot Suger, the "father of the Gothic."<sup>2</sup>

One of the most important collections of stained glass of this period is that in the Chapel of the Chateau de Versailles, the work of Guillaume Le Vieil.<sup>3</sup> His son, Pierre, the author of Traité la peinture sur verre,<sup>4</sup> worked on the Eglise des Invalides<sup>5</sup> in Paris and the Cathedral of Sens.<sup>6</sup> Father and son also executed some stained glass for the churches of d'Ecouen and Mesnil-Aubry in the department of Oise.<sup>7</sup>

On the eve of the Revolution there were no more than four glass-painters left in Paris who earned a living in stained

glass. The Revolution itself smashed, or sold to the English, a good third of France's stained glass windows.<sup>8</sup> Thus, in France, as in England, it seemed that by the beginning of the nineteenth century, stained glass as a medium was destined to disappear. Coloured glass was difficult to get and the formulae for making it had been forgotten. Furthermore, 'restoration' work was left in the hands of ordinary glaziers, plumbers and roofers.<sup>9</sup>

As in England, in the early nineteenth century, coloured enamel frits,<sup>10</sup> continued to be used as a substitute for coloured 'pot' glass.<sup>11</sup> However, as a coat of enamel paint, although providing colour, was the surest way of excluding light, experiments went on to find a way of making glass equal in brilliance to that of the Middle Ages. It was not until 1826 that Gustave Bontemps, a chemical engineer and director of the Choisy-le-Roi glassworks, was the first man in Europe to manufacture a pure red glass.<sup>12</sup>

The first thirty years of the nineteenth century were thus experimental ones in both England and France.

The spirit of the age, however, was changing, and the Gothic Revival that came as an offspring of the Romantic movement of the late eighteenth and early nineteenth centuries was not without its effect on the art of stained glass.<sup>13</sup> In 1828, the chemist Alexandre Brongniart, director of the Sèvres procelain factory, opened a stained glass workshop,

hoping no doubt, that he would discover the medieval recipes of glassmaking.<sup>14</sup>

The great painters of the period were also commissioned to produce designs and cartoons. Ingres, Delacroix and Larivière,<sup>15</sup> for example, produced cartoons on subjects that extolled the history of France for the Chapelle Royal at Dreux. These, however, despite the protestations of Brongniart, who claimed that his craftsmen were capable of executing the windows in coloured glass, were produced in elaborate over-painted enamels on a poor quality glass.<sup>16</sup>

With the appearance of Victor Hugo's (1802-85) great romantic novels Notre-Dame de Paris (1831), and Notre Dame, a tale of the 'Ancient Regime' (1833), interest in the Middle Ages and its relics was accelerated.<sup>17</sup> Under Prosper Mérimée (1803-70)<sup>18</sup> historical writer, poet, and Inspector-General of Historical Monuments, a vast salvage operation of medieval works began, in which the architect and designer Eugène-Emmanuel Viollet-le-Duc (1814-1879) was to play a leading rôle.<sup>19</sup>

Under the direction of the Gérentes<sup>20</sup> and Guilhermy,<sup>21</sup> the arts of iconography in stained glass were rediscovered. New 'manufacturies' were opened. Antoine Lusson established himself at Le Mans,<sup>21</sup> Emile Thibaud and Thévenod<sup>22</sup> at Clermon - Ferrand; Charles Laurent Maréchal<sup>23</sup> was working at Metz.<sup>24</sup>

Large-scale restoration projects were inaugurated under the auspices of the 'Service des Edifices Diocésains' in the case of cathedrals, and the 'Service des Monuments Historiques' in the case of other protected buildings. Work was undertaken at Le Mans and Bourges, and in 1846 the restoration of the Sainte-Chapelle stained glass in Paris, was begun.<sup>25</sup>

Founded in 1844 by Adolphe Didron the elder,<sup>26</sup> the influential review Anales archeologiques rivetted the attention of the man in the street on the restoration programme at Sainte-Chapelle, which now became a matter of national interest.<sup>27</sup>

Viollet-le-Duc, appointed head of the office of Historic Monuments in 1846, entrusted the work to Antoine Lusson and Maréchal de Metz, with the collaboration of the archeologist François de Guilhermy, and with Louis-Auguste Steinheil supplying the stained glass cartoons.<sup>28</sup>

The elder Gérente, Henri, and his brother Alfred, both master glaziers, were also appointed. Henri died prematurely in 1849, but Alfred also carried out many restoration commissions for Viollet-le-Duc at the Abbey of Saint-Denis (1849-58) and Notre Dame, Paris (1861-65).<sup>29</sup>

By the middle of the century, two different styles of stained glass had emerged. The first was summed up by Adolphe Didron, writing in Annales archéologiques, "It is from mosaics that one should act, and not from paintings."<sup>30</sup> Stained glass should adhere to the medieval model, and remain true to the architectural frame.

The second style or trend, gradually became as academic as the 'archeological' type - this was the school of stained glass 'painting', which ignored the architectural divisions, such as the stone mullions, and used the entire bay as a canvas, as it were, for a single composition.<sup>31</sup>

Charles Maréchal de Metz, a former pupil of Delacroix and a brilliant technician, was a lively proponent of the 'painting' style, as was Claudius Lavergne, a pupil of Ingres.<sup>32</sup>

In 1840 there were about forty workshops in the whole of France; by the 1870's there were over two hundred. As in England, the demand for windows led to the introduction of industrial manufacturing processes which inevitably inhibited truly creative ideas.<sup>33</sup>

The Universal Exhibitions (thirteen between 1851 and 1900) were the vehicle for competitions and an opportunity to view the works of competitors and stained glass designers from abroad.<sup>34</sup>

In 1867 Japanese art was exhibited in France for the first time. It took France by storm, resulting in a flood of stained glass oriental pastiches.<sup>35</sup> Samuel Bing, "a perceptive man and dealer in Oriental art",<sup>36</sup> opened a gallery in Paris the day after Christmas 1895. He called it 'Le Salon de l'Art Nouveau'. It was to give its name to an art movement 'Art Nouveau' which flashed like a meteor throughout Europe and America for the first twenty years of the new century.<sup>37</sup> At the opening exhibition, paintings by Frank Brangwyn, R.A. (1867-1956);<sup>38</sup> stained glass windows designed by the Frenchmen Pierre Bonnard (1867-1947), Henri de Toulouse-Lautrec (1864-1901) Edouard Vuillard (1876-1953), Felix Vallotton (1865-1925) and Paul Sérusier (186-1927); fabricated by the American, Louis Comfort Tiffany (1848-1933);<sup>39</sup> jewellery by René Lalique (1860-1945); sculpture by Auguste Rodin (1840-1917); paintings by Eugène Carrière (1849-1906), Maurice Denis (1870-1943) and Fernand Khnopff (1858-1921); drawings by Aubrey Beardsley (1872-1898), and posters by Charles Rennie Mackintosh (1868-1928), were exhibited - one of the most extraordinary artistic events of its time.<sup>40</sup>

The style of Art Nouveau had, as its main motif, a long, sensitive, sinuous line,

"such a line that might also be suggested by the way the spots are scattered in a leopard skin or by a flick of a whiplash, flowing or flaring up, 'moderator' or 'furioso', always moving in a sort of narcissistic self-delight."<sup>41</sup>

Art Nouveau had no single founder; it evolved seemingly almost overnight in a variety of different ways in all the capitals of Europe; 'Jugendstil' in Munich, 'Sezessionsstil' in Vienna; 'Modernista' in Barcelona; 'Floreale' in Rome.<sup>42</sup>

A window which epitomizes early Art Nouveau is that by the architect and painter Eugène Grasset, fabricated by the Parisian glazier Félix Gaudin in 1884, and now in the Musée des Arts décoratifs in Paris. In it a young girl, who reminds us of both Botticelli and the Pre-Raphaelites, wanders sensuously through a clearly oriental-inspired garden.<sup>43</sup>

By now, stained glass had permeated architectural design; town halls and schools, universities and railway stations, banks, cafés, brasseries and even brothels had their stained glass windows.

In 1913, in nearby Switzerland, Alexandre Cingria completed monumental art nouveau commissions for Notre Dame de Geneva, using a range of unusual and striking colours.<sup>44</sup>

The most powerful designers of stained glass in Europe were four architects, the Catalan, Antonio Gaudi (1852-1926), the Scot, Charles Rennie Mackintosh, the Frenchman, Hector Guimard (1867-1942,) <sup>45</sup> and the Belgian, Victor Horta (1861-1947). Guimard gave powerful expression to the medium, and demonstrated that the Art Nouveau idiom, with its emphasis on line, seemed particularly appropriate to translation in-

to stained glass, as in his roof-light in the hall of the Hotel Mezzara, Paris (1911).<sup>46</sup> Art Nouveau was also innovative in its use of contemporary materials, such as cast and wrought iron, plate glass, pressed glass, bronze and ceramics. Perhaps one of the most extraordinary constructions of the period in glass and metal is Frantz Jourdain's Samaritaine building in Paris (itself a modular building of glass and component parts), and its great dome over the Galeries Lafayette. This dome, with its mixture of oriental and occidental idioms, is some 30,5 metres across (1890-1903);<sup>47</sup> its stained glass is the work of Jacques Gruber.<sup>48</sup>

Jacques Gruber (1871-1936) of Nancy in Alsace-Lorraine, bridged the periods of Art Nouveau and Art Déco. An accomplished artist and designer of furniture, glass and ceramicware, as well as stained glass, Gruber drew his inspiration from the flora and fauna of the woods of his native district. An innovative glass-worker, he collaborated with the brothers, Auguste and Antonin Daum, who created vases and bowls in which several layers of coloured glass were superimposed on an opal-white base-glass, a process perfected by Emile Gallé (1846-1904).<sup>49</sup> Gruber adapted this technique to flat glass, which he etched for elaborate effects. Combined with such 'art' glasses as American drapery glass (developed by John La Farge and Louis Comfort Tiffany), dichroic glass (the colours of which change with the angle of viewing), and iridescent glass, and a sophis-



ticated system of lead calme, he produced stained glass for the secular market that was much in demand.<sup>50</sup> In his late work (for example, his 'Paysage lorraine' of 1928)<sup>51</sup>, he made much use of geometric shapes and machine-made obscure glasses. His son, Jean-Jacques, succeeded him; in 1980, he was President of the Chamber of Master Glass Workers.<sup>52</sup>

During the first Great War, the mighty cathedrals of the North and East France were in the front line of battle. Reims was battered by artillery and the precious stained glass was hurriedly removed under fire. Noyon and Soissons suffered the same fate. The windows of Amiens were likewise removed and placed in safe-keeping with Socard, a master stained glass designer in Paris. There a mysterious fire destroyed the premises, together with half of the windows.<sup>53</sup> Once again restoration was a prime necessity.

In 1919, Maurice Denis (founder of the 'Nabis'),<sup>54</sup> and Georges Desvallières opened a studio devoted to the production of a truly spiritual art - the 'Atelier d'Art Sacré'. Two other workshops dedicated to the same goals followed, 'L'Arche' ('The Ark') and 'Les Artisans de l'Autel' ('Craftsmen of the Altar'), the former under the leadership of the stained glass designer, Louis Barillet, the latter founded by Jacques Le Chevallier. (Both Barillet and Chevallier co-operated regularly with the Nancy Studio of the Grubers).<sup>55</sup>

The intellectual impetus for this 'movement' (for such it was), was supplied by the Neo-Thomist philosopher, Jacques Maritain (b. 1882), French Catholic apologist and author of 'Art et scholastique' (1920), and 'The Philosophy of Art' (1923).<sup>56</sup> The rôle of art and the form it should take was debated endlessly, and as a result of Maritain's re-thinking of the problem of spirituality and aesthetics,

"L'art chrétien n'est pas un espèce de genre - comme on dit 'art byzantin' au 'ogival', c'est par le sujet où il se trouve et par l'esprit d'où il procède que l'art chrétien définit ... c'est l'art de l'humanité rachetée ... Tout lui appartient, le profane comme le sacré,"<sup>57</sup>

August Perret (1874-1954) was commissioned to build a church in the new suburb of Raincy on the road to Meaux, north-east of Paris.<sup>58</sup> A consummate structural engineer and pioneer in the use of ferroconcrete in architecture, he constructed Notre Dame le Raincy entirely in this medium. Although the external view is hardly propitious, the interior is a revelation of spaciousness and peace.<sup>59</sup> Elegant proportions combined with fluted, tapering columns, a high shallow-domed ceiling, and light, perforated wall-screens (elements which, as we have seen, influenced Sir Basil Spence, architect of Coventry Cathedral after the Second World War) - no wonder this building has been called "the Gothic Cathedral reinvented" and "the Sainte-Chapelle in reinforced concrete."<sup>60</sup>

Perret conceived the interior as an evenly-lit, glowing envelope of rich yet soft colour that would both rest and

stimulate the eye. The screen walls are simple pre-cast concrete units, pierced with square, round or segmented holes, glazed in the traditional glass and lead technique. Each bay is glazed with a predominating colour, but these colours owe nothing to the past: pistachio green, heliotrope, purple, brown, acid pink and marigold.<sup>61</sup> Maurice Denis collaborated with Marguerite Huré in the making of the glass. Each bay has a panel of figurative glass designed by him, combined with patterns that anticipate Art Déco, by Marguerite Huré.<sup>62</sup>

Another milestone in the artistic styles of the twentieth century was the exhibition 'Les Arts Décoratifs' held in Paris in 1925. This exhibition confirmed that Art Nouveau was dead. No more sinuous line - in its place was to be found an eclectic amalgam of cubist, geometric, machine-made and exotic motifs borrowed from the ancients (Assyria, Egypt, Inca, Aztec, and so on) and the primitive (for example, Africa and Mexico).<sup>63</sup>

Perhaps one of the most unusual windows in the late Art Déco Style is to be found in the Church of Ste Odile, Porte de Champerret, Paris. Designed and made in the 1930's by François Emile Décorchement (1880-1971), these enormous tympanum windows (there are three of them, each some 15,25 metres high) are crowded with figures depicted in scenes related to the life of Ste Odile.<sup>64</sup>

Both colour (of a particular resonant and intense hue), and technique are unusual. The coloured glass seems to have been fused together, in effect not unlike the 'pâte de verre' technique invented by Henri Cros,<sup>65</sup> (a sculptor working for the Manufacture Nationale de Sevres), but of slab-glass thickness. We know that Décorchement perfected 'pâte de verre' (paste-glass), however, this type of glass is usually wafer-thin and its production laborious.<sup>66</sup>

Max Ingrand (1908-1969), judged by many as the greatest stained glass designer of the period, carried out numerous mural decorations and other decorative schemes in the years between the great wars. His first important stained glass commission was for the Church of St. Agnes at Maisons-Alfort in 1933-34.<sup>67</sup>

With the outbreak of war in 1939, a new wave of destruction followed.

## 6.2 THE MODERN TRADITION : THE WATERSHED

In 1945 reconstruction and restoration began again. Many ancient treasures had been stored in safe-keeping, but later windows had been left 'in situ'; these, in many cases, had been destroyed in bombing raids and tank battles.<sup>68</sup> In 1938 the Dominican fathers, Marie-Alain Couturier and Raymond Régamey, in the review Art Sacré (of which they were the editors), expressed the controversial view that a non-

figurative art form would best express the Christian ethic. It had to wait until after the war, however, to put these ideas into practice.<sup>69</sup>

Except for the occasional excursions into the medium, most painters up until this period had avoided involvement in stained glass. In 1948 Father Couturier was summoned to organize the glazing of Maurice Novarina's chapel of Notre-Dame-de-Toute-Grâce at Plateaux d'Assy in Haute-Savoie (begun in 1938 and finished in 1956).<sup>70</sup> Before the Second World War, the painter Georges Rouault (1871-1951)<sup>71</sup> had already completed one window for this church, 'Le Christ aux outrages' (The Mocking of Christ). The fabrication of this window to his design, was carried out by the master glazier, Paul Bony (b. 1911-1982).<sup>72</sup> In Bony we meet a sensitive and intelligent translator who possessed the technical facility and patience to faithfully record every mark of the original design. This frequently necessitated elaborate acid-etching (etching) and doubling (plating), in order to render what had been a relatively easy technical exercise in watercolour or oil paint.<sup>73</sup> Father Couturier seized his opportunity to involve the contemporary artists of the day, both in the glazing programme and the decoration of the interior.<sup>74</sup> Rouault provided a further five cartoons for windows that were fabricated by Bony.<sup>75</sup> Designs by Jean Berçot, Jean Bazaine (b. 1904), Maurice Brianchon, Couturier himself, and Bony, followed. A tapestry by Jean Lurçat (b. 1892) on the theme of 'Apocalypse', ceramics by Marc Chagall (1889-1986),

altarpieces by Pierre Bonnard (1867-1947) and Henri Matisse (1869-1954), and sculpture by Germaine Richier (1904-1959), were commissioned.<sup>76</sup>

After Father Couturier's death in 1954, Marc Chagall was asked to provide his first stained glass cartoons for the Baptistry windows, again made by Bony, and fixed in the building in 1957.<sup>77</sup> The Assy experiment cannot altogether be claimed a success, for the idiosyncratic talents of the artists were too varied for a building devoted to worship and prayer. However, to the clergy it was a convincing display of the importance of approaching France's great artists to provide designs, while conversely the artists' eyes were opened to the potential of stained glass as a means of expression.

The first truly abstract windows in France were designed by Alfred Manessier (b. 1911), and made by Atelier Lorin of Chartres in 1947, for the little eighteenth century church at Les Breseux in Franche-Comte.<sup>78</sup> They were pronounced a signal success and led to many commissions through the years, the most recent in 1985.<sup>79</sup>

Manessier, who had trained as an architect, but had changed to painting in 1936, understood well the requirements of both disciplines.<sup>80</sup> An outstanding colourist, he was nevertheless always aware of the architectural demands on fenestration decoration, even (as in his 1976 window for the

Chapel of the Holy Sepulchre of Fribourg Cathedral) when a traditional technique is required, or when the use of 'dalle de verre' (for example, in the Church of Alby-sur-Chéran in Savoy, 1978)<sup>81</sup> is deemed more suitable. Another fine example of his work can be seen in the crypt of the Cathedral of Essen, West Germany (1960).<sup>82</sup> Almost all of his designs have been realized by the Lorin Studios of Chartres, which, with the death of the last of the Lorin family in 1975, was purchased by the partners Gerard Hermet (b. 1937) and Jacques Juteau (b. 1927).<sup>83</sup>

But to return to the milestones of the post-war period.

In 1948 Henri Matisse (1869-1954) was convalescing in the Dominican nursing home in Vence, near Nice. Here he was approached for advice concerning stained glass windows envisaged for a new chapel, the 'Chapelle du Rosaire'. He finally undertook to design not only the building, but all aspects of its decoration, right down to the vestments used by the clergy during the service.<sup>84</sup> REYNTIENS considers "the result (is) a masterpiece of sophisticated simplicity".<sup>85</sup> The simple shapes and limited colour (only three colours are used in the chapel, yellow, blue and green) are closely related to Matisse's late works in 'papiers découpé' (paper cut-outs). Despite their apparent simplicity, SOWERS relates what difficulties Paul Bony, back in his Parisian Studio, experienced in the translation of the painter's designs into glass<sup>86</sup> for the master glazier recognized that the plant-forms in a brilliant yellow glass would halate or 'bleed'

into the surrounding blue and green field. Matisse's overzealous intermediaries, however, would permit no tampering with the painter's design, with the result that Matisse insisted that the windows were re-made as Bony had suggested. REYNTIENS describes the glazier's solution to the problem.<sup>87</sup> Leaving the blue and green glass totally transparent, the yellow pieces were carefully matted dull by exposure to the fumes of hydrofluoric acid, "so the surface is that of a yellow kid glove." He attributes the success of the work, however, not to the colour, nor to the simplicity of means, but rather to an exact sense of interval, also apparent in Matisse's paintings and drawings.<sup>88</sup>

Bony also carried out Matisse's designs for windows at Saint-Jean, Cap-Ferrat (1951 and 1954); Time-Life Building New York (1952), (now in the Museum of Modern Art, New York, New York); and the Church of the Scholastic Community, Cateau-Cambrésis (1955), Matisse's native town.<sup>89</sup>

In 1951, Fernand Léger (1881-1955), architect and painter, and avowed atheist, was summoned by Canon Ledeur to Novarina's new Sacré Coeur<sup>90</sup> at Audincourt, to design a vast fresco of 'dalle de verre' which constitutes the south wall of the nave.<sup>91</sup> Léger exploits the formal elements of Christian symbolism in this monumental frieze of glass and light, creating, as it were, an envelope of coloured light which brings the nave to life.<sup>92</sup> In the same year Léger was commissioned by the Vatican to design a panel on the theme



of the 'Holy Tunic' for the Vatican Museum's Modern Religious Art Collection.<sup>93</sup> These works, together with stained glass for the church of Courfaivre in Switzerland, were fabricated by Louis Barillet.<sup>94</sup>

Meanwhile at Varangeville, near Dieppe (Seine-Maritime), another famous painter, Georges Braque (1882-1963), in 1952 and 1954 designed windows for the Chapel of St. Dominique. These windows (carried out by Paul Bony), are unrelated to his own still-lives and sea-scapes. The central panel depicts the simplified form of the saint, wearing a red fez.<sup>95</sup> These windows do not match the subtle richness of his paintings, but seven years later he returned to Varangeville again, this time producing a superb abstract 'Jesse Tree'<sup>96</sup> (also carried out by Louis Barillet).<sup>97</sup> In 1962, collaborating with Charles Marq, he produced a window 'L'oiseau sur fond violet'<sup>98</sup> for the Chapel Foundation Maeght of Saint Paul of Vence (Alpes-Maritimes).<sup>99</sup>

At the pilgrimage Church of Notre Dame, du Haut at Ronchamp, near Belfort in the Vosges region, the architect Le Corbusier (Edouard Jenneret-Gris) (1887-1965), was responsible for both the architecture and stained glass.<sup>100</sup> Le Corbusier's unusual church design was, "... precisely tuned to respond to the 'visual accoustics' of an undulating landscape."<sup>101</sup> A small organic building with a strange shell-like roof, it has a primeval quality in keeping with its location, once the site of a sun temple.<sup>102</sup> The

surrounding walls, made with concrete frames and in-filling, have variations of thicknesses, which lit by the deeply luminous and irregular windows that pierce them, emphasize the sculptural quality of the building.<sup>103</sup> These walls have been sprayed with 'gunite';<sup>104</sup> the resulting texture is that of the white walls of Mediterranean folk buildings, rather than the machine-like finish of modernist architecture.<sup>105</sup> The stained glass is crude both in design and workmanship, and is absolutely right both for the building and the setting.<sup>106</sup> Some of the windows are minute; none of them are very large, and pierce the thick walls at arbitrary heights.<sup>107</sup>

In 1953 stained glass was further promoted by an exhibition at the Pavillion de Marsan in Paris on the initiative of Jean Verrier, Inspector-General of Historic Monuments.<sup>108</sup>

By now Pablo Picasso was the only painter of any importance to resist the attraction of the medium.<sup>109</sup> The glassmakers too, further extended the possibilities of the medium. Jean-Luc Perrot (b. 1926), a master glazier, carried out experiments at the Boussois factory which resulted in the manufacture of giant glass slabs ranging in size between two and ten metres square.<sup>110</sup> These were first used in a glass wall in the Church of Saint Joan of Arc at Belfort between 1954-1957. Although monumentally impressive, there is a dehumanizing factor in glass of such a size and after 1960 they were discontinued.<sup>111</sup>

The windows of Metz Cathedral were badly damaged during the Second World War, and the success of many of the projects encouraged the 'Services des Monuments Historiques' (whose task it was to replace works),<sup>112</sup> to engage Jacques Villon (1875-1963) to provide cartoons of the Chapel of the Holy Sacrament off the north side of the nave.<sup>113</sup> These windows, fabricated by Charles Marq and Brigitte Simon<sup>114</sup> during 1956, 1957, affirm the vision and freedom of a great creator, and upgrade a somewhat ordinary chapel.<sup>115</sup>

Another member of the Ecolé de Paris, Roger Bissière (1888-1964) was commissioned soon after (1958), to provide non-figurative designs of the Gothic tympana above the portals of the south tower. These too, were executed by Charles Marc and Brigitte Simon, and once again proved how well abstract stained glass can 'marry' with ancient architecture.<sup>116</sup>

Jean Bazaine (b. 1904) designed his first windows for a private chapel in 1937: 'The Instruments of the Passion',<sup>117</sup> and immediately after the war, as we have seen, designed three windows for the church at d'Assy in Haute-Savoie. In 1954 he produced designs for the Baptistry of Audincourt in both flat glass and 'dalle de verre' and also for the Church of de Villeparisis.<sup>118</sup> In 1965 he commenced his most important work, a series of eight windows for the choir of the ancient church of St. Séverin in Paris.<sup>119</sup> These were executed by Bernard Allain and were completed in 1970; they

symbolize the 'Fountain of Life'.<sup>120</sup> Bazaine has designed many other works elsewhere in France.<sup>121</sup>

Max Ingrand, who as we have seen, completed his first important stained glass commissions before the Second World War and subsequently executed numerous works in France and abroad, including Canada, the United States of America, Brazil, West Germany, Senegal and Venezuela.<sup>122</sup> Admired and praised by many critics (for example, ROLLET) and derided by others - BONY,<sup>123</sup> comments,

"Dans les monuments historiques, combien d'églises splendides ou charmantes ont été inondées par la production de fausses valeurs boursouflées (Max Ingrand à Saint-Pierre de Montmartre, hélas! et tant d'autres ...) ..."<sup>124</sup> -

but then Jacques Bony is a vociferous advocate of the non-figurative school of the 'Ecole de Paris'. Although the author would agree that the over-lifesize scale of his cubist-inspired figures jar in the tiny Romanesque church of St. Pierre de Montmartre (the third oldest church in Paris), Ingrand's windows (completed in 1953) in the apse and side aisles remain some of the most interesting stained glass in the city. An outstanding glass painter and draughtsman, in his figurative windows he manipulates the spectator's eye, moving it across richly textured surfaces and in and out of the colourfield so that there are illusions of space on an essentially flat place. Expressive rather than expressionist, his images look both back to the

past and yet are of the present, with strong allusions to both Expressionism and Cubism.<sup>125</sup> Other works in France include a 'Tobias and the Angel' in the General Mother House of the Priests of Saint-Sulpice, Paris; 'Saint Denis and Christ on the Cross', Argenteuil; 'Crucifixion' in the church of Yvetot; 'Crucifixion' in the Church of Auppegard; 'Angel Musicians' in the Cathedral of Saint-Malo; 'Our Lady's Window' in Notre Dame du Pré, Le Mans; 'Saint Peter' in Saint-Germain, Rennes; and a Rose Window in the Cathedral of Beauvais.<sup>126</sup>

Marc Chagall's second excursion into stained glass was in 1959-1960, this time with the collaboration of Marq, the master glazier from Rheims.<sup>127</sup> These windows, for the ambulatory of the Cathedral, are on the subject of 'Jacob and the Angel', 'Moses and David', and the 'Garden of Eden'.<sup>128</sup> Metz, although it has exceptional glass by others (including, as we have seen, Jacques Villon) is very much Chagall's Cathedral, for between 1959 and 1969 he completed major cycles of work there in the ambulatory, the east windows of the north transept and the triforium of the north transept.<sup>129</sup> During the same period, two important commissions were completed in the United States of America, namely, the Memorial to J.D. Rockefeller in the Church of Pocantico Hill, New York, and the Dag Hamarskjoeld Memorial in the United Nations Building, New York.<sup>130</sup> His first window in England, the Tudeley Church Memorial, which we have already discussed, was completed in 1968.

He also carried out perhaps the most publicized works (1960-1961), the twelve windows representing the twelve tribes of Israel, for the Hadassah-Hebrew Medical Centre of Jerusalem University, with Marq once again fabricating the windows. These windows were exhibited in New York before their installation in Israel.<sup>131</sup>

There were also demands for his work from elsewhere in Europe; in 1969 he completed windows for the Fraumünster in Zurich, Switzerland,<sup>132</sup> and in 1977, Saint Stephen's Church, Mainz.<sup>133</sup> Two major cycles of stained glass were also completed in France. The first project in 1972-1973, was three stained glass windows for the Biblical Message Foundation in Nice, to which he had already contributed a major cycle of paintings and a large mosaic.<sup>134</sup> The second was the provision of major windows for the Chapel of the Virgin in the ancient Cathedral, Notre Dame of Reims.<sup>135</sup>

LEE,<sup>136</sup> REYNTIENS<sup>137</sup> and SOWERS<sup>138</sup> are all critical of aspects of Chagall's stained glass. As the initial viewpoint is always that of the painter, and the artist has thus largely ignored the structural impositions of the lead line (which was left in the hands of his collaborator, Charles Marq), there is often an uncomfortable arbitrariness in the

distribution of lead calme. SEDDON,<sup>139</sup> however, holds that the Jerusalem windows, for example,

"... are outstanding for the modulations of dazzling colour, accentuated by areas of snowy white. Irregular glass shapes are held by curvilinear leading remarkable for its suppleness."

SOWERS concludes,

"For all that, Chagall's windows are not the kind of 'mail-order modern' stained glass ..."

"Chagall took the trouble to learn the techniques of glass painting and to get everything out of his designs that could be gotten out of them by painting the windows himself. Some of the details are thus very charming, pure Chagall; and yet one hardly needs to see his preliminary sketches to know that these windows were simply not conceived in terms of stained glass."<sup>140</sup>

Gabriel Loire was born in Pouancé in Anjou in 1904. In 1926 he apprenticed himself to Charles Lorin of Chartres, with whom he stayed until 1936 when he founded his own studio.<sup>141</sup> Operating on a truly international scale, Loire perhaps can be said to have been the busiest stained glass designer of the twentieth century. With a particular affinity for 'dalle de verre', the glass wall has been of particular significance to him, although as we have seen at Salisbury, he is equally at home in traditional painted, stained and fired flat glass. Another talent has been his ability to cooperate closely with the architectural fraternity on major monumental commissions.<sup>142</sup> One of these is the monolithic fish-shaped First Presbyterian Church, Stamford, Connecticut U.S.A. (1955). Here, supported on prestressed concrete

beams, 20 000 pieces of 'dalle' constitute the sloping walls of the building.<sup>143</sup>

Another impressive display of his talents in slab glass is the Kaiser Wilhelm Memorial Church in West Berlin, with its 22 000 glass blocks.<sup>144</sup> His most extraordinary work is the Rainbow Tower, or the 'Symphony Tower of Joy for Children' at Hakone, some 90 kilometres from Tokyo, Japan (1974).<sup>145</sup> Part of an open-air Museum of Modern Art, the tower is composed of 480 panels of 'dalle'. A central staircase leads the spectator up past a rich medley of images from flowers, snowflakes, clowns and games to lovers in a crescent moon - an introduction to the magical world of childhood.<sup>146</sup> There are some 320 square metres of 'dalle de verre" in the tower.<sup>147</sup>

St. George's Cathedral, Cape Town, South Africa, has eight Loire windows in 'dalle' in the nave clerestory, and one each in the south and north transept (1970, while the great west window is a memorial to Lord Mountbatten of Burma (1983).<sup>148</sup>

Other international works include the Basilica of Notre Dame de Lourdes in Santiago, Chili; College Daher, Cairo, Egypt; Church of St. Paul, Glasgow, Scotland; St. Celestine, Elmwood park, Illinois, U.S.A.; Chapel of Thanks Giving Day, Dallas, Texas, U.S.A.; Conference Centre, Niamey, Niger;



Djeddah, Ryad, and those centres in England, discussed in Chapter Two.<sup>149</sup>

### 6.3 'LE VITRAIL FRANÇAIS CONTEMPORAIN'

The style and tradition of the 'Ecolé de Paris' after the Second World War, was dominated by various forms of free and geometric abstraction.<sup>150</sup> Many of these painters, as we have seen, designed for stained glass, and were active into the 1970's and early 1980's. The new 'old masters' are those born just before the Second World War, some of them second and third generation stained glass designers. Jean-Baptiste Ambroselli (b. 1934), painter, and grandson of G. Desvralières; Claude Baillon\* (b. 1939); Jacques Bony (b. 1918), brother of Paul Bony; François Chapuis\* (b. 1928); Emmanuel Chauche (b. 1938); Michel Durand (b. 1931); Michel Gigon (b. 1929); Henri Guerin (b. 1929); Jacques Loire\* (b. 1932), son of Gabriel Loire; Jean-Pierre Hemery; Gérard Hermet\* (b. 1937); Mireille Juteau (b. 1931) and Jacques Juteau (b. 1927); Gerard Lardeur (b. 1931); Guy Le Chevallier (b. 1930), son of Jacques Le Chevallier; and Anne Le Chevallier-Faraut (b. 1937); Guy Méliava (b. 1938); Louis-Renet Petit\* (b. 1934); Michel Petit (b. 1934); Brigitte Simon (b. 1926), daughter of the designer Jacques Simon, and wife of Charles Marq; Jeannette Weis (b. 1934), are the most active.<sup>151</sup>

Of the next generation, namely, those born during and after the Second World War, Philippe Gozzolino (b. 1947); Alain Creunier\* (b. 1952); Jean-Dominique Fleury (b. 1946); Sylvie Gaudin\* (b. 1950), grand-daughter of Jean Gaudin; Marie-Jo Guevel (b. 1947); Jacques Guitton\* (b. 1949); Jean Mauret (b. 1944), son and grandson of glaziers; André Ropion\* (b. 1940); Marie-Cecile Tellier (b. 1950); and Udo Zembok (b. 1951, in West Germany), are probably the most important. Those above marked with an asterisk, have completed work of particular interest to the author.<sup>152</sup>

In the author's opinion, the French stained glass artist's obsession with the painterly non-figurative style has inevitably led to a new academism. Many works are no more and no less than a sort of twentieth century variation on the 'grisaille' windows of Cistercian France. Many of them are repeating the solutions of Bazaine and Matisse, Manessier and LeMoal, Jacques Chevallier and Gabriel Loire - thus reducing creative ideas to a formula.<sup>153</sup>

As interesting as some works are (for example, those of Jean-Dominique Fleury), there seems no real reason why they should be executed in stained glass, for they appear to pertain to neither the autonomous panel, nor architectural fenestration.<sup>154</sup> Similarly, some of the statement of Louis René Petit (for example, his stained glass in the Church of Hauteville in Fribourg, Switzerland, and the Church of St. Claire, Paris), although virtuoso demonstrations of the

stained glass art, do not in any way complement or enhance the religious function of the buildings in which they have been placed.<sup>155</sup>

In conclusion it must be added that little has been written on contemporary stained glass in France, and it is quite possible that an entire school of figurative or representational glass lies hidden, awaiting a perspicacious scribe.

#### 6.4 REFERENCES AND NOTES - CHAPTER 6

1. ROLLET, J. (1980). Les Maitres de la Lumiere. p. 68.
2. By the audacious use of the rib-vault, and the introduction of sixteen great stained glass windows at the narthex, Suger flooded the choir of his Abbey Church of Saint-Denis with coloured light, and a new architectural style was born that we call the 'Gothic'.  
Refer : CROSBY, S.M. (et al.) (1981). The Royal Abbey of Saint Denis in the time of Abbot Suger (1122-1151). pp. 13-23.
- 3,4. Guillaume Le Vieil (1676-1731), glass-painter, and his son Pierre (1708-1772) author and glass-painter.  
Refer : ROLLET, J. (1980). p. 257.
5. The Hôtel des Invalides was founded in 1670 by Louis XIV. The Eglise, crowned by Jules Hardouin-Mansart's great dome was completed in 1706. It is now the mausoleum of Napoleon I.  
Refer : Michelin's Guide to Paris and Principal Sights Nearby. pp. 42-43.  
  
Also : Bannister Fletcher (1948). A History of Architecture on the Comparative Method. pp. 706-710.
6. op. cit.
7. Ibid.
8. Ibid.
9. Ibid.
10. Enamel (French : émail = enamel, and German : schmelzen = to melt). A coloured frit of ground glass, oxides and flux which, with the addition of water or vinegar and gum arabic, may be painted onto the surface of glass. When kiln-fired, it turns transparent to a lesser or greater degree. It is not renowned for its longevity in the art of fenestration, where sharp changes in temperature may cause it to flake off the base glass.  
Refer : ELSKUS, A. (1980). The Art of Painting on Glass. pp. 101, 102.
11. 'Pot Glass', also 'Pot Metal'. 'Antique' glass, i.e. glass manufactured in the 'antique' method by hand-blowing (as opposed to machine-made), and coloured throughout with one colour.  
Refer : LEE, SEDDON, STEPHENS. p. 199.
12. FORBES, R.J. (1965). 45 Centuries of Glass. p. 12.

13. Romanticism was born in England - a profound revolution in the human spirit. William Kent (1684-1748), designer of the picturesque garden; Horace Walpole, author of the first 'Gothick' novel, The Castle of Otranto and an early collector of stained glass; William Blake (1757-1825), the poet, were some of its pioneers.  
Refer : PEVSNER, N. (1968). Studies in Art, Architecture and Design. Vol. 1. p. 99.  
QUENNELL, P. Romantic England. p. 1-20.
14. Brongniart's ceramic formulae are still of importance to ceramists today.
15. Ingres, Jean-Auguste-Dominique (1790-1867), and Delacroix, Ferdinand Victor Eugene (1798-1863) need no introduction - the first being the most accomplished draughtsman of the nineteenth century, neo-classical (yet Romantic) painter, and celebrated public figure and senator; the second, the most important painter of the Romantic movement, and author of important art journals and critical writings.  
Refer : READ, H. (1966). (Edit.). Encyclopaedia of the Arts. pp. 419,236.
- Larivière, Charles Philippe de (1798-1876). French painter responsible for the cartoons for the Sevrés stained glass in the Chapelle Royal - at Dreux.  
Refer : ROLLET. p. 257.
16. Ibid.
17. Ibid; and DRINKWATER, J. (date unknown). The Outline of Literature. pp. 409-414.
18. ROLLET. p. 259.
19. FARRANT, P. (et al. (1980). Eugène Emmanuel Viollet-le-Duc.
20. The author first encountered the Gérentes when in 1984, he was taken on a conducted tour of the stained glass of Ely Cathedral (not the museum) by the Rev. MacDonald. Here he had the pleasure of observing the glass from the triforium level, and in the west window he discovered the outstanding work of Henri Gérente. There are windows by the Gérentes, father or son, at Preston, Leicestershire; St. Mary, Bury St. Edmunds, Suffolk; Selby in Yorkshire, Sheffield Cathedral in South Yorkshire, and elsewhere.  
Refer : COWEN. pp. 61 (et al.).
21. Le Mans is famous for its Romanesque stained glass relics, in particular the 'Ascension' of circa 1150 A.D. The author made a particular pilgrimage to Le Mans to see this window. Lusson is mentioned in BRISAC, C. (1986). A Thousand Years of Stained Glass. pp. 146, 151.

22. Ibid. pp. 146, 149, 261.
23. Ibid. pp. 151-153, 158.
24. Ibid.
25. Ibid. p. 149.
26. Ibid. p. 151.
27. Ibid.
28. Ibid; also FERRANT. p. 96.  
Guilhermy, François-Ferdinand, Baron. 19th Century Scholar and Specialist in medieval iconography. Also worked with Viollet-le-Duc on the restoration of Notre Dame de Paris.
29. Ibid. p. 152.
30. Ibid.
31. There were similar divisions in early Victorian stained glass.  
Refer : HARRISON, M. (1980). Victorian Stained Glass.
32. ROLLET. p. 258; BRISAC. p. 151-153, 158.
33. See Chapter 2; BRISAC. p. 153.
34. BRISAC. p. 157.
35. Japanese art influenced all the arts, particularly painting.
36. MCKEAN, H.F. (1980). The "Lost" Treasures of Louis Comfort Tiffany. p. 5.
37. Ibid.
38. Brangwyn's rich tapestry-like and flamboyant paintings and bold drawing lent themselves particularly well to translation into stained glass.  
Refer : DE BELLEROCHE, W. (1946). Brangwyn Talks. p. 16.
39. MCKEAN. p. 5.
40. Ibid.
41. SCHMUTZLER, R. (1962). Art Nouveau. p. 7.
42. Ibid; READ. p. 43; LEE, SEDDON, STEPHENS. pp. 154-155.
43. BRISAC, C. p. 156; ADAM, S. (1980). Decorative Stained Glass. page 20.

44. Cingria's windows were a revelation to the author.  
Refer : BRISAC, p. 165.
45. ADAM, plate 32; BRISAC, p. 159.
46. Ibid.
47. REYNTIENS, p. (1976). The Story of Stained Glass (5) The Renewal of Vision - 20th Century. pp. 2,5.
48. Refer : HATJE, G. (1971). (Edit.). Encyclopaedia of Modern Architecture. pp. 34-36; 145.
49. CHOUX, J., ABBÉ (et al.) (undated). Jacques Gruber Ebéniste et Maître-verrier 1876-1936.  
- Gruber spent three years (1894-1897) with the Daum Studio in Nancy. Jean Daum, founded the studio in 1878 and was joined by his sons, Auguste in 1879, and Antonin in 1887. It was Daum's lamps - acid-etched cameo-glass, finished on the wheel, that established the firm's creative reputation.  
Refer : DUNCAN, A. (1978). Art Nouveau and Art Deco Lighting. pp. 73, 74.
- Gallé was a master-craftsman : ceramist, cabinet-maker, marquetarian, enameller and glassmaker extraordinary. He was the undoubted founder and driving force of the School of Nancy which was formed in 1901. The large firm he founded, ceased operating at the outbreak of war in 1914.  
Refer : GARNER, p. (1976). Emile Gallé  
DUNCAN, pp. 77,78.  
BUECHNER, T.S. (1984). Emille Gallé : Dreams into Glass. American Craft, Vol. 44, No. 2. pp. 32-35.
50. Tiffany, too, manufactured elaborately-profiled lead came for his flamboyant 'art nouveau' windows.  
Refer : McKEAN, pp. 41, 44.  
Also : McCLINTON, K.M. (1981). "Pâte-de-Verre" Antique Trader Annual. Vol. xi, (1981). pp. 184-185.  
ROSENBLATT, S. (1968). "The 'Lost' Art of Pâte de Verre". Hobbies, Vol. 73 No. 8, October. pp. 98k-980.
- 'Pâte de Verre' was researched by the author in the comprehensive library at the Corning Museum, Corning, New York State, in 1984.
51. CHOUX, p. 66.
52. FIRMIN-DIDOT, P. (et al.) (1980) 1<sup>er</sup> Salon du Vitrail. pp. 9-16.  
Also : GRUBER, J.J. (1973). Spacichomes - Stables of coloured glass. Leonardo - International Journal of the Contemporary Artist. Vol. 6, No. 3, 1973. pp. 241-242.

53. ROLLET. pp. 71-76.
54. Although never working in an abstract style himself, Denis anticipated what was to come by uttering the later 'war-cry' of the abstractionists - "a picture - before being a horse, a nude or an anecdotal subject - is essentially a flat surface covered with colours arranged in a certain order."  
His enthusiasms were more influential than his practical output.
55. BRISAC. p. 165.
56. REYNTIENS. p. 6; READ. p. 598.
57. REYNTIENS. pp. 6-7.
58. FRAMPTON. p. 108; HATJE. pp. 224-225; REYNTIENS. pp. 6-7; PEVSNER, N. (1968). Studies in Art, Architecture and Design. Vol. 2. p. 225.
59. Ibid.
60. NERVI, P.L. (et al.) (1979) Modern Architecture. p. 112.
61. REYNTIENS. p. 7.
62. Ibid; BRISAC. p. 165, 168.
63. REYNTIENS. p. 2.
64. Ibid. pp. 7,8.
65. GILBERT, A.T. (1900). The Cross Family. Art Journal. Vol. 62, 1900. pp. 153-155.  
DURET-ROBERT, F. (1974). 'Le Sculpteur qui Redecouvert la Pâte de Verre : Henry Cros' Connaissance des Arts, No. 274, Dec. 1974. pp. 69-72.
66. The subject of much experimentation by the Royal College of Art's Department of Ceramics and Glass under Martin Hunt in the 1980's.  
Refer : CUMMINGS, K. (1980). The Technique of Glass Forming.
67. ROLLET. p. 76, 257.
68. BRISAC. p. 165.
69. Ibid.
70. Ibid; REYNTIENS. p. 10.
71. Comment has already been made regarding Rouault's early training as a stained glass apprentice.



72. FIRMIN-DIDOT. pp. 52, 53.
73. REYNTIENS. p. 11.
74. Ibid; BRISAC. p. 168.
75. SOWERS comments, "... Bony was employed to ... duplicate ... a series of Rouault paintings that ... the church had found suitable in subject matter and which the artist had lent for the purpose. Here ... was the 'servile and lifeless imitation' ... of a whole repertoire of modern painterly effects that in stained glass count for almost nothing. This is the craft tyrannized by art."  
Refer : SOWERS, R. (1981). The Language of Stained Glass. p. 109.
76. Op. cit.
77. Ibid. p. 168.
78. Ibid.
79. FURBISH, R. (1983, 1984). Corte Supremade Justica, Caracas, Venezuela. Stained Glass (SGAA), Vol. 80, No. 2, 1985. p. 131.
80. PERROT, F. (1984). Le Vitrail Français Contemporain.
81. Dalle-de-Verre as we have seen (Refer Chapter 2) was first created by the Parisian master-glazier Jean Gaudin in 1927, grandfather of Sylvie Gaudin.
82. Viewed by the author in 1984. See BRISAC. p. 169.
83. PERROT. pp. 80, 84.
84. REYNTIENS. p. 6; BRISAC. pp. 168, 169; ROLLET. p. 75; PERROT. p. 5, 114.
85. REYNTIENS. p. 6.
86. SOWERS. pp. 107-109.
87. Op. cit.
88. Ibid.
89. ROLLET. p. 75; PERROT. p. 114.
90. French: 'Sacred Heart'.
91. BRISAC. p. 168; LEE, SEDDON, STEPHENS. p. 171.
92. Ibid.

93. An avowed Communist, the sculptor Giacomo Manzu (b. 1908), was later commissioned to make a set of bronze doors for that greatest Catholic church of them all - St. Peter's in Rome. It seems that faith, in itself, is not the spur for artistic masterworks.
94. PERROT. p. 17.
95. LEE, SEDDON, STEPHENS. p. 170.
96. SOWERS. p. 109; plate v, p. 101.
97. PERROT. p. 40.
98. 'Bird on a violet ground'.
99. PERROT. p. 41.
100. BRISAC. p. 169; LEE, SEDDON, STEPHENS. p. 171; PERROT. p. 11.
101. FRAMPTON. p. 228.
102. Ibid.
103. See also NERVI. pp. 346, 347.
104. A technique whereby cement is sprayed onto a surface to create a regular texture.
105. FRAMPTON. p. 229.
106. SOWERS, R. (1965). Stained Glass : An Architectural Art. p. 92, 93.
107. PERROT, plate opposite p. 94.
108. BRISAC. p. 170.
109. ROLLET. p. 73.
110. SOWERS. (1965). pp. 59, 60.
111. PERROT. p. 122 and plate; LEE. (1977). p. 52.
112. BRISAC. p. 112.
113. Ibid.
114. Married in 1949.  
Charles Marq collaborated over the years with many of the members of the 'Ecolé de Paris', including Chagall, Bissière, Sima, Braque, Ubac, Viera da Silva and Poliakoff, as well as designing works in his own right and collaborative works with his wife Brigitte (née Simon).

115. PERROT. p. 150, and plate.
116. Ibid. p. 34, and plate.
117. Ibid. p. 30.
118. Ibid.
119. Viewed by the author in 1984.  
BRISAC. pp. 172-173.
120. Ibid.
121. PERROT. p. 30.
122. ROLLET. pp. 72, 256; and unpublished lists and photographs supplied to the author by the South African stained glass designer, Leo Theron of Pretoria, 1986.
123. PERROT. p. 16.
124. "Among the historic monuments how many splendid churches have been inundated by blown-up false values (Max Ingrand at Saint-Pierre de Montmartre, alas! and so many others ...)."
125. Author's opinion.  
Refer also : LEE, L. (1977). The Appreciation of Stained Glass. p. 93, concerning the 'large brush' method of glass-painting favoured by Ingrand, Rouault, and in England, Reyntiens.
126. See 122 above.
127. PERROT. p. 42.
128. BRISAC. p. 171.
129. Op. cit.
130. Ibid.  
Also : AMIEL, L. (et al.) (1982). Homage to Chagall. pp. 189, 190.
131. LEE, SEDDON, STEPHENS. pp. 166, 167; and plate.
132. PERROT. p. 42.
133. AMIEL, L. (et al.) (1982). Homage to Chagall. pp. 189, 190.
134. VERDET, writing in Homage to Chagall. pp. 165-174.
135. PERROT. plates, pp. 42, 43.

136. LEE. p. 43.
137. REYNTIENS. p. 15.
138. SOWERS. (1965). pp. 42, 43.
139. SEDDON, writing in LEE, SEDDON, STEPHENS. p. 166.
140. Op. cit.
141. PERROT. p. 104; FIRMIN-DIDOT, P. (et al.) (1980). 1<sup>e</sup> Salon du Vitrail, Chartres. pp. 66-67.
142. For example, the architect, Y. Garafulic in Chili; Harrison & Abramowitz in Stanford, U.S.A.; Philip Johnson in Dallas, U.S.A. - and others.
143. Illustrated in LEE, SEDDON, STEPHENS. p. 162.
144. Ibid.
145. Ibid; BRISAC. plate, page 175.
146. Ibid.
147. Ibid.
148. Booklet (1970?). Stained Glass in St. George's Cathedral.
149. PERROT. p. 104; FIRMIN-DIDOT (1980). pp. 66-67.
150. ARNASON, H.H. (1978). A History of Modern Art. pp. 579-583.
151. Listed in PERROT.  
 Also refer : BOUCRAUT, M-M. (1979). Vitraux et tapisseries en liberté.  
 - FIRMIN-DIDOT (1980);  
 - FIRMIN-DIDOT (1982);  
 - FIRMIN-DIDOT, P. (et al.) (1983). Vitrail Labyrinthes, Chartres.  
 - ROLLET. pp. 71-76.  
 - PERROT, F. (et al.) (1983). Vitrail en Eclat, Reims.
152. Jacques Loire, for example, has always worked in the shadow of his father's powerful personality. It is no wonder then that he is least successful when he tries to emulate him in mammoth screen walls like that of the Church of St. Denis at Vaucresson, which purports to 'evoke the divine apostolate' in 'dalle de verre'. His dalle de verre screen in the Hotel Navotel in Chartres, and the Anglican Church, Paris, are also unfortunate in their combinations of yellows, greens, purples, browns and cerulean blues. He is most successful in the Chapelle Carmel de Chartres, where he uses tinted plate

glass and a lattice of leads of differing widths to convey his theme against a tapestry of grass and trees. Refer : DESREZ, G. (1984). Jacques Loire.

153. Throughout his introductory essay, PERROT beats a drum for abstraction, used almost exclusively (in the examples given) in the ecclesiastical environment. The intrusion of over-lively and colourful idiosyncratic statements in abstract stained glass are as uncomfortable as sacharine religiosity to the humble worshipper. The manipulations of the ancient symbols of Christianity in the glazing of the church mullions is at least as important as the way the glass enriches the interior and enhances the architecture.
154. Fleury manipulates oxide on glass in a way which reminds one of Hans Hartung (b. 1904); a member of the 'Ecolé de Paris'.
155. Illustrated in FIRMIN-DIDOT (et al.) (1983). pp. 30-35; and PERROT. p. 126.

CHAPTER 7 : MUSEUMS, SOCIETIES, AND GLASS MANUFACTURERS  
IN FRANCE

7.1 MUSEUMS

BRISAC<sup>1</sup> lists fourteen collections of stained glass in museums in France. The most interesting to this study are the following :

7.1.1 The Musée de l'Ecolé de Nancy Emile - Gallé, Nancy, contains an important collection of stained glass by Jacques Gruber.

7.1.2 Musée des Arts décoratifs, Paris houses a large collection of nineteenth and twentieth stained glass, including Grasset, Guimard and Gruber.

7.1.3 Musée d'Orsay, Paris houses a collection of French and foreign panels from the end of the nineteenth and the early twentieth centuries.

7.1.4 Musée du Prieuré, Saint-Germain-en-Laye A collection of Nabis and Symbolist stained glass with cartoons by Maurice Denis.

7.1.5 Musée d'Art moderne, Strasbourg.

Collection of nineteenth century/early twentieth century windows by Sophie Tauber-Arp, Theó van Doesburg, Serge Poliakoff and Roger Bissière.

The others are :

7.1.6 Musée de l'ancien hôpital Saint-Jean, Angers.

7.1.7 Musée du Berry, Bourges.

7.1.8 Musée Condé, Chantilly.

contains the collection of the Prince de Condé acquired in 1817, being the forty-four panels illustrating the loves of Cupid and Psyche as related by Apuleius. These sixteenth century panels came originally from the Château of Ecoeu.

7.1.9 Musée national de la Renaissance, Ecoeu.

7.1.10 Musée du Louvre, Paris.

7.1.11 Musée des Thermes et de l'Hôtel de Cluny, Paris.

7.1.12 Musée départemental des Antiquités de la Seine - Maritime, Rouen.

7.1.13 Musée municipal, Sens.

7.1.14 Musée del'Oeuvre Notre-Dame, Strasbourg.

## 7.2 LA GALERIE DU VITRAIL

17 rue du Cloître Notre Dame

28000 Chartres.

The proprietress of this interesting gallery which specializes in stained glass, is the charming Mme. Micheline Loire, of the famous Loire family of master stained glass-painters of Chartres. The gallery is both retail shop, selling panels of stained glass, lamps, books and literature<sup>2</sup> on the medium, as well as the venue for exhibitions of contemporary excursions into the medium.<sup>3</sup>

## 7.3 CENTRE INTERNATIONAL DU VITRAIL<sup>4</sup>

75 rue de Grenelle

75007 Paris.

The Centre International du Vitrail, an organization for the promotion of stained glass, grew out of a restoration project in the shadow of the great Cathedral of Chartres - the restoration of the ancient cellar granary of the Cathedral, a unique thirteenth century relic.



The Centre has superb exhibition facilities. Its first major exhibition was held from 3 July to 15 September 1980, the '1<sup>e</sup> Salon du Vitrail', which provided an overview of French accomplishments in the medium from 1900 to many of the contemporary artist-glaziers mentioned in Chapter Six.<sup>5</sup> Each exhibition is accompanied by a scholarly and informative catalogue, usually accompanied by full colour plates.<sup>6</sup> PERROT's recent book 'Le Vitrail Français Contemporain' can be said to have grown out of her catalogue compilations on behalf of the Centre.

#### 7.4 CORPUS VITREARUM MEDII Aevi<sup>7</sup>

The Centre International du Vitrail also has important links with the Corpus Vitrearum Medii Aevi, established in 1952 by the Union Académique Internationale and the Comité International d' Histoire d' Art, for the study, appreciation and conservation of the estimated 50 000 square metres of rare and fragile medieval stained glass removed to safety in 1939 by Inspector-General Jean Verrier of the Historical Monuments' Commission.<sup>8</sup> After the Second World War, the restoration of these windows was systematically documented and recorded photographically. This record is filed in the archives of the Historic Monuments' Photographic Service.<sup>9</sup>

In 1953, an exhibition "Vitraux de France" was held at the Musée des Arts décoratifs, in Paris. MERCIER<sup>10</sup> said of this exhibition, .

"... Het was een gelukkig initiatief om XIII de-eeuwse glasramen naast het werk van Rouault, Léger of Matisse te plaatsen. Op die manier werd het glasraam aan publiek en kunstenaars getoond als een geprivilegieerd expressiemiddel voor schilders van vroeger. Meteen was ook aangetoond dat hedendaagse schilders uitstekende resultaten bereiken onder Zich druk te maken over de regels die worden opgelegd in naam van de archeologische sakrale kunst."

This, and a further exhibition at the same venue in 1958, "Le Vitrail Français" gave some indication of the glories of French stained glass from the eleventh century to contemporary times".<sup>11</sup>

In 1962, an International Technical Committee was established, to co-ordinate research into the corrosion and conservation of medieval glass.<sup>12</sup> Laboratory examinations of the composition of ancient glass manufacture, the nature of deterioration, the effects of pollution and variations of temperature among other factors, was carried out in the laboratories of the Historic Monuments Commission in the Château de Champs-sur-Marne, under the direction of Inspector-General Jean Taralon, assisted by a multi-disciplinary team of experts.<sup>13</sup>

The principal aim of the Corpus Vitrearum is the publication of all surviving European medieval window glass, including

material in collections in the U.S.A. and Canada. Catalogues follow a common format, employ an internationally recognized numbering system for windows and individual panels, and seek to authenticate medieval glass that has undergone extensive restoration by the use of restoration diagrams. The results of the operations of the International Technical Committee are published in regular international newsletters.<sup>14</sup>

#### 7.5 STAINED GLASS MANUFACTURE

One of the most famous manufacturers of stained glass in the world is undoubtedly :

VERRERIE DE SAINT-JUST-SUR-LOIRE      Tel. : (77) 365298  
42170 Saint-Just-Saint-Rambert      Telex: 330591F  
Nr. Lyon  
France

Their agents in South Africa are :

Inter-Glass Africa (Pty) Ltd.  
P.O. Box 51783  
Randburg  
2125.

Saint Just offers a variety of coloured glass types,<sup>15</sup> including pot-coloured plain or striated surface glasses; crackle antique; 'Bulle' drawn and pot-coloured with stri-

ations and bubbles, antique blown glass, both pot-coloured or flashed; and cast, pot-coloured, rectangular or square shaped 'dalle de verre'.<sup>16</sup>

Over 3 000 different tints are available. French glass is used all over the world; for instance, Loire's 'Tower of Joy' in Japan; Eben van der Merwe's Provincial Administration Building in Bloemfontein; Loire's 'Fish' Church in Stamford, U.S.A.; were created with glass from Saint Just. All Chagall's windows were made by Marq with antique glass specifically produced by Saint Just to his specifications.<sup>17</sup>

## 7.6 REFERENCES AND NOTES - CHAPTER 7

1. BRISAC. pp. 188, 189.
2. A catalogue will be sent on request.
3. The author was fortunate to view the 1983 Annual Exhibition of the Architectural Stained Glass Department of the West Glamorgan Institute of Higher Education on show in the Galerie du Vitrail in July 1984.
4. Of which the author is a 'Membre Actif'.
5. See Bibliography.
6. Ibid.
7. Refer also to 4.1, the Corpus Vitrearum in Great Britain.
8. Jean-Jacques Gruber, writing in the Introduction to the exhibition catalogue 1<sup>e</sup> Salon du Vitrail (1980).
9. Ibid.
10. G. Mercier, 'Art abstrait dans l'art sacré' uitg. Boccart, p. 96. Quoted by CALDERS, A. and GERON, J-M. (1986) in the catalogue to the exhibition 'Gloed van Glas' held in the ASLK-galerij, Kreupelenstraat 12, Brussels in May-July 1986.
11. A rough translation reads,  
"It was a fortunate occurrence to be able to place XIII<sup>th</sup> Century windows next to the work of Rouault, Léger or Matisse. In this way it could be demonstrated to the public and artists alike, that the window was regarded as a privileged medium of expression to painters of yore. At the same time it was shown that contemporary painters achieve outstanding results without having to concern themselves with rules and regulations laid down in the name of archeologically sacred art."
12. Pamphlet (1984) : Recording Medieval Glass. Royal Commission on Historic Monuments. (England).
13. GRUBER. p. 13.
14. Ibid.
15. Used extensively in stained glass classes by the Port Elizabeth Technikon (1985-todate).

16. 'Drawn' glass is machine-made; 'antique' glass is made in the so-called 'antique' or 'ancient' manner by hand-blown techniques. 'Pot' colour refers to the addition of colouring agents, such as oxides, added to the molten glass in the 'pot' or cauldron. The resulting glass is a solid colour permeating through the sheet. 'Flashed' glass is a thin layer of one colour on a base of another, e.g. red on white, red on yellow, blue on white. 'Dalle-de-verre' are 25cm thick, 30cm by 20cm in dimension; each weighs 3,5 kg. They are cast in moulds.
17. AMIEL. p. 190.

## CHAPTER 8 : GERMANY : HISTORIC OUTLINE

### 8.1 FOREBEARS

As HARRISON points out, "it is always tempting to try and identify 'streams of development' in the history of art",<sup>1</sup> but in Germany, where stained glass is today as diverse in approach as the works are numerous, the result would be a simplification. For this reason, to speak of a German 'School of Stained Glass' would be misleading, as would reference to a 'founder' of such a 'School'.<sup>2</sup>

Nevertheless, of the early twentieth century glass designers, John Thorn Prikker (1868-1932) was a profound influence in shaping the direction that modern stained glass has taken. Born in Holland, Thorn Prikker was a prominent painter in the Jugendstil style.<sup>3</sup> His paintings, for example, "The Bride"<sup>4</sup> of 1892-93, have boldly delineated forms and flat decorative surfaces that herald his later concern for the medium of stained glass.<sup>5</sup> Probably the strongest influence on his development was his friendship with the Belgian Art Nouveau artist, Henry van der Velde (1863-1957).<sup>6</sup> Van der Velde was also craftsman, industrial designer, architect, and critic who exercised a considerable influence on German architecture and design.<sup>7</sup>

Van der Velde moved to Germany in 1899,<sup>8</sup> and possibly at his instigation, Thorn Prikker followed in 1904, taking up a post at the Krefeld School of Arts and Crafts,<sup>9</sup> where he taught stained glass, mosaic and fresco painting.<sup>10</sup>

Thorn Prikker's first stained glass commission was for the reception hall of Hagen<sup>11</sup> Railway Station in 1910. His designs were turned into stained glass by the Berlin Studios of Gottfried Heinersdorf (1883-1941).<sup>12</sup>

It is important to remember, that unlike the 'line' studios in England, where an 'in-house' designer is employed who thus perpetuates a particular style, in Germany studios offer their facilities and expertise to independent artists.<sup>13</sup> This admirable system ensures a marriage between innovative and creative design and fabricated final works of great technical facility.

The studios thus also became the meeting place of artists working on different projects; at Heinersdorf's Studio, Prikker came into contact with many of the members of Die Brucke, Der Blaue Reiter, and the Berlin November Gruppe, who had their designs executed there.<sup>14</sup> Among them were César Klein (1876-1954), Max Pechstein (1881-1955), Richard Seewald (1889-1976), Karl Schmidt-Rottluff (1884-1964) and Heinrich Campendonk (1889-1957). Prikker's windows at Hagen show the influence of his contact with Expressionism.<sup>15</sup>



His first ecclesiastical commission came to him through his friend the architect Peter Behrens (1868-1940),<sup>16</sup> a series of windows for the Drei Königen Kirche in Neuss (1912).<sup>17</sup> At the time of this commission, church art in Germany was carried out mainly in the Nazarene style, not dissimilar to the Gothic Revival style of an earlier period in England.<sup>18</sup> Thus Prikker's dynamic and restless figures with their intense expressions came as a shock, so far did they depart from the accepted norm. The Neuss 'St. George', for example, is a sombre, physical presence, who fills the entire window light with his power.<sup>19</sup>

In 1920, Thorn Prikker settled in Munich,<sup>20</sup> where he taught at the School of Arts and Crafts.<sup>21</sup> A window, from this period, fabricated by the Bereinigte Werkstatte in Munich - Solln (1922), for the Music Room of Professor Körner of Essen, is completely abstract in almost a jazzy Art Déco style.<sup>22</sup>

From 1926 until his death, Thorn Prikker taught at Cologne and at the Düsseldorf Academy, and the Hein Derix Studios at Kevelaer were responsible for executing his designs.<sup>23</sup> The strident angularities of the Art Déco style had disappeared from his mature style, which, in its disposal of verticals and horizontals, has elements in common with the works of De Stijl or Frank Lloyd Wright (1869-1959) across the Atlantic.<sup>24</sup>

Towards the 1920's it has been said that he was much influenced by De Stijl and Cubism. It is, however, interesting to speculate whether the geometry of his windows was not rather the result of his friendship with Peter Behrens, who had discovered through J.L.M. Lauweriks of Düsseldorf that, "the secret(s) of geometry could spawn a world of signs ...".<sup>25</sup>

Thorn Prikker's use of symbols within a geometrical framework is particularly well illustrated by 'The Spirit's Dove' in Drei Königen Church, Neuss (1928). The Holy Spirit, in the form of an abstracted dove in the apex of the window descends, its head touching the apex of an equilateral triangle, symbol of the Holy Trinity. Within the triangle, vertical lines lead the eye downward to two semi-circular bands containing rows of circles symbolising the Spirit's seven gifts and Christ's five wounds. Bands of horizontal lines intersect with the central vertical axis to form a cross. The arms of the triangle are extended downwards with strips of red glass, symbolizing Christ's blood and Divine Love. A horizontal red strip meets with it to create an 'A' - the 'Alpha'. (The Alpha and Omega symbols - the Beginning and the End - occur frequently in Prikker's windows).<sup>26</sup> Prikker cleverly manipulates the illusions of space with both geometry and selective colour, which emphasizes the symbols and visual relationships contained within the window.<sup>27</sup>

During this last period of his life, Thorn Prikker completed a distinguished body of works for the BMV School at Essen, the Church of St. Georg, Cologne, and Drei Königen Church, Neuss.<sup>28</sup> Most were non-figurative; all retain symbolic elements which give pertinence to their function. Prikker was one of the first artists of the twentieth century to lay the groundwork for a new type of monumental art through the introduction of the principles of modern art into ecclesiastical architecture.<sup>29</sup>

Heinrich Campendonk (1889-1957) studied painting under Thorn Prikker at the Krefeld School of Arts and Crafts from 1905-1909. In 1911 at the invitation of Franz Marc (1880-1916), he became a member of the 'Blaue Reiter' group. He did not begin designing for stained glass until 1926 when he began teaching at the Düsseldorf Academy, and, like Prikker before him, used the Hein Derix studios at Kevelaer to execute his designs in glass.<sup>30</sup>

Campendonk used non-figurative and symbolic design in a manner reminiscent of Thorn Prikker, as in his windows for the Crypt of the Münsterkirche, Bonn,<sup>31</sup> (1956), fabricated this time by the Wilhelm Derix Studios, Düsseldorf.<sup>32</sup> Unlike Prikker, however, Campendonk used strongly simplified figurative subjects in most of his windows, telling his story dramatically with the simplest of means. The lead line in Campendonk's work (as it was in Prikker's) is all important; it defines the structure and characteristics of the subject.

Glass painting is used only where lead would be clumsy, to clarify a form (an eye, nose or mouth, for example) or as a textural patina to the glass.<sup>33</sup> All these characteristics are present in the 'Passion' triptych for the 1937 World Exhibition, held in Paris.<sup>34</sup>

During the post-war years 1952-3, Campendonk completed a number of windows for the Essen Münster, the most interesting of which is 'St. Michael', sword and shield in hand, the devil underfoot.<sup>35</sup> At the same time he designed five 'Angel' windows for the Catholic Pfarrkirche St. Paulus in Düsseldorf.<sup>36</sup> Despite the figurative subject matter, Campendonk's windows are all strongly architectonic. This is perfectly illustrated in the 'Isaiah' north window (1952) for Cologne Cathedral of which only a trial panel was executed.<sup>37</sup>

Let us return briefly to 1906. In that year, the influential Henry van de Velde, under the patronage of the Duke of Saxe-Weimar, founded and designed the Weimar School of Arts and Crafts, moving decisively from art nouveau into a new rational and functional form of architecture. Van der Velde left Weimar in 1914 and on his recommendation, was succeeded as director by Walter Gropius (1883-1969). Gropius assumed his duties after the first World War, and set about the reorganization of the curriculum of the schools of fine and applied arts, consolidating the separate schools under a new name, Das Staatliche Bauhaus, Weimar.<sup>38</sup>

The first head of the stained glass department at the 'Bauhaus' (as it became commonly known) was the mystic Johannes Itten (1888-1967),<sup>39</sup> and later the painters Paul Klee (1879-1940),<sup>40</sup> and Josef Albers (1888-1976).<sup>41</sup> Sophie Taueber-Arp (1889-1943)<sup>42</sup> and Theo Van Doesburg (1883-1931)<sup>43</sup> were among the distinguished artists who worked there.<sup>44</sup>

HARRISON<sup>45</sup> records that few windows made at the Bauhaus have been discovered, but those by Albers in 1922 for the Sommerfeld House (designed by Walter Gropius and Adolf Meyer) at Berlin-Dahlem, are extant. BRISAC<sup>46</sup> records that there is a collection of windows by Sophie Taueber-Arp, Theo van Doesburg and others, in the Musée d'Art moderne, Strasbourg.

Anton Wendling (1891-1954) studied under Thorn Prikker at Munich from 1921-1923.<sup>47</sup> After a year in Italy, he was appointed assistant lecturer to Heinrich Nauen (1880-1940) at the Düsseldorf Academy in 1925, and carried out his first stained glass commission the following year.<sup>48</sup>

The commission, however, which established his reputation in the forefront of post-war designers, was his abstract stained glass for the side window of the great Aachen Dom, Charlemagne's Church in the ancient city of Aix-la-Chapelle (now Aachen).<sup>49</sup> It was important that these tall windows

should complement Walther Benner's (b. 1912) figurative central windows (themselves somewhat 'Gothick' in character),<sup>50</sup> with the medieval architecture of the building.<sup>51</sup>

One of Wendling's most significant works is the 'Fish Window' in the baptistry of St. Sebastian's Church in Aachen.<sup>52</sup> Christ, symbolized by a great white fish bearing a red cross in its mouth, leads the Christians, a school of small white, grey and blue fish, through the billowing waves of life towards Redemption, while swimming in the other direction, red and purple fish descend into the depths. The Greek word 'Ichtys' appears in large letters in the top right-hand side of the window.<sup>53</sup>

Another connection with Heinrich Nauen at the Düsseldorf Academy, was Georg Meistermann (b. 1911), the most formidable force to appear in immediate post-war Germany. Meistermann's studies at the Academy had been cut short by the political climate leading up to the Second World War.<sup>54</sup> Few of his early works survived the war; those that do, have a strong calligraphic style in the Josef Strater (1899-1956)<sup>55</sup> manner, but in a more dynamic form. Two of these windows are shown in PLÖTZ,<sup>56</sup> namely, Meistermann's 'Chi Rho' with symbols of the Evangelists in the Pfarrkirche at Solingen-Mangenberg,<sup>56</sup> and 'St. Francis receiving the Stigmata' for the Franziskanerkloster at Werl (1937).<sup>57</sup>

In 1952, Meistermann was appointed Professor at the Städel Art Institute, Frankfurt, and in 1955, Professor at Düsseldorf Academy. Meistermann's first major achievement was his five-storey staircase window for the West German Radio Station in Cologne. This huge expanse of glass, called 'Colour Tones of Music', with its organic blobs of colour and network of sinuous black lines, "... inevitably recalls Miró ...,"<sup>58</sup> but is exactly right for its location.<sup>59</sup>

In 1956, at Bad Kissingen, Meistermann designed the first all-white figurative window, a concept lauded by Professor Johannes Schreier (of whom much more later) as, "... a cleansing of the modern manipulative<sup>60</sup> uses of colour in the mass media ..."<sup>61</sup> and a return to the medieval concept of 'grisaille' windows more suited to a contemplative atmosphere.<sup>62</sup>

At St. Marien, Cologne-Kalk, there is a set of four impressive Meistermann windows of 1965.<sup>63</sup> The first, a 'Piéta', recalls his earlier calligraphic style with its figurative subjects, but as the series progresses, as it were, from window to window, so the figures become more wraith-like, and the restless, closely leaded sections become more turbulent until in the last window they overwhelm the ghostly figures altogether.<sup>64</sup>

## 8.2. CONTEMPORARY MASTERS

Let us turn our attention now to the generation of stained glass artists who were born in the period between the two World Wars, and consider the conditions prevailing in Germany after the collapse of the Third Reich, that led to the enormous outpouring of post-war artistic activity, already encountered in the work of Wendling and Meistermann.

Much of Germany had been well-nigh destroyed in systematic bombing raids by the Allies.

The magazine, "Das Münster", published in Munich (Vol. 1, 1947 to Vol. IV, 1951) tried to assess something of the damage to church buildings. In the small bishopric of Aachen, for example, only 43 of the 498 Catholic churches survived undamaged; 142 had been completely destroyed. (By 1960, 123 had been rebuilt and 18 temporarily restored). In the area of the Rhineland-Palatinate, 400 churches "of monument rank" were totally or partly destroyed, while in the Freiburg archdiocese, 786 churches were damaged. Sixty-five Lutheran churches were totally destroyed and many other damaged.<sup>65</sup>

It was the large-scale movement of the population that provided the impetus, and the spiritual outpouring after 13 years of dictatorship that provided the stimulus for the reconstruction and new construction of churches. The popu-



lation had been swollen by more than 12 million refugees; three-quarters of a million Lutherans were re-settled in Catholic Bavaria, while Catholic refugees also found themselves in predominantly Lutheran areas.<sup>66</sup>

On the whole the Church emerged in good shape from the tyranny of the Third Reich and could even point to martyrs.<sup>67</sup> The problems of reconstruction, both physical and spiritual were many. Endless debate revolved around the form and function of church architecture for the people desperately sought a new encounter with God and a new style of worship. Decoration within the church was also the subject of earnest debate.<sup>68</sup>

In 1952, Pope Pius XII, in his "Instruction on sacred Art" of the Holy Office of 30 June, declared,

"The new forms and pictures should not be rejected in general and a priori. It is absolutely necessary that, granted the prudent avoidance of eccentric realism or exaggerated symbolism, modern art should also be given a free hand, as long as it serves the sacred buildings and rites with the requisite respect and reverence."<sup>69</sup>

Ten years later, the 2nd Vatican Council, in the "Constitution on the Sacred Liturgy" promulgated in November 1962, declared, "that creative artists should only be required to show 'due respect and reverence' and that 'freedom of practice' ... was assured".<sup>70</sup> In the Lutheran circles, Dr. Paul Schütz approved pictures in the Protestant Church, but stressed the difficulty of portraying Christ. "Such

pictures could be a symbol but also a sign of the impossibility of portraying God."<sup>71</sup>

Germany, before the Second World War, had been the breeding ground for exciting new ideas in architecture, but the advent of Nationalist Socialism called a sudden halt to progressive thinking. No 'modern' architecture was tolerated; only a sterile, monumental neo-classicism was promulgated. The Bauhaus was dissolved; many architects fled.<sup>72</sup>

The rebuilding programme after the war was immense. It was estimated that initially some 6.5 million homes alone were required; architects had to build before they could think. And yet the isolated achievements of individual architects were remarkable.<sup>73</sup> In the field of church building (it is estimated that more than 8 000 were built), Dominikus Böhm (1880-1959), Rudolf Schwarz (1897-1961), Hans Schädel (b. 1910), and many others, created the environment so necessary for the stained glass designer. These architects exploited the contemporary possibilities of fenestration with a daring that has no precedent since the Gothic era.<sup>74</sup> Some of the architects were creative stained glass designers in their own right. Dominikus Böhm and Heinz Bienefeld, for example, collaborated on a stained glass wall in Dominikus' Church of St. Maria Königen at Cologne-Marienburg (1953-1954),<sup>75</sup> which has been proclaimed as,

"... a classic of grisaille (that) can stand comparison with any glass at any time."

"The eye (is led) from end to end as a continuously unfolding experience of great intensity, in a range of soft greys, opalescents and white - some of which are figured commercial glasses. The effect on the spectator is to keep the attention always within the bounds of the window, yet move the eye about by slow degrees so that it is continuously refreshed and never tires."<sup>76</sup>

The example set by such creative designers was not everywhere appreciated or emulated. SCHREITER refers to "the countless figurative anachronisms unfortunately demanded everywhere by churches after the war."<sup>77</sup>

Paul Weigmann (b. 1923) of Leverkusen, studied at the Kölner Werkschulen under Professor Wilhelm Teuwen (1908-1967).<sup>78</sup> Teuwen was a pupil of Campendonk and an influential teacher, who in his own work steered a capricious course between realism, stylization and abstraction.<sup>79</sup> Weigmann<sup>80</sup> successfully interweaves abstract and representational elements which are sometimes figurative (as in St. Martinus, Weverlinghoven (1977), and St. Joseph, Köln-Dünnwald<sup>81</sup> (1979), and frequently contain floral and leaf forms (as in the apse windows of St. Remigius, at Bonn (1969-1982) - a grisaille of natural forms in white glass on a muted blue background with tiny accents in red).<sup>82</sup> At times Weigmann is geometrically severe, as in his variations on a square in the choir of St. Mariä Himmelfahrt (1972).<sup>83</sup> His strangest windows, reminiscent of the prints of the English sculptor Eduardo Paolozzi (b. 1924), are the three north windows in the nave of the Church of Christ-König at Leverkusen -

Küppersteg - three tall hieratic abstract grisaille figures that impose their presence on the nave (1974).<sup>84</sup>

Other members of the Teuwen 'school' are Robert Rexhausen (1928-1983), Hans Menekes (1911-1983), Franz Pauli (1927-1970), Theo Heiermann (b. 1925) and Ernst Küppers (b. 1921).<sup>85</sup>

Wilhelm Buschulte (b. 1923)<sup>86</sup> attended the Akademie für Bildende Kunst in Munich, and since 1950, has completed a distinguished body of works. Working both in flat glass and 'dalle de verre', sometimes using lyrical colour, at others, grisaille, "he possesses an unusual ability to instil into the interior of a building, a lyrical, spiritual atmosphere through the medium of stained glass."<sup>87</sup> COULON-RIGAUD, writing in CLARKE,<sup>88</sup> calls Buschulte an abstract 'naive', although how this term can be applied to the creator of the huge geometric grisaille windows in the choir of the Aachen dom (1979-80), the technically elaborate choir windows of St. Patrokli, Soest (1981), or the immense grisaille windows of St. Martinus, Linnich (1970/72), is difficult to understand.<sup>89</sup> Perhaps the lyrical, almost Klee-like leading of the window in the Church of the Holy Family, Oberhausen (1958),<sup>90</sup> or the close, lace-like webbing of the leads in the Annenkapelle in the Hildesheim Dom (1977/1980)<sup>91</sup> were the subject of this opinion. Of his combined cut-steel plate and Boussois slab glass windows, like that in the 800 year

old Church of St. Clemens in Drolshagen,<sup>92</sup> or those in the Ratzeburg Dom (1969),<sup>93</sup> SOWERS concludes that they perform the seemingly impossible feat of looking completely contemporary, and at the same time almost more Romanesque than Romanesque.<sup>94</sup>

In his four tall windows in the choir of the chapel of St. Katherinen-Hospital, Una (1968), Buschulte uses bright shot yellow-greens, ceruleans, cobalt and ultramarine blues, purples and reds in organic floating abstracts.<sup>95</sup> Those in the Essen Münster of 1965 are related in concept, but more muted.<sup>96</sup>

In 1977/78, Buschulte returned again to a lyrical figurative style, once again perfectly in accord with the architecture, in a window 'He was Crucified for us' in St. Heribert's Church, Cologne.<sup>96</sup>

Ludwig Schaffrath was born in 1924 in Alsdorf-Ofden, near Aachen, where he continues to live today.

From 1945 to 1946, he studied at the Schluterschule, and was, from 1946 to 1953, assistant to Anton Wendling in the Architecture Department of Aachen Technical College.<sup>98</sup> His early work clearly shows the influence of Wendling, but by the 1960's his style had become uncompromisingly austere and geometrical. The art of Mosaic is also close to his heart, and his native district Alsdorf-Ofden, a coal-mining area,

provides him with a rich supply of rocks, minerals and fossils to use in his compositions.<sup>99</sup> This subsidiary activity obviously influences his vision,<sup>100</sup> and his stained glass oeuvre up to the mid-sixties, particularly his slab glass for the Trauerhalle, Hückelhoven-Hilfarth (1959), and St. Maria Königin, Troisdorf (1961-62), and the glass-lead windows for the Ursuline Convent of St. Angila at Wipperfürth (1962) and St. Martinus, Aldenhoven (1960-63).<sup>101</sup> Analogies to archeological strata and phenomena re-occur in his work, as for example the 1979 window in the Kreuzkirche, Herz Jesu, Stolberg,<sup>102</sup> and indeed in his mighty screen-wall for the Railway Station at Omiya in Japan (1982),<sup>103</sup> (of which more will be said later).

Schaffrath's 32 stained glass windows for the glazing scheme of the ancient cloisters of the Aachen Dom in 1962 established his reputation.<sup>104</sup> The restless, splintered abstractions in rich irridescences of his earlier work have disappeared, and a controlled leadline in calme of different thicknesses dictates a graphic form in antique clear glass. These 'epitaph' windows have allusions to crucifixions, skeletal structures, bygone destroyed forms.<sup>105</sup> These are seminal windows; from this period line is the dominant element in his work while colour is used with great circumspection ("because colours are often used to manipulate, like in advertising, his windows want to protect from 'visuellen Terror'").<sup>106</sup> Schaffrath does not consider himself to be 'a stained glass designer', but rather 'an artist

working in various media', and declares "I choose glass, because of things I want to express which can only be expressed with glass".<sup>107</sup>

The huge triangular window in the Priesterhaus, Maria-Rast, Aachen (1979) is a transitional window, containing elements of both the skeletal figures of the Cloister windows of Aachen Dom, and the earlier fragmented images. However, the window features a series of vertical and horizontal parallel lines which anticipates the outpouring of majestic windows of the 1970's.<sup>108</sup> In St. Marien, Bad Zwischenahn (1970)<sup>109</sup> swathes of parallel lines sweep across the window lights; in the entrance hall window of the Swimming Pool at Ubach-Palenberg (1973)<sup>110</sup> and the nave window of St. Martinus at Schwalbach-Limes (1973-74),<sup>111</sup> these swathes are punctuated by transparent lenses which restrain the eye, and glitter on the surface of (predominantly) colourless opalescent glass.

This majestic series culminates in "perhaps the most stunningly powerful set of windows of the 20th Century",<sup>112</sup> St. Antonius, Düren (1974), and St. Josef's Church, Aachen (1971-75).<sup>113</sup>

More intimate articulations of sweeping parallel lines and lenses can be seen in the August Pieper Haus, Aachen, and at Köln-Mengenich, Cologne.<sup>114</sup>

In his series of six windows for the chapel of St. Antonius Hospital, Eschweiler (1976), the austere geometrical precision of the parallel lines have been relaxed and combined with more organic elements to create wraith-like floating forms in translucent and opalescent glass with passages of opaque red.<sup>115</sup>

A similar contemplative colour scheme is to be found in Schaffrath's 'kalligraphischer Rythmus' in the Anne-Frank-Schulen, Aachen (1979), where the parallel lines have opened up to become a composition based on the letter 'O'.<sup>116</sup>

Schaffrath refers to his swathes of parallel lines as "tracks of light".<sup>117</sup> His 12,5 metre long glass window for the main hall of the Railway Station of Omiya, Japan (some 30 kilometres north of Tokyo) (1982) is analogous to a stream of light, and in this panel 'light' and 'water' are his themes. The name of the country 'Japan' means "Spring of Light" - a land surrounded by water and rich with hot springs from the earth.<sup>118</sup>

Against a background of black rectangles with red frames, a cascade of white glass with blue accents divided into parallel sweeping panels and supported on a horizontal and dynamic diagonal grid of purple, flows from left top to bottom right corner - a visual play on the meaning of the word. Transparent, blue and black lenses contribute to the meaning of the theme.<sup>119</sup>



In the same year (1982) Schaffrath created the meditative window for the Priesterseminar at Aachen, this time a contemplative composition of verticals and horizontals in reamy clear glass, superimposed with lenses arranged in grid format. An irregular panel of flashed red on opal echoes the black horizontal and vertical grids of the window.<sup>120</sup>

Schaffrath has a seven-year contract with the Japan Traffic Culture Association to provide works in glass and mosaic - the last project in the latter medium was completed in 1983 for the Railway Station, Osaka.<sup>121</sup> These projects do not, however, represent his first contact with oriental philosophy.

Since the 1960's, students of every nation - Americans, English, Swedish, Icelandic, Australians and Japanese - have been knocking at his door, sometimes staying for weeks or even months.<sup>121</sup>

In 1975 Reyntiens invited him to participate in a seminar at Burleighfield,<sup>122</sup> and in the same year he was invited by the British Craft Council to make a four-week tour to seven art schools in England, Scotland and Wales. Between 1976 and 1981 he made nine trips to the U.S.A., holding thirteen seminars and workshops as well as regular Summer Schools back at Burleighfield, England, and, between 1977-1980, Summer Schools at Pilchuck, Seattle. In 1981 he spent two months in Australia at the invitation of the Goethe

Institute and the Australian Craft Council, and between 1981 and 1983, made five trips to Japan, where he gave seminars and lectures in Tokyo, Kyoto and Osaka.<sup>123</sup>

Indeed so persuasive is this man, and pervasive his style, that E.D. CARPENTER once wrote, "Is there a Schaffrathization of American Stained Glass?"<sup>124</sup>

If, as RICKE writes, "It is of little consequence for Schaffrath's basic concept whether or not the building is sacred or profane",<sup>125</sup> then the stained glass of an equally powerful personality, Johannes Schreiter, can be said to stem from different roots. Born in 1930 in Buchholz, East Germany, Schreiter fled to the West after his high school graduation in 1949. During his escape he injured his arm and had to abandon any idea of following a musical career.<sup>126</sup> Contact with the modern art of the West inspired him to follow an artistic career, and from 1949 to 1957 he studied at Münster (under Vincenz Pieper (1903-1981), a well-known glass-painter),<sup>127</sup> Mainz and Berlin. By 1958 he had already established a reputation with his "Brand-collages",<sup>128</sup> later his "Rauchkörper-Bilder" (smoky-form pictures), and "Fragmentraum-Bildreihen" (Fragmented space series), which assured him a place in contemporary art history as one of the foremost exponents of the art of collage in the tradition of Picasso, Ernst and Schwitters.<sup>129</sup>

Schreiter's first major commissions in stained glass were in 1959-1961 for St. Margaret's Church, Bürgstadt-on-Main, and St. Johannes, Bremen.<sup>130</sup> The former window is gigantic - some 21 x 11 metres - a huge triangle of dynamic vitality which thunders above - a cataclasm of shapes and colours.<sup>131</sup> His slab glass ('Betonglas') six light window at Bremen conveys the same idea (but in a form related to the chunkier medium), and with skeletal areas in white glass which relate to his later and smaller scale windows in the Church of St. Johannes, Bremerhaven (1966),<sup>132</sup> in which skeletal forms are stacked as though in an ossuary.

In 1963 Schreiter was appointed Professor at the Staatliche Hochschule fuer Bildende Künste,<sup>133</sup> Frankfurt, a post which he still holds today.

Schreiter's west windows for the chapel of Exerzitiienhaus, Johannesbund, Leutesdorf/Rhein (1966) are a radical departure from his previous style.<sup>134</sup> The glass is a cool non-transparent blue through which the lead lines meander, sometimes apparently thrusting into the areas of glass,<sup>135</sup> as well as surrounding it.

"In effect, the lead line is visually disassociated from its structural function and treated as a pure graphic element with its own expressively determined reason for existence."<sup>136</sup>

This effect was achieved by visually extending the lead line by glueing on sheet-lead foil. Later it became normal for Schreiter's collaborators, the Wilhelm Derix GmbH of Taunusstein-Wehen, to use normal H-section lead calme by substituting plexiglass for normal glass, with the leads inserted into pre-sawn cuts.<sup>137</sup>

In the choir of the same building of the same year we see the perfect example of what has been called Schreiter's "grandiose reticence",<sup>138</sup> and demonstrates effectively what can be done when architect and artist collaborate from the drawing board stage of planning. In all his work Schreiter is acutely concerned with the architectural surroundings of his stained glass and the function and nature of the space containing the windows. His designs have been called "abstract iconography", and reflect his desire to suggest a sacral space which cannot be compared to anything built from human experience.<sup>139</sup>

The choir of the chapel of Exerzitionenhaus, Johannesbund, Leutesdorf/Rhein comes close to achieving this impossible goal, his fragmented glass harmonizing perfectly with the geometric purity of the architecture without echoing it.<sup>140</sup>

In 1971-72, at St. Marien, Dortmund,<sup>141</sup> Schreiter uses the vertical parallel line schema which he breaks and fractures

in an apparently arbitrary manner. Throughout his work his central theme is the fragility and transience of all things, or in his own words,

"In the crumbling or dissolving of form it becomes suddenly human, because it is transient."<sup>142</sup>

Thus his forms are often broken up, twisted, or interrupted in their continuity, reflecting their changeable, impermanent nature. This concept is also applicable to his windows in the Church of St. Laurentius Niederkalbach bei Fulda (1977) where the border pattern breaks away into a ribbon and diamond quarries apparently disintegrate to leave an umber void of non-transparent glass.<sup>143</sup> In his windows in St. Ansgar's, Södertälje, Sweden (1975) these ribbons break loose across the surface of the glass, entering and exiting through fragmented passages.<sup>144</sup>

In his Limbourg Cathedral windows of the same period, the parallel bands take on the characteristics of paper streamers which peel away from a background which is itself a chilly void.

"The stained glass window becomes a stage set for the Theater of the Absurd, upon which decay and disintegration are engaged in a delirious 'danse macabre'"<sup>145</sup>

Inevitably, the work of an artist as uncompromising as Schreiter has sometimes led the unperceptive patron to turn

down a proposed design. This was the case in the early 1980's when the Unilever Corporation, Great Britain, commissioned him to design a large window, but turned it down for a number of reasons, not the least of which was its somewhat mocking quality.<sup>146</sup> In due course, however, this time funded by the German Branch, sections of the proposed window were fabricated by the Wilhelm Derix Studios for the Museum of Arts and Crafts, Hamburg. In the window, the image of computer paper, folded, torn or burnt, is covered with the word 'Unilever' either typed or handwritten.<sup>147</sup>

His most controversial design, however, is that provided recently for the fifteenth century Church of the Holy Ghost at Heidelberg, which incorporates screen printed images of music scores, electrocardiograms, computer printouts, and extracts from biblical and philosophical texts. With Hans GERCKE, head of the Heidelberg Art Society, "let us hope that this uniquely artistic, morally and theologically committed contribution ... will ... be realized."<sup>148</sup>

Autonomous panels are a natural part of Schreiter's oeuvre, a vehicle for experimentation and exhibition. Many have been purchased for museums around the world. In 1983 a Museum of Contemporary Stained Glass was opened at Langen near Frankfurt, for the express purpose of housing thirteen panels of Schreiter's stained glass, donated by the artist to the city on condition that several new works by important contemporary designers are purchased annually. One of these

is the panel called 'Fazit 19/1983/F'.<sup>149</sup> Ties appear to hold down a white vertical arrow that points skyward against a grey and purple background and contained within the shape of the burial window of Limbourg Cathedral. The bottom of the arrow bears Schreiter's trade mark, the burn mark. In contemporary society, the arrow is commonly used as a directional sign; here it is transformed into a symbol for the misguided aspirations of our time.<sup>150</sup>

Schreiter's whole pictorial language is based on the concept of opposites. Spontaneous lines are superimposed on constructive ones; organic forms oppose geometric ones; rhomboid and square nets meet violently with tears and cracks; quiet, calculated spaces turn dramatically into wild and incomprehensible ones.<sup>151</sup>

"Art that is totally understood is also easily forgotten."

"Art is not a question of understandability nor a question of flirtation with the incomprehensible. The only thing that counts is truth. Artistic identity is its beginning, which is precisely what brings it into close proximity with religion, in which striving for truth is, of course, also the central concern."<sup>152</sup>

Like Schaffrath, Schreiter's teaching programmes have been eagerly followed in England, New Zealand and the United States. Of his rôle as a teacher, he says,

"I have no intention of teaching anybody anything and certainly do not want to impart information for the sake of entertainment. I want to communicate **conscience**, not **knowledge**. The future of the 21st Century is dependent on whether or not we can regene-

rate the moral intelligence of the peoples of the world."<sup>153</sup>

Another German stained glass artist who makes extensive use of photosilkscreen and collage processes, sometimes to metamorphose the images of the past into his own designs, is Joachim Edgar Klos. Born in 1931 in Weida, Thüringen, East Germany, he studied at the State University for Architecture and Fine Art in Weimar, until in 1951 the University closed down its Fine Art Department. Klos made his way to the West via Berlin, and studied at the Krefeld Art School until 1957. He now lives at Nettetal-Schaag, near Mönchengladbach.<sup>154</sup> Since his student days he has enjoyed a substantial reputation as a stained glass designer, sharing, in 1959, the Glashutte Mittinger prize with Georg Meistermann for the best glass painting of that year.<sup>155</sup>

In St. Adelheid, Geldern, Niederrhein (1967),<sup>156</sup> Klos creates a meshed screen in black vitreous enamel in vertical strips interspersed with clear glass and whorls reminiscent of tree trunks. Using the same device but incorporating areas of blown up photographic half-tone dots and screens he creates, at Kaldenkirchen, Niederrhein (1967),<sup>157</sup> two windows which look like figurative rusted steel sculptures. Screen printing is once again used to great effect in the tall Gothic windows of St. Nikolaus, Walbeck, Niederrhein (1968),<sup>158</sup> St. Martini, Veert, Niederrhein (1969)<sup>159</sup> and the Liebfrauenkirche, Bocholt (1969-1972).<sup>160</sup>



At St. Nikolaus, classical columns and blown-up renaissance wood engravings have been used as elements in the design, while at St. Martini, the figure of the saint is obtained from a stone sculpture from Chartres Cathedral. At Bocholt, lace patterns have been incorporated into a grid structure.

Klos uses colour discreetly, preferring the meditative 'opak' glass (not to be confused with the opulent opalescents that we are used to, in say Louis Comfort Tiffany's work, but a glass made in the Lambertz Glass Factory, Waldsassen,<sup>161</sup> in which a colour is flashed onto the surface of an opal sheet. Light still penetrates the glass, but is held on the surface, rather than transmitted through it) to over-lively antique types of glass.

He is also a master at manipulating the parallel line, but in a manner quite unlike either Schaffrath or Schreiter, as in the 'Rosenkranz' series at St. Vitus, Hochelten (1969)<sup>162</sup> and pre-eminently in the fifteen 'Stations of the Cross' (1983), in the nunnery of Schwesternheim near Kvelaer.<sup>163</sup> All colour effects are abandoned here, while the content has been abbreviated to a system of dynamic forms, whose meaning becomes apparent when one is familiar with the theme and meditates on its content. Upstairs in the same building is a Meditation Chamber - a tiny room flanked with small but luminous windows - primarily in blues, reds and yellows. On

the surface are scrawled words from Holy Scripture - 'leaders' as it were to meditation on the Holy Message.

In the Arnold Janssen Church at Goch (1983),<sup>164</sup> he uses photosilkscreen and collage process in a composition which includes a photographic portrait of the saint (he was beatified by Pope Paul VI) and the printed word, within a grid of parallel lines in white and blue glass. Opposite this window is another, containing Janssen's fellow in beatification, Josef Freinadametz.<sup>165</sup> Klos one again uses white translucent glass and blue 'opak' glass in the entry wall window of the Police Academy at Münster-Hilltrip (1983). Here a limited stained glass competition resulted in the project being divided between the two artists Joachim Klos and Jochem Poensgen.

Klos also works in a variety of other media, including printmaking, painting, mosaic, and is an architectural colour consultant.<sup>167</sup>

Jochem Poensgen was born in Düsseldorf in 1931, and, self-taught, has since 1956 practised as a designer of stained glass, printmaker, and illustrator for Die Zeit, Die Welt and Spectrum.<sup>168</sup> Highly articulate, he has written many articles for such magazines as Stained Glass (SGAA), and Neues Glas, New Glas, Verre Nouveau. He has taught widely both in Germany and abroad, including the Institute for Church Architecture at the Philipps University in Marburg

and the Pilchuck Glass Center, Stenwood, Washington State, U.S.A. He is Guest Professor at the Architectural Stained Glass Department of the West Glamorgan Institute of Higher Education, Wales.<sup>169</sup> His first major commission was for the Church of St. Elizabeth at Bensberg-Refrath (1959-62), 240 metres of slab glass and sculptured concrete in which there is a spacial play on the shape of the rectangle.<sup>170</sup>

Of his architectural work, Poensgen says,

"It has become more and more clear to me how much our work interprets architecture. By that I mean that our stained glass windows not only interpret a building aesthetically but beyond this also the institution for which the building is erected."<sup>171</sup>

It is difficult to evaluate Poensgen's contribution to the churches of St. Elizabeth at Bensberg-Refrath, Christchurch, Dinslaken (1967), or St. Martins, Bad Honnef-Selhof (1968), for in each case the screen walls are so assertive in character that the glazing scheme appears to be an after-thought.<sup>172</sup>

As REYNTIENS comments,

"Most German post-war glass is emphatically non-figurative and relies on the rhythm of the intervals of leading for interest and enjoyment. Occasionally ... there is an attempt to vary a window space by the insertions of large panels of concrete. Unfortunately, this is seldom successful for either it obstructs the actual window, in which case the designer is tempted to ... vary the light and dark glass too dramatically, or the back light in the rest of the church is such that it negates the artistic intention behind the use of concrete panels by showing them up for what they are, that is, merely panels of concrete."<sup>173</sup>

The 'wedding-cake' effect at Christ Church, Dinslaken, is particularly disturbing.<sup>174</sup>

Particular mention must be made of Poensgen's many autonomous panels which reveal his strong 'constructivist' and innovatory skills, as in his exhibition panel for Hein Derix, Kevelaer (1975),<sup>175</sup> and his 'Triptych with flag', for the Glass Master Exhibition in Wales (1980).<sup>177</sup> In his 'Open Space' series of 1983-85, carried out at Pilchuck, Washington State, and Riverton, Wyoming, U.S.A., and with Hein Derix, Kevelaer, Poensgen explores textural surfaces in order to manipulate the image beyond the window space,

"... to mirror, to look through, and visually draw the outer world inside and thusly to convey it to the interior."<sup>178</sup>

Poensgen refers to these as "intellectual technical exercises" - an attempt to give his glass 'pictures' a lightness which playfully dissolves the boundary between glass surface and space with a minimum of technical effort."<sup>179</sup>

Hans Gottfried Von Stockhausen (b. 1920)<sup>180</sup> has had a long and distinguished career in education, while at the same time practising as a stained glass designer. His association with the Akademie für Bildende Künste at Stuttgart began as a student (1947-1951). Between 1954 and 1957 he was Instructor in Drawing, and in 1968, Head of General Artistic Education. In 1969 he was appointed Professor, and in 1970 also Head of the Department of Glass Design.<sup>181</sup>

Unlike most of the designers that have so far received attention in this study, Von Stockhausen prefers to execute his own panels, thus maintaining full control over the work from concept to realization. He has numerous architectural works to his credit in Hamburg, Ulm, Dortmund, Lübeck and elsewhere, and enjoys designing autonomous works, a subject which he discusses in RICKE's book.<sup>182</sup> Von Stockhausen retired in 1986; the new Professor is Ludwig Schaffrath.<sup>183</sup>

Space (and time) does not allow a study of every designer (and there are many) at work in Germany today. However, the following have all produced works that have excited the attention of the author:-

Hubert Spierling (b. 1925), Max Herrmann (b. 1908), Dieter Hartmann (b. 1939), Ernst Jansen-Winkel (b. 1904), Herb Schiffer (b. 1936), Anton Wolff (1911-1980), Robert Rexhausen (b. 1928), Hans Lünenborg (b. 1904), Herbert Bessel\* (b. 1944), Sigrid Glögger\* (b. 1936), Ada Isensee\* (b. 1944), Hartmut Lieb\* (b. 1949), Albrecht Pfister\* (b. 1952), Eva Sperner (b. 1953).

Those marked with an asterisk (\*) are all graduates of the Akademie für Bildende Künste, Stuttgart.

### 8.3 REFERENCES AND NOTES - CHAPTER 8

1. HARRISON, M. (1980). The Development of Contemporary Stained Glass in Germany : in, KNIGHT, A. (et al.) (1980). Glass Masters - Contemporary Stained Glass from West Germany. pp. 3-8.
2. Ibid.
3. KEHLMANN, R. (1985). The Legacy of Johan Thorn Prikker. American Craft, Vol. 34, No. 2. pp. 26-31.  
Also : ARNASON. p. 241.
4. "The Bride". Oil on canvas (145 cm x 86,5 cm). State Museum Kröller-Müller, Otterlo, Netherlands. Ref. KEHLMANN. p. 31.
5. Op. cit.
6. ARNASON. pp. 157-158.
7. Ibid.
8. Ibid.
9. HARRISON. p. 3.
10. KEHLMANN. p. 26.
11. One of Van der Velde's first large architectural commissions in Germany was the design of the interior of the Folkwang Museum, Hagen. (1900-1902).
12. HARRISON. p. 3.
13. LEWIS, T. (1980). Introduction in, KNIGHT, A. (et al.) 1980. p. 2.
14. Op. cit.
15. Ibid.
16. Peter Behrens was one of those German architects who gave their support to the Deutscher Werkbund which championed the principle of a reform of the relationship between artist and industry in order that quality and quantity could be made to complement each other. NERVII. p. 93.
17. HARRISON. p. 4.
18. KEHLMANN. p. 27.
19. Ibid.

20. Since 1880 Munich has been one of the most active centres of experimental art in all Europe : The Munich Secession (1892), Neue Künstler Vereinigung (New Arts Association) (1909), Blaue Reiter (1911), Cubism (1912). The Russian painter Vasily Kandinsky (1866-1944) dominated the Munich art world from 1900 to 1914 when, at the outbreak of the first World War, he returned to Russia. Naum Gabo's interest in art was first stimulated in Munich, where he was studying mathematics.
21. HARRISON. p. 4.
22. Ibid.
23. Ibid.
24. KEHLMANN. p. 30.  
Compare, for example, Wright's radiator screen for the Darwin D. Martin House, Buffalo, New York, 1904. (See PIPER, J. (et al.) (1978). Glass/Light, plate 11) with Prikker's 'Ornament fenster met Fischsymbol, Wittlaer, Pfarrkirche, 1927. (See PLÖTZ, R., and DERIX, H. (1984). Die Glasmaler-Werkstätten Hein Dericx, plate 91. p. 62.
25. NERVII. p. 96.
26. KEHLMANN. pp. 30-31.
27. Ibid.
28. HARRISON. p. 4.
29. It is interesting to note that the perspicacious Herbert Read, in his English Stained Glass (1926) wrote, "... in all directions (i.e. in England) there is a relapse into servile and lifeless imitation of medieval mannerisms", and continued, "... these principles are not dead : they have merely migrated, and on the continent, especially in Germany, there is a school of glass-painting which is not only modern in intention, but is inspired by all that is vital and significant in modern art ... we have on the other hand the profoundly moving and sincere work of Jan Thorn-Prikker, who has given to the symbols and images of Christianity a new intensity and realism for which there is no parallel this side of the Renaissance; and on the other hand, we have the abstract designs of Karl Schmidt-Rottluff and again of Thorn-Prikker which seem to open up infinite possibilities for this art of pure colour and light." (SOWERS, 1981. p. 107.)
30. ENGELS, M.T. (1966). Campendonk als Glasmaler. pp. 5-7.
31. Ibid. pp. 12-13; plates 28, 29, 30.
32. Refer 9.1, the Professional Studios of Germany.

33. KEHLMANN. p. 30.
34. HARRISON. p. 5.
35. ENGELS. p. 79; plate 69.
36. Ibid. p. 80; plate 70, 71.
37. Ibid. p. 74.  
There are representative works by Prikker, Campendonk, and other German, French and American masters, in the Suermondt Museum, Aachen. (Visited by the author, 1984). Refer 10.3, Museums in West Germany.
38. ARNASON. pp. 158, 159; NERVI. pp. 128-132; 146-151.
39. ITTEN, J. (1971). The Elements of Colour.
40. It should not come as a surprise to the reader that Paul Klee at one time of his life, worked in stained glass. Due to the virulent antipathy of the National Socialists (Nazis) to the Bauhaus, its methods and its teachers, which later drove them to seek refuge abroad, there are few remaining relics of their work in this fragile medium.
41. The prophet of the square, influential teacher and author of (1971) Interaction of Colour.  
Writing in Das Kunstblatt (1923) Paul Westheim said, "Three days at Weimar are enough to make you throw up for the rest of your life at the sight of a square". (NERVI. p. 146).
42. Sophie Taueber-Arp was much admired by the French.
43. NERVII. pp. 12-132; 146-151 graphically describes the tensions, animosities and idiosyncracies of the staff of the Bauhaus. For example, Johannes Itten and his mystical doctrine of Oriental and Zoroastrian origin which clashed head on with Theo van Doesburg and his Neo-Plastic rigorism.
44. HARRISON. p. 4.  
We are also reminded of Tom Wolfe's (1981) hilarious satire, From Bauhaus to Our House.
45. HARRISON. p. 4.
46. BRISAC. p. 189.
47. Op. cit.
48. Ibid.



49. Illustrated in STEPHANY, E. (et al.) Licht Glas Farbe, p. 8, 9.
50. Illustrated in STEPHANY. p. 10.
51. There is a trial panel for these windows in the Suermond Museum in Aachen.
52. Ibid. p. 14.
53. Ibid. p. 16.
54. HARRISON. p. 5.
55. See PLÖTZ. p. 74, 'Crucifixion' by Strater (1929).
56. Ibid. p. 75.
57. Ibid. p. 76.
58. HARRISON. p. 6.
59. LEE, SEDDON, STEPHENS. pp. 158.
60. As in advertising.
61. HARRISON. p. 6.
62. JOHANNES SCHREITER, writing in CLARKE, B. (1979). Architectural Stained Glass. pp. 37-38.
63. The subject of a pilgrimage by the author in 1984. One of these windows is shown in LEE, SEDDON, STEPHENS. p. 160.
64. STEPHANY. pp. 36, 37 shows all four windows.
65. SCHNELL, H. (1974). Twentieth Century Church Architecture in Germany. p. 75.
66. Ibid.
67. Father Bonnhoffer, for example.
68. Op. cit.
69. Ibid. p. 77.
70. Ibid. p. 121.
71. Ibid. p. 123.
72. HATJE. p. 125.
73. Ibid. p. 126.

74. SOWERS. (1981). p. 122; HATJE. p. 126; SCHNELL. pp. 78-96; 121-131.
75. SCHNELL. Colour plate II, p. 165.
76. REYNTIENS (1976). The Story of Stained Glass (6), The Movement Towards Simplicity - 20th Century. p. 12.
77. "Glass as a light filter" in CLARKE. p.41.
78. KORN, V-D. (et al.) (1983). Paul Weigmann-Glasmalerei aus dem rheinischen Raum.
79. PLÖTZ. Plates 120-126; colour plate, p. 121; STEPHANY. p. 23.
80. Entertained the author and discussed his work through an interpreter on 6 August 1984.
81. STEPHANY. Plate 49.
82. Ibid. Plate 11; also PLÖTZ. p. 102 for another example.
83. Ibid. Plate 50.
84. Ibid. Plate 126.
85. Ibid. p. 23.
86. CLARKE. p. 122.
87. STEPHANY. p. 30.
88. As illustrated in STEPHANY.
89. CLARKE. pp. 128-129.
90. STEPHANY. p. 12.
91. SOWERS. p. 70.
92. Ibid. p. 134.
93. Ibid. p. 111.
94. STEPHANY. p. 40, 41.
95. Ibid; CLARKE. pp. 126, 127.
96. Ibid. p. 119, plate 128.
97. The great designer gave the author a morning in August 1984, including a conducted tour of some of his master-works in the Alsdorf-Aachen region. See Acknowledgements.

98. CLARKE. p. 109.
99. BÖRNSEN, N. (1984). Neuaufbau einer alten Kunst, Der Glasmaler Ludwig Schaffrath. Westermanns Monatshefte. Sep. 9. pp. 6-14.
100. Author's opinion.
101. STEPHANY, E. (1963?). Ludwig Schaffrath, Einige Arbeiten der Letzten Jahre. Der Munster. pp. 417-428.
102. BÖRNSEN. Plate, p. 9.
103. Ibid. p. 10; STEPHANY. Plate 13.
104. Ibid. p. 10; STEPHANY. Plate 13.
105. Ibid; LEE. SEDDON, STEPHENS. p. 161.
106. Schaffrath, quoted by BÖRNSEN. p. 14, "Visual Terror".
107. Ibid.
- 108.
109. SOWERS. (1981). Plate, p. 150.
110. CLARKE. Plates, p. 118,; 120, 121.
111. Ibid. Plate, p. 112, 113.
112. HARRISON (1980). p. 6.
113. SOWERS. Plates on pages 152, 153.
112. CLARKE. Plate, p. 115.
114. HILL, R., and J., and HALBERSTADT, H. (1976). Stained Glass - Music for the Eye. Plates, pp. 50, 51.
115. CLARKE. Plates, pp. 115-117; There is a duplicate panel from this series in the Victoria and Albert Museum, London.
116. STEPHANY. Plate 45, pp. 56,57.
117. Ibid. p. 28.
118. BÖRNSEN. p. 9.
119. Ibid. plate, pp. 10, 11.
120. STEPHANY. Plate, pp. 145, 146.
121. Op. cit., p. 9.

122. At the time of the author's visit, a charming young Japanese student was spending three months in the master's home. Schaffrath's most famous oriental pupil is probably KOJI MATANO of Nagano, Japan.
123. POENSGEN, J. (1984). Ludwig Schaffrath, Zum 60 Geburtstag. Neues Glas, New Glass, Verre Nouveau. Vol. 2, 1984. pp. 64-71.
124. Smithsonian, Feb. 1978.
125. RICKE. p. 46.
126. BURCKHARDT, S. (1984). Johannes Schreiter : Stained Glass Innovator. Stained Glass (SGAA). Vol. 79, No. 1. pp. 42-45.
127. PLÖTZ. Plate 107, p. 72.
128. Shown in the 'Contemporary German Graphic Art' exhibition at the King George VI Art Gallery, Port Elizabeth, 1985.
129. GERCKE, H. (1986). Der Heidelberger Fensterstreit Neues Glas, New Glass, Verre Nouveau. Vol. 1, 86. pp. 20-24; 56-57.
130. SOWERS. Plate 69.
131. DERIX, L. (1983). Werkstätten für Glasmalerei, Mosaik, Betonglasfenster, Wilhelm Dericx in Rottweil/N. und Wiesbaden. Das Munster. Vol. 1, No. 2, 1963. p. 10.
132. SOWERS. (1981). Plate 93, p. 142.
133. CLARKE. p. 105.
134. SOWERS, R. (1984). Johannes Schreiter : A Contemporary Mannerist? Stained Glass (SGAA). Vol. 79, No. 2. pp. 142-147.
135. Author's observation.
136. SOWERS. (1984). p. 143.
137. HARRISON. p. 7.  
A technique observed by the author during his visit to the Wilhelm Dericx studios at Taunusstein-Wehen in September 1984.
138. BURCKHARDT. p. 44.
139. Ibid.
140. LEE, SEDDON, STEPHENS. pp. 160, 161.

141. CLARKE. Plates, pp. 89, 92, 93.
142. BURCKHARDT. p. 44.
143. CLARKE. Plate, p. 97; SOWERS. (1984). Plate, p. 145.
144. CLARKE. Plate, p. 99.
145. SOWERS. (1984). p. 144.
146. BURCKHARDT. pp. 43-45.
147. Ibid. Plate, pp. 42, 43.
148. GERKE. p. 57.
149. HAUFSCCHILD, L. (1984). The Museum of Contemporary Stained Glass. Stained Glass. (SGAA). Vol. 79, No. 1. pp. 46-47; See plate, p. 46. viewed by the author, Sept. 1984.
150. Ibid.
151. Ibid.
152. BURCKHARDT. p. 46.
153. GERCKE. p. 57.  
Johannes Schreiter's address is:-  
Rotkehkhenweg 7  
D-6070 Langen.
154. See Acknowledgements.
155. CLARKE. p. 103.
156. Ibid. Plates, pp. 106-108.
157. STEPHANY. Plates 108, 109.
158. CLARKE. p. 104.
159. HAUFSCCHILD, L. (1984). German Architectural Stained Glass, 1984. Stained Glass. (SGAA). Vol. 79, No. 2. pp. 136-141.
160. CLARKE. p. 105.
161. See 6.3, and Acknowledgements.
162. See PLÖTZ. Plate 159. p. 112.
163. RICKE. Plate, page 153: 'Christ Falls for the Third Time'.
164. HAUFSCCHILD. (1984). p. 137.



CHAPTER 9 : PROFESSIONAL STUDIOS AND GLASS FACTORIES  
IN GERMANY

9.1 PROFESSIONAL STUDIOS

Two family concerns dominate the field of professional stained glass manufacture, although there are also a number of smaller operations in different parts of the country.

9.1.1 The firm of Dr. Heinrich Oidtmann, Glas-und Mosaikwerkstätten, Linnich<sup>1</sup> was founded by a medical doctor in 1857. Conducting medical experiments with the use of coloured slides and a microscope, he became so enamoured with coloured glass that he sought out glass-painters in Bohemia and Saxony, and started a small business in a rented skittle alley in the house next door.

Despite family tragedies (the first two generations of Heinrich Oidtmanns died in their early fifties, the third at forty-one, while his wife, Ludovika, who carried on the business to the Second World War, was murdered in 1945), the world-wide recession of the 1930's, the cultural policy of National Socialism which did not favour sacred art forms, and the destruction of the studio during the war that followed, did not destroy the firm. Under the brothers, Heinrich (b. 1922) and Ludovikus (b. 1928), the studios were

rebuilt, and put in full production, and a centre where artists both from Germany and abroad<sup>2</sup> could have their designs fabricated by the highest standards of craftsmanship, was established.<sup>3</sup>

Many of the artists surveyed in Chapter 8 use this studio for the manufacture of their works.<sup>4</sup>

9.1.2 The Wilhelm Derix Werkstätten für Glasmalerei/Mosaik und Betonglasfenster<sup>5</sup> was founded at Goch in 1866. A school friendship linked Wilhelm Derix with the founder of the Steyl Mission House, Arnold Janssen (referred to in Chapter 8), and through him Wilhelm Derix obtained contracts for many church windows for the Steyl missions overseas.

In 1896, due to the pressure of business, a branch was established in Kevelaer, and by 1903 Wilhelm's two sons, Heinrich and Wilhelm, each managed one of the studios at Goch and Kevelaer.

By 1910, the studios were exporting to Russia, Poland and the U.S.A.

The sons of the two brothers, Heinrich and Wilhelm, were born in 1904, and, like their fathers, were named Heinrich and Wilhelm, the third generation.



Both received a good practical training in the family business and at the Art Institutes of Munich, Krefeld and Cologne, where they studied under the celebrated Thorn Prikker. They also came into contact with, among others, Campendonk, Dieckmann, Wendling, Bauer and Dominikus Böhm, the architect.

In 1922, the studio at Goch was closed and the firm consolidated at Kevelaer. In 1940-41, the cousins parted company, Heinrich retaining the business at Kevelaer, Wilhelm founding a new studio in Kaiserswerth, Düsseldorf, and, in 1942/43, a branch studio at Taunusstein in South Germany.

Wilhelm died suddenly in 1946 and his widow successfully ran the business until in 1976 when her daughter, Elizabeth Derix, took over. There are thus today three thriving branches of Derix Studios:-

- Hein Derix, Kevelaer, run by Hein Derix's nephew, Pieter, and Werner Heymann;<sup>6</sup>
- Wilhelm Derix, Düsseldorf, run by Elizabeth Derix;<sup>7</sup>
- Wilhelm Derix, Taunusstein-Wehen,<sup>8</sup> run by Wilhelm and Ursula Derix, children of Wilhelm Derix who founded the branch in 1942.

9.1.3 Glas Dedy GmbH

Tel. 02202/8767

Leverkusenstrasse 73

Bergisch Gladbach

Köln

This busy modern studio provides a comprehensive service including stained glass, decorative mirrors, glass engraving and brilliant cutting, under the direction of Karl Alexander Dedy who has more than twenty years of experience, and a team of fifty employees.

Without the collaboration of such enlightened professionals as these, the massive stained glass renaissance in Germany after the Second World War would have been impossible, for the infrastructure required to handle large-scale commissions is beyond the resources of the Arts and Crafts style artist.

Unlike their British counterparts, the Germans have established an admirable partnership between artist/designer, fabricator and glass supplier. The designer liaises with the architect and/or patron, church authority (et al.) and fabricator (the studio), and then produces a design in full colour (usually to approximately one-tenth scale). Once this concept has been approved, the designer enlarges his concept to a full-scale cartoon, and on occasion, this too, is in full colour. This cartoon, now the exact fitting size of the window, is handed over to the

studio, which proceeds to make one full panel in all its details, to give the client an idea of just what the finished window will look like - its glass-painting, surface treatment, and so on. If this is satisfactory the work proceeds, if not the concept may still be modified at this time. Another good reason for this procedure is that the artist and/or studio now possesses a panel which can be used for exhibitions, or displayed on the premises or in the artist's studio for publicity purposes.

As the work proceeds, the designer spends much time helping with the selection of glass-quality, colour, tint and so on. Few great designers (although this is not always true) today work with the glass itself - their responsibility ends with the completion of the design and the supervision of the work as it develops in the hands of skilled specialists - glass cutters, glass-painters, and those who work with lead calme to put it all together.

In a complex design the factory will also be consulted, so that the glass selected is ideal for the commission. This method allows total freedom to the artist/designer, who is not dominated by the demands of the manufacture in any way. In fact the studios go out of their way to encourage designers to be original in their thinking, guaranteeing in turn to make anything that the designers can dream up on paper. Something of an assembly line is thus established; however, in some studios, staff are moved from task to task

so that they develop expertise in a range of technical fields and do not become bored.<sup>10</sup>

## 9.2 FACTORIES

### 9.2.1 Lamberts Glass Factory, Waldsassen<sup>11</sup>

The village of Waldsassen is situated in the wooded region East of Bayreuth between the Fichtelgebirge and the Oberpfälzer Wald. Like its neighbours, Selb and Wieden, it survives through the ceramic and glass industries established in the area in the Sixteenth Century. It is also a place of religious pilgrimage, namely, to the fine Stiftsbasilika Waldsassen, built on an earlier Cistercian plan in 1704, and an attempt to adapt the more theatrical Italian Baroque style to German taste. A macabre feature of the church is the display of skeletons of saints (e.g. St. Gratianus - 'der heiligen Lieber aus den Katakomben Roms') dressed in rich and decaying costumes, and mounted in great glass boxes above side altars - a bit like a holy butterfly collection.

The purpose of the visit to this isolated village, half-a-day's travel by two train - and bus-journeys, was to visit the famous Lamberts Glass Factory, which produces some of the finest hand-made glass in the Western World. The author's appointment was with the head of the firm, Mr. Stefan Lamberts (who had, however, forgotten the ap-

pointment and gone off to Majorca on vacation). The Works Manager, Mr. Helmut Horcher, therefore, welcomed the author, and conducted him on a tour of the factory, where, for the first time, he was able to observe the glass-blowing process of antique glass. Briefly, the method used is this:-

Glass is made from sand, silica, potash and a fluxing agent. These raw materials are placed in a special ceramic retort, or pot, about 16h00 in the afternoon, over a gentle heat which is slowly increased over a period of eighteen hours. When the glass is molten and the colouring agents (metallic salts, e.g. copper for red, cobalt for blue) have been added, the glass blower dips his blowpipe into the glass, and collects a toffee-like ball on the end of it. By blowing down the pipe he blows a glass bubble. This is blown first into a cupped mould, usually of wood, but sometimes of iron, to shape the initial bubble in the right way.

As the bubble grows, so great skill is required, to prevent the bubble distorting, or falling off the blowpipe. The pipe is constantly spun in order to compensate for the force of gravity and swung like a pendulum over a pit in the floor.

Once it has reached the correct proportion, the end of the bubble, now the shape of a cylinder, is cut open with a metal glass cutter, and shaped carefully with a pair of calipers. The cylinder is then separated from the blowpipe by wrapping a filament of red hot glass around it where the

shoulder begins, and then tapping the top smartly. This breaks off and a pure cylinder shape is left. These cylinders are placed in a long automated lehr so that the glass will be tempered or annealed. As they come off this lehr they are cut with a diamond and turned on their sides. A minute tap on one end of the cylinder starts a lightening split along the line of the diamond score and the cylinder springs apart by about twenty millimetres.

Still on their sides, these cut cylinders are slowly taken on a conveyor belt through a long tunnel - the final annealing chamber - the split cylinder unrolls, aided by a plank of wood on the end of a pole, to become a flat uneven sheet of glass. By this method each team of glass blowers (working in teams of three) produces as many as ninety sheets of antique glass per session - i.e. 07h00 to 13h00.

Once the annealing process is finished (over a twenty-four hour period), the final sheet of glass is known as 'antique'.

This factory contains a vast warehouse from which shipments go out to the world. They stock a range of over two thousand tints of glass, and will provide a special service to the designer requiring a particular tint not in their range, and compete very favourably price-wise with Hartley Wood (England) and St. Gobain (France).

### 9.3 REFERENCES AND NOTES - CHAPTER 9

1. Visited by the author in August 1984. See Acknowledgements for their address.
2. For example, Pierre Soulages (1965), a work in slab glass now in the Suermondt-Ludwig Museum, Aachen; Jean Cocteau (1958, 1960) one work in the Chapelle des Simples at Milly la Forêt, France, and one in the collection of the Studio; Raoul Ubac (1958), a work in slab glass now in the Suermondt-Ludwig Museum; Robert Sowers (1957), a rose window in the Suermondt Museum, and others.
3. The history is recounted by LUDWIGS, K.H. (1982). 'Chronicle', in STEPHANY. pp. 207-217.
4. Ibid.
5. PLÖTZ, DERIX and POENSGEN (1984) relate the history of the firm in Die Glasmaler-Werkstätten Hein Derox. p. 6-26.
6. The author and his family were lavishly entertained by Mr. Derox, and shown the studios in the company of Joachim Klos and his daughter, Bettina (a stained glass designer in her own right), who acted as translator, in August 1984. A sketch made by the author's daughter was transcribed overnight into a stained glass panel, now a proud possession.
7. Due to pressure of time unfortunately not visited, but correspondence has subsequently resulted in photographs of their splendid studios.
8. This visit was a revelation; one was left in awe at such demonstrations of meticulous craftsmanship and precision shown in every aspect of the manipulation of an intractable medium.
9. Not visited, but examples of their fine craftsmanship were viewed in their gallery in central Cologne.
10. Refer : DERIX CREATIVE GLASS (1984). Creative Glass enhances atmosphere. (Brochure).
11. See Acknowledgements.

## CHAPTER 10 : EDUCATION, RESTORATION AND GLASS MUSEUMS IN GERMANY

### 10.1 EDUCATION

10.1.1 There are two educational institutions in the Federal Republic of Germany (which, as we have seen in Chapter 9, have a long history of involvement with stained glass), namely, Stuttgart Akademie der Bildenden Künste and Munich Akademie der Bildenden Künste.<sup>1</sup> Both stress the importance of the medium within the Fine Art context and the importance of a continuum of creative staff.<sup>2</sup>

"Von Stockhausen's teaching theories at the Stuttgart Academy could be a model for other German institutes. All the graduates are trained in painting, graphics, or sculptural work and see the creation in glass as an additional expanded possibility for expression. They avoid the danger of relying on the allure of the material without any intellectual concept and thus of becoming stranded somewhere in an indefinite area between painting and craft."<sup>3</sup>

10.1.2 It is also possible to qualify as a glazier by submitting to an apprenticeship under a Master Glazier or in a firm specializing in stained and leaded glass. Examinations in both theoretical and practical aspects are conducted by the local 'Handwerkskammer'. Such an apprenticeship is of five years' duration, and, the accompanying diploma is awarded, signifying that the candidate may now practise as a master glazier.<sup>4</sup>



# MEISTERPRÜFUNGSZEUGNIS

Schulze, Uwe Fritz

geb. am 11. November 1953 in Braunschweig

hat heute vor dem am Sitz der Handwerkskammer Wiesbaden errichteten Prüfungsausschuß die Meisterprüfung

im Glaser Handwerk  
mit folgendem Ergebnis bestanden:

Teil I	— praktische Fertigkeiten	gut
Teil II	— fachtheoretische Kenntnisse	befriedigend
Teil III	— wirtschaftliche und rechtliche Kenntnisse	gut
Teil IV	— berufs- und arbeitspädagogische Kenntnisse	befriedigend

Die bestandene Meisterprüfung berechtigt zur Führung des Meistertitels, zur selbständigen Ausübung des Handwerks sowie zur Ausbildung von Lehrlingen (Auszubildenden) in dem genannten Beruf.

Wiesbaden, den 2. Juli 1980

DER MEISTERPRÜFUNGS-AUSSCHUSS

*Summoy*  
Vorsitzender

*J. Winter*  
Beisitzer

*J. ...*  
Beisitzer

*H. Hümmel*  
Beisitzer

*W. ...*  
Beisitzer

*Bullmann*  
Beglaubigt



HANDWERKSKAMMER WIESBADEN

## 10.2 RESTORATION

As has been pointed out, the situation immediately after the cessation of hostilities in 1945 required emergency measures, and the preliminary glazing programmes were frequently carried out in haste.<sup>5</sup> Although a great many medieval windows were removed and hidden away during the war, some were stored in damp and unsuitable locations. BECKSMANN,<sup>6</sup> for example, writes on the deterioration of the stained glass at Bücken on the Weser, where mould-like deposits on the heads and a browning on the inside of the glass was caused by incorrect storage during the war. The same article refers to the early Jesse window (A.D. 1116) which had been stored in a cellar which had sometimes been under water and had been ruined as a result.

Losses were enormous; there are large areas of Germany in which not one single medieval glass panel survived.<sup>7</sup> Natural ageing, poor installation and upkeep, the installation of heating systems in churches and the subsequent build up of condensation - the pollution of the atmosphere with noxious substances (sulphur- and carbon-dioxide, hydrochloric and hydrofluoric acids from factory and domestic chimneys and motor-vehicles)<sup>8</sup> have all taken a terrible toll of the heritage of the Middle Ages.<sup>9</sup>

With the co-operation of the Corpus Vitrearum Medii Aevi (Germany), and a distinguished body of scientists and con-

servators, a vast conservation programme is under way to save as much as possible. Ulf-Dietrich Korn,<sup>10</sup> Gottfried Frenzel,<sup>11</sup> Eva Frodl-Kraft,<sup>12</sup> W. Geilmann,<sup>13</sup> Rolf Wihr,<sup>14</sup> Ernst Bacher,<sup>15</sup> are amongst those who have contributed significant research to the field.

### 10.3 MUSEUMS

BRISAC<sup>16</sup> lists fourteen museums in Germany with specialist collections of stained glass. These are:

10.3.1 Kaiser-Friederick Museum, Berlin.

10.3.2 Kunstgewerbemuseum, Berlin."

10.3.3 Schnützen-Museum, Cologne."

10.3.4 Hessisches Landesmuseum, Darmstadt."

10.3.5 Angermuseum, Erfurt.

10.3.6 Historisches Museum und Museum für Kunstbrandwerk, Frankfurt.

10.3.7 Augustinermuseum, Freiburg im Breisgau.

10.3.8 Univeritatsmuseum, Marburg.

10.3.9 Bayerisches Nationalmuseum, Munich.

10.3.10 Landesmuseum, Münster.

10.3.11 Germanisches Nationalmuseum, Nürnberg.

10.3.12 Württembergisches Landesmuseum, Stuttgart.

10.3.13 Goethe Nationalmuseum, Weimar.

10.3.14 Wiesbadenmuseum, Wiesbaden.

Those marked with an asterisk (\*) are the most important to this study.

BRISAC fails to list the following very important collections of contemporary stained glass :

10.3.15 Suermondt Museum, Aachen.<sup>17</sup>

This collection includes panels by Thorn Prikker, Heinrich Campendonk, Anton Wendling, Ludwig Gies, Peter Hecker, Georg Meistermann, Daan Wilschut, Wilhelm Rupprecht, Maria Katzgrau, Ernst Jansen-Winkeln, Hans von Stockhausen, Robert Sowers, Helmut Lander, Victor Vasarely, Friederich Oidtmann, Wilhelm Buschulte, Paul Renard, Pierre Soulages, Raoul Ubac, Ludwig Schaffrath, Kurt

Bielecki, Joachim Klos, Fritz Winter, Cesarina Seppi, John Baker, and Gerdur Helgadottir.

10.3.16 Museum of Contemporary Stained Glass, Langen.<sup>18</sup>  
Founded in 1983 by Professor Johannes Schreiter of  
Langen. (Refer Chapter 9).

Neues Glas, New Glass, Verre Nouveau,<sup>19</sup> lists a further fifteen retail glass galleries, some of which feature stained glass exhibitions from time to time.

#### 10.4 REFERENCES AND NOTES - CHAPTER 10

1. RICKE, H. (1983). Neues Glas in Deutschland/New Glass in Germany. p. 54.  

"Die nachhaltigsten und am deutlichsten in die Zukunft weisenden impulse für die Entwicklung des freien Glasbilde in Deutschland gingen und gehen von der Stuttgarter Akademie der Bildenden Künste aus. Dafs Stuttgart neben München die einzige kunstakademie in der Bundesrepublik besitzt ..."
2. Ibid.; translation, p. 52, 56-57.
3. Ibid. p. 56.
4. Information obtained from an applicant for a stained glass position in South Africa.
5. KORN, V-D. (1983). As much as necessary, as little as possible - notes on the protection and restoration of medieval and renaissance stained glass, in STEPHANY. pp. 156-173.
6. NEWTON, R.G. (1983). The Deterioration and Conservation of Painted Glass : A Critical Bibliography. p. 9, item 39.
7. Op. cit. p. 157.
8. Sulphur dioxide is given off into the atmosphere by the burning of coal and oil. It combines with humidity to create sulphuric acid. It also reacts with alkalis, such as calcium to form chalky layers of sulphates that can be several millimetres thick. Highly hygroscopic, it absorbs water like a sponge, thus accelerating the destruction of the glass.  
Quoted from : FRENZEL, G. (1985). The Restoration of Medieval Stained Glass. Scientific American. May 1985. pp. 100-106.
9. Op. cit. p. 157.
10. NEWTON. p. 58, stresses the importance of KORN's research, e.g:  
KORN, V-D. (1971). Ursachen und Symptome der Zerfalls mittelalterlicher Glasgemälde (Causes and symptoms of the deterioration of medieval painted glass). Deutsche Kunst und Denkmalpflege, 1971, 29. pp. 58-74.
11. FRENZEL has a studio in the Institute of Stained Glass Research and Restoration at Nuremberg. NEWTON records numerous papers summing up his research. pp. 31-34.

12. NEWTON. pp. 34-41.
13. Ibid. pp. 41, 42.
14. Ibid. pp. 90, 91.
15. Ibid. pp. 4-7.
16. BRISAC. pp. 189, 190.
17. GRIMME, E.G. (1974). Führer durch das Suermondt -  
Museum, Aachen.
18. HAUFSCCHILD, L. (1984). The Museum of Contemporary  
Stained Glass. Stained Glass (SGAA). Vol. 79, No. 1.  
pp. 46-47.
19. Neues Glas, New Glass Verre Nouveau. Vol. 2, 1986. pp.  
172, 173.

## CHAPTER 11 : UNITED STATES OF AMERICA : HISTORIC OUTLINE

### 11.1 INTRODUCTION

Much has been written about aspects of stained glass in America, but little said.<sup>1</sup> The main source of information is the quarterly magazine of the Stained Glass Association of America (SGAA), which has been in existence since 1906.<sup>2</sup> No comprehensive 'history' has as yet been attempted; the more general European appreciations make little mention of the stained glass practitioners of the American Continent except for such innovators as La Farge, Tiffany, Frank Lloyd Wright and a handful of post-second World War artists in glass that by birth, training or practice have had links with Europe.<sup>3</sup>

The author's short visit to the United States of America in 1984 was confined to the East Coast: New York, Philadelphia, Washington D.C., with excursions to Corning, New York State; Yale University, New Haven, Connecticut; Princeton (University) and Morristown, New Jersey; Old Greenwich, Purchase (State University) and Stamford, all in Connecticut.<sup>4</sup>



This survey, with certain important exceptions, thus deals primarily with the stained glass artists and studios of the East Coast.

## 11.2 FOREBEARS

During the nineteenth century, New York became the richest city in the world. Extravagant buildings rose throughout the metropolis, and stained glass as an art form with close ties to architecture flourished. At first it was fashionable to look to Europe for suitable glass to glaze the homes, clubs, churches and public buildings - fine stained glass from the Middle Ages and the Renaissance, as well as the best commissioned work that money could buy from the artists of the great European revival.<sup>5</sup>

The magnificent collection of medieval stained glass from the twelfth to the seventeenth century (with the exception of the early thirteenth century)<sup>6</sup> now housed in The Cloisters Museum, Tryon Park, Manhattan,<sup>7</sup> was given and bequeathed by two extraordinary millionaires, George D. Pratt and John D. Rockefeller Jnr., whose generosity established The Cloisters and its land in 1930.<sup>8</sup>

This complex testifies to the purchasing and organizational powers of wealthy Americans, for it consists of a modern structure combined with sections from five medieval mona-

steries, a Romanesque chapel, a twelfth century Spanish apse and a Chapter house from the same period.<sup>9</sup>

The glass collections are comprehensive with examples of Austria, France, England, Switzerland, Flanders and Germany.<sup>10</sup>

More will be said of stained glass in museums in the following chapter; however, stained glass from earlier centuries can also be found in churches and other buildings in New York City.

The sixteenth century Flemish windows now in the Riverside Church on Riverside Drive, Manhattan, illustrates the trade in European stained glass mentioned in Chapter 6.<sup>11</sup> Although their provenance is vague and their exact origin unknown, they were transported to England during the Napoleonic Wars and brought to the United States of America in 1924.<sup>12</sup>

St. David's School of 12 East 89th Street, Manhattan, has a set of interesting sixteenth century windows (acquired from the Randolph Hearst Collection),<sup>13</sup> while the Pierpont Morgan Library on Madison Avenue and 36th Street boasts good sixteenth and seventeenth century enamelled windows of Swiss or South German origin.<sup>13</sup> During the period of the Gothic Revival, French,<sup>14</sup> British<sup>15</sup> and German<sup>16</sup> glass was installed in the burgeoning city.

Although domestic glass of a purely decorative nature had been made at different times and in different places since the 1630's, when the Dutchman Evert Duyckinck (1621-1702) first set up his business as a painter, glazier and 'burner of glass' on the outskirts of the town near Wall Street,<sup>17</sup> the first major cycle of figurative glass to be designed and made in America was by two young Englishmen, the brothers William Jay (1816-1884) and John (1818-1898) Bolton.<sup>18</sup> Working between 1843 to 1848, at a time when the art of large-scale glass painting was almost unknown in the U.S.A., both in their twenties and with no prior experience, they designed, cut, painted, fired and glazed some 4 000 square feet of windows for the Church of St. Ann and the Holy Trinity, Brooklyn Heights.<sup>19</sup> William Jay was an admirer of Raphael; the Renaissance stained glass of King's College Chapel, Cambridge, which he had known intimately in his youth was his inspiration of this extraordinary American commission - a rival to any of the glass of the period exported from Europe.<sup>20</sup>

The oldest existing American stained glass studio is that of J. & R. Lamb, founded in New York City by Joseph Lamb, like Bolton, an Englishman, in 1857.<sup>21</sup> A talented grandson, Frederick Stymetz Lamb (1863-1928), who between 1886 and 1922 designed some 2 000 windows and won numerous awards in international salons - beating both John La Farge and Louis Comfort Tiffany in the Paris International Exposition of 1900 - ensured the growth of the firm. During the years of

the depression the firm moved to Tenafly, New Jersey, and later to Spring Valley, New York.<sup>22</sup> The last member of the family, Katherine Lamb Tait, died in 1981 aged 86.<sup>23</sup> The firm is now owned and run by Donald Samick at Harlemville (Ghent), New York. Many recent commissions have concerned the restoration of windows by four generations of Lamb designers.<sup>24</sup>

The most famous English stained glass artist to visit and work in America was Henry Holiday (1839 - 1927).<sup>25</sup> There are windows by this prolific designer in St. Peter's Episcopal Church, Albany, New York; Trinity Church, Boston, Massachusetts; St. Paul's Cathedral, Buffalo, New York; Grace Church, New York City; Holy Trinity and the Church of the Incarnation, New York City; Grace Church, Utica, New York; St. Thomas' Church and the Church of the Ephiphany, Washington, D.C.; General Lee Memorial Window, Richmond, Virginia; Church of the Holy Trinity, St. Stephen's Church, and the Chestnut Hill Academy, Philadelphia; Drew University, Madison, New Jersey.<sup>26</sup>

In the 1870's, two young men, both native Americans, began to experiment with glass, and independently arrived at results that best expressed the American desire for opulent coloured windows. Their search led to the development of an entirely new form of glass, opalescent, or as it was known

in Europe, American Glass.<sup>27</sup> The two young men were John La Farge (1835-1910,<sup>28</sup> and Louis Comfort Tiffany (1848-1933).<sup>29</sup>

Both La Farge and Tiffany had had artistic training. The former went to Paris in 1856 and studied in the studio of Thomas Couture (1815-1879) at about the same time as the 'father' of French Impressionism, Edouard Manet (1832-1883).<sup>30</sup> He also travelled to England where he studied the work of the Pre-Raphaelites,<sup>31</sup> and later fell under the spell of Japanese Art. Back in America by the 1870's, he was making stained glass and experimenting with the introduction of pieces of opalescent glass - experiments in glass-making which culminated in November 1879 in a patent for a new method "to obtain opalescent and translucent effects in windows."<sup>32</sup> He was also an ardent student of the work of Eugène Chevreul (1786-1889), the French chemist whose writings on optics and the composition of light and colour were seminal to the experimental art movements at the end of the nineteenth and beginning of the twentieth centuries.<sup>33</sup>

The younger Louis Comfort Tiffany was the son of Charles Lewis Tiffany, founder of New York's famous jewellery store of the same name.<sup>34</sup> The young man studied at the National Academy of Design in 1866 after a year's sketching trip in Europe, where he came under the influence of the French Barbizon School. He also studied under the landscape painter George Innes (1825-1894), and was exposed to the tradition of the Hudson River painters through his friendship with

Samuel Coleman (1832-1920).<sup>35</sup> Coleman introduced Tiffany to the arts of the Middle East, and in 1870 Tiffany visited Spain and North America.<sup>36</sup> As a nineteen year old, Tiffany had visited both Chartres and Ravenna - both glass and mosaics struck a responsive chord in his make-up.<sup>37</sup> The rich mosaics of the Middle East fostered this interest and by the mid-'seventies Tiffany was taking a serious interest in the decorative arts.<sup>38</sup> First experimenting at home and then at Thill's Glasshouse with Bronx, he later built a glass-house of his own and formed his own firm, Louis C. Tiffany & Company.<sup>39</sup> Despite disasterous fires,<sup>40</sup> his company flourished. By the late 1890's Tiffany had introduced an amazing array of glass types for use in mosaics, lamps and three-dimensional glass objects and windows,<sup>41</sup> drapery glass which resembled the stuff of rumpled fabric itself,<sup>42</sup> iridescent glass,<sup>43</sup> mottled glass,<sup>44</sup> dichroic glass,<sup>45</sup> kaleidoscopic glass<sup>46</sup> - and his opalescent glass, a multi-coloured glass that is translucent but not transparent.<sup>47</sup>

Although there are certain superficial similarities between the work of the two rivals, a closer study reveals marked differences of approach.

Of the many thousands of windows<sup>48</sup> designed by them and made under their supervision,<sup>49</sup> the bulk were ecclesiastical figure windows. La Farge's figures are invariably classical in style and frequently stand in an architectural niche, a

device to reduce the spacial depth of the image.<sup>50</sup> Rich textures are achieved through the use of multiple layers of plating and selective passages of opalescent glass.<sup>51</sup> Vitreous oxides are used circumspectly and only when detail could not be achieved by other means.<sup>52</sup>

"It was the pursuit of 'a thoroughly logical system of doing without painting' that led La Farge to innovate the process of cloisonné."<sup>53</sup>

Sometimes details were so small that they had to be inserted with tweezers.<sup>54</sup>

A magnificent sample of La Farge's exploitation of opalescent glass within the framework of a Renaissance interior can be seen in the 'St. Paul' window in Judson Memorial Church, 55 Washington Square South, Manhattan (c.1893), in which the architecture elements of the church are echoed in the glass framework surrounding the Saint.<sup>55</sup>

Trained as a 'plein-air' landscape painter,<sup>56</sup> Tiffany was much given to increasing the depth of field of the figurative window by placing the figure or figures within or against the landscape, as in the 'Above All Have Charity Among Yourselves' in St. Ann's Episcopal Church in Bronx (c.1900),<sup>57</sup> or the 'First Vision of the Prophet Joseph Smith in the Mormon Church', Salt Lake Temple (1893).<sup>58</sup>

Figurative windows were frowned upon by many Protestant denominations, and both La Farge and Tiffany produced

decorative windows for them based on geometrical designs derived from Celtic interlaces, North African arabesques and assymetrical oriental sources.<sup>59</sup>

Saints and martyrs in glass smacked of 'Popery'; nevertheless there was a desire for art forms in the churches. Jews too, were becoming more and more concerned with art which they were introducing into their homes, yet their religion even more than the Protestants proscribed against images.<sup>60</sup> Tiffany's landscape windows seemed the perfect solution to this dilemma -

"Theologically the landscape window was as innocent as geometry ... but better than geometry, the landscape window added not just beauty, but beauty with a pious message."<sup>61</sup>

But perhaps it is in the field of natural form that both La Farge and Tiffany best excelled. La Farge's 'Peonies Blown in the Wind' (1879) was an early work<sup>62</sup> which "(seeks) to capture the universal flower" (he was never interested in the depiction of 'botanically accurate' flowers), "the highest possibilities of its form and beauty."<sup>63</sup>

Tiffany's 'Magnolias' of 1885 is similarly a masterpiece of understatement in blues and pinks - a breath-taking example of the glass-maker's oeuvre - is in total contrast to the more dramatic and flamboyant pieces (like 'Wisteria' or "View of Oyster Bay").<sup>64</sup>



By the end of the century the opalescent method had been widely adopted by most of the progressive studios. Perhaps one of the most elaborate example is the 'Ivanhoe' window at the Barlett Gymnasium of the University of Chicago.<sup>65</sup> Designed by William Peck Sperry (an associate of Tiffany) in 1901, this vast panorama of medieval pageantry contains over 15 000 pieces of opalescent and ripple glass in the Tiffany tradition.<sup>66</sup>

As we have seen,<sup>67</sup> the era of opalescent coincided with the European Art Nouveau movement. Both Tiffany and La Farge contributed exhibition panels to International Salons,<sup>68</sup> but despite winning prizes and acclaim, 'American Glass' did not catch on in Europe. Even in America, by the 1920's, the opalescent works of Tiffany and La Farge were being replaced by simpler concepts.<sup>69</sup>

At almost the same time as Tiffany's greater international success,<sup>70</sup> an architect from Wisconsin was building a new style of 'Prairie' home-suburban houses for the well-to-do American Middle Class which embodied stained glass in a totally different way.<sup>71</sup> The architect was Frank Lloyd Wright (c.1867-1959), possibly "one of the three or four greatest architects of the 20th Century."<sup>72</sup> Wright is said to have come to maturity "almost precisely in 1900", the year that the Ladies' Home Journal initiated his series of Prairie houses with his design of "A Home in a Prairy Town."<sup>73</sup>

A master of building detail, Wright concerned himself with every aspect of the Prairie house, sometimes right down to the furniture. In the architectural conquest of space,

"arrived at by an even more accentuated breaking up of the conventional box-for-living and by the use of a decoration of exquisite refinement",<sup>74</sup>

Wright produced a series of concepts which allowed for an apparently infinite number of variations, each one pertaining exactly to its site.<sup>75</sup>

All parts of the volumetric progressions, rhythms and proportions of the architecture are in accord.<sup>76</sup> The window spaces are always of particular importance to Wright, not unseeing blind 'eyes' in the walls (the so-called 'picture window'), but leaded plate glass with insertions of meticulously calculated geometrical fragments of iridescent, opalescents and gold ceramic glazed glass which ensures the continuum of the architectural line (viewed from the exterior), yet dissolves in a symphony of space and light when viewed against the landscape from the interior.<sup>77</sup>

In his much-quoted article entitled "The Meaning of Materials - Glass" for The Architectural Record in July 1928,<sup>78</sup> Wright explains the importance of glass in his work,

"All the diversity of colour and texture available in any material is not only available but imperishable in glass. Shadows have been the brushwork of the architect when he modelled his architectural forms. Let him work, now, with light diffused, light refracted, light reflected - use light for its own sake

- shadows aside. In the openings in my buildings the glass plays the effect the jewel plays in the category of materials. The element of pattern is made more cheaply and beautifully effective when introduced into the glass of the windows than in the use of any other medium architecture has to offer. The metal divisions become a metal screen of any pattern - heavy or light, plated in any metal, even gold or silver - the glass a subordinate, rhythmical accent of any emotional significance. The pattern may be calculated with reference to the scale of the windows and the scheme of decoration given by, or kept by the motif of the glass pattern?<sup>9</sup> ... I have used opalescent, opaque, white, and gold in the geometrical groups of spots fixed in the clear glass. I have used, preferably, clear primary colours, like the German flashed-glass, to get decorative effects, believing the clear emphasis of the primitive colour interferes less with the function of the window and adds a higher architectural note to the effect of light itself ..."<sup>80</sup>

Wright's glass cannot be divorced from his architecture as a whole, for every detail was an integral part of the design. In the Darwin D. Martin House at Buffalo (1904), Wright's window composition is based on the square and the geometrical divisions and progressions of a square together with an ascending series of triangular shapes. Brass calmes are combined with clear or acid-embossed cathedral glass with horizontal and vertical motifs in shades of amber, with balancing verticals of white opalescent.<sup>81</sup>

In the Dana-Thomas house in Springfield, Illinois (1904) there are over 250 stained glass panels set in the exterior and interior walls and ceilings. All of these windows are constructed with plate glass and 'art' glass using a variety of complex zinc calmes. Some of these are exceedingly intricate and complex - over 225 pieces can be found in one 90 square centimetres section of the more complex panels.<sup>82</sup>

And yet Wright constantly emphasized the well-defined rôle of ornament within the architectural scheme, "generated by the larger elements of the design and, in turn, enriching them - but always subordinate and never calling attention to itself."<sup>83</sup>

The Wright style begat what became known as "mission modern" - subtly powerful when properly related to the architectural frame or insipidly anonymous as a commercial by-product.<sup>84</sup>

The last of Wright's Prairie Houses, the Little House (1909-1914), has been enshrined in the Metropolitan Museum of Art - a Bauhaus-like synthesis of style and form in its simplicity, functionality and handcrafted honesty.<sup>85</sup>

Back in the orbit of ecclesiastical stained glass, the architectural firm of **Cram, Goodhue and Ferguson** were turning many Gothic dreams into a belated reality. Ralph Adams Cram (1863-1942), President of the Medieval Academy of America and Professor of Architecture at the Massachusetts Institute of Technology was the militant Medievalist, Bertram Grosvenor Goodhue (1869-1924), the best architect of the American historicist Gothic style.<sup>86</sup> The period preceding and following the turn of the century was the new Cathedral Age, transplanted as it were, to the American Continent.

In 1889, St. John the Divine, the largest Gothic-style church in the world was begun;<sup>87</sup> some thirty years had elapsed since St. Patrick's Cathedral, America's largest Roman Catholic Cathedral rose on the then rural outskirts of New York City.<sup>88</sup>

In the Capital City, Washington D.C., the foundation stone of another mighty Gothic Cathedral, that of Saint Peter and Saint Paul, was laid in 1907.<sup>89</sup>

In 1913, the General Church of the New Jerusalem began to build another great Gothic pile at Bryn Athyn in the south-east corner of Montgomery County, Pennsylvania.<sup>90</sup>

But while architects and clerics looked to the Gothic for precept and example,<sup>91</sup> Tiffany, La Farge and the opalescent 'School' looked to the Renaissance.<sup>92</sup>

DUNCAN<sup>93</sup> suggests that a major cause for the decline of Tiffany's window business was a decline in American Church building, but this was not really the case. Some 40 000 churches were built between 1890 and the First World War, while many thousands of windows were also placed in older churches during the same period. Rather could the decline be attributed to the Medievalist notions of such architects as Cram and their search for 'authenticity' through the promulgation of the use of coloured pot glass in the 'medieval manner'.<sup>94</sup>

Cram and Goodhue looked particularly to England for their stained glass.<sup>95</sup> One of the artists whose designs were sought after, was J. Gordon Guthrie (1874-1961), a Scot who (as we have seen) fell out with his father in 1896 and left Scotland for New York where he joined the Tiffany Studios until 1906.<sup>96</sup> In 1914, accompanied by his family, he was again in Scotland in an attempt at a reconciliation with his father.<sup>97</sup> When this failed, they set off instead on a tour of the Cathedrals of France, until the outbreak of the First World War when they hurried back to America. This time he joined the Young Studio, one of the major Neo-Gothic Studios favoured by Cram and Goodhue. Between 1925 and 1944, he produced some of the finest stained glass in the United States.<sup>98</sup>

Well versed in the simultaneous contrasts of Chevreul and the chromatic theories of the American, Ogden Rood, Guthrie was much given to insertions of green chips within a field of red glass, as in the rose window for the Church of the Heavenly Rest, New York, and blue within an elaborately etched and stained flashed red which read as deepest orange. Like the great masters of the thirteenth century, Guthrie possessed a peculiar talent for the manipulation of white glass. Important yet difficult to control within a full palette of coloured glass, a halation of white light can cause holes in a composition that destroy colour balance.<sup>99</sup>

Charles Jay Connick (1875-1945) was 'discovered' by William Willet (c.1867-1921), a pupil of La Farge. Connick was a newspaper cartoonist who soon found himself at home in the two-dimensional linear imagery of medieval window design.<sup>100</sup> Setting himself up at Boston (Willet moved to Philadelphia where he established the Willet Studios, the largest professional studios of contemporary America). Connick became a vocal protagonist of the Medieval arts. His writing and lecturing during the 1920's and 1930's were summarized in his book, Adventures in Light and Color (1937).<sup>101</sup>

His most important contribution was the stress which he laid on the architectonic rôle of the stained glass window in the architectural scheme of the building. An essential requirement was that the imagery in a window should be flat and not three-dimensional in the Renaissance style. Messrs. Cram, Connick and Company were travelled, sensible protagonators, intimately familiar with the great medieval works at Chartres, Le Mans, Tours and elsewhere, as well as the peculiar beauties of English glass.<sup>102</sup> But it was the blues of the stained glass of Chartres, which, since the days of Viollet-le-Duc<sup>103</sup> had been the subject of pseudo-scientific research. Many windows in imitation of, or as in the Riverside Church on Riverside Drive, New York, exact copies of those at Chartres were produced.<sup>104</sup> Connick used much blue in his glass, as for example in the lancets and rose of the Church of St. Vincent Ferre, Lexington Avenue and 66th Street, Manhattan.<sup>105</sup>

Another much admired member of the Gothic historicist school was the Pennsylvanian artist, Lawrence B. Saint, who from 1927 to 1933 was director of the stained glass workshop of the Cathedral Church of St. Peter and St. Paul (the National Cathedral), Washington, District of Columbia.<sup>106</sup> Working at his home near Philadelphia, Saint not only made his own glass,<sup>107</sup> but designed and executed the north rose window, the nine choir aisle windows and four others in the north transept aisles.<sup>108</sup> The 1930's were difficult years in America and gifts designated for stained glass failed to meet the expenses of the project, which was discontinued.<sup>109</sup>

Lawrence Saint's studio included two furnaces and attendant Swedish glass blowers, English glass cutters, English and German glaziers, and American and German artists.<sup>110</sup>

In 1929 Saint persuaded the Beaux-Arts, Paris, to organize an on-site inspection of the great west lancets of Chartres, so that he could compare the glass which he had made with the twelfth century originals.<sup>111</sup> Saint took Hathaway with him to Europe and sent him to Rouen to copy "the lovely grisaille windows of St. Ouen", and then on to England to York, Canterbury and Oxford to make further detailed copies before returning to Philadelphia.<sup>112</sup>

Of course in this striving to compete with the ancients, anachronisms abounded; window subjects were portrayed in



biblical dress, medieval styles and sometimes, as at St. John the Divine,

"We squirm in a time warp, seeing a Gothic Abraham Lincoln deliver the Gettysburg Address"<sup>113</sup>

William Willet favoured a neutral stance - clothing and placing his figures in surroundings that are vaguely biblical but without any specific references to an historical era.<sup>114</sup>

Another talented Boston designer to attract the attention of Ralph Adams Cram was Wilbur H. Burnham Snr. (1887-1974). Cram kept him busy for the rest of his life, helping him to adorn his neo-Gothic churches in all the major cities of North America.<sup>115</sup>

Burnham's son, Wilbur H. Jnr., was a schoolmate and friend of John F. Kennedy. Joining his father's studio after graduating from the Yale School of Fine Arts,<sup>116</sup> father and son were awarded the "Medal D. Argent" at the 1937 Paris Exposition. Both served in turn as President of the Stained Glass Association of America, and advanced the cause of stained glass in other ways.<sup>117</sup>

William Willet at Philadelphia was succeeded by his son Henry Lee Willet (1899-1983). After his formal education at Princeton University and at the Wharton School of Pennsylvania, Henry Willet spent several years researching

stained glass in Europe.<sup>118</sup> An outstanding organizer and innovator, he introduced French 'dalle-de-verre' to the United States, and developed 'after-hours' colour - the introduction of relief sculptural effects on the stained glass window's surface through the use of malleable, sculptured sheet-lead, surfaced with 23-karat gold leaf and platinum, which at night reflects artificial light to enliven the window space.

Under his Presidency, the Willet firm prospered to become the largest 'main line' studio in America.<sup>119</sup>

One of America's most popular artists, Grant Wood (1892-1942) was accomplished in many media, including stained glass.<sup>120</sup>

The Veteran's Memorial Colliseum window in Cedar Rapids, Iowa, is his earliest and best example. This commission came to him in 1927 when he was thirty-five; his reputation as a painter not yet established. Of mixed German and English-American stock, Wood had his design fabricated in Munich, Germany, where he personally oversaw the production, as well as executing the faces of the figures in the window.<sup>121</sup>

The Heimer Company of Clifton, New Jersey, was established by George and Edward Heimer, father and son, and Conrad Pickel in 1934, and is today a thriving business under the

control of Edward Heimer's son and daughter-in-law, Josephine.<sup>122</sup> Well versed in the traditions and techniques of the Munich pictorial style, many of their restoration commissions have been concerned with the repair and conservation of old 'Munich School' panels, while it is estimated that over 1 000 major commissions and 7 000 smaller commissions have been completed since the inception of the firm.<sup>123</sup>

Another family company to have weathered the vicissitudes of war and financial depression into the 1980's is the Rambusch Decorating Company of New York City.<sup>124</sup> Founded in 1898 by Frode Rambusch, a Danish artist and craftsman schooled at the Royal Art Academy in Copenhagen and with additional training in France, Switzerland, Austria and Germany, he visited America in 1889.<sup>125</sup> Immediately sensing a land and climate of fame and promise, he sent for his Norwegian wife, Valborg Olsen.

The purposes of the firm were declared to be,

"the manufacture and sale of stained glass; the execution, manufacture and sale of ecclesiastical and domestic decorations for churches, houses, and the buildings; and of sculpture and relief work."<sup>126</sup>

The Rambusch Company undertook the full decorative schemes for hotels, banks, clubs, churches, and the residences of the rich. This frequently entailed painted murals, sculp-

ture, furnishings in cloth, wood or metal, lighting, stained glass windows and domes.<sup>127</sup>

A family concern for three generations, from the 1920's to the 1960's, 'Rambusch' was run by Frode's sons, Harold and Viggo F.E. Rambusch. Today, their sons Robert, and Viggo Bech Rambusch,<sup>128</sup> lead an up-to-date organization of designers and technicians in handcraft and machine crafts, as well as advanced lighting, paint technology and general 'know-how'.<sup>129</sup>

Let us pause briefly to consider the material of which stained glass is made: glass. We have already commented on the glass-making skills of Bolton, La Farge, Tiffany, and the Cathedral workshops at Bryn, Athyn and Washington. One of the oldest glassmakers in the United States is the Kokomo Opalescent Glass Company of Kokomo, Indiana.<sup>130</sup> Established in 1882 in order to make glass insulators, production was soon expanded to meet the increasing demand for opalescent sheet glass. At the Paris Exposition of 1889, the Opalescent Glass Works (as it was then known) was awarded a Gold Medal for the excellence of its products. By this time, Kokomo was also supplying L.C. Tiffany Studios of New York with opalescent 'catspaw' textured glass.<sup>131</sup> Colours sold to the studios of La Farge and Tiffany are still available today and made in almost the same way, while production in recent years has been expanded through the introduction of new furnaces which permit seven days a week operation cycles.<sup>132</sup>

The Blenko Glass Company, of Milton, Virginia, was founded by William J. Blenko from London, England.<sup>133</sup> Autocratic, disciplined - a self-made man who had taught himself Chemistry and French, who played both the flute and an excellent game of chess, he first made 'Norman slab glass'<sup>134</sup> for a church built in 1890 in Norfolk, England.

Blenko first set himself up at Kokomo, Indiana in 1893. It was not, however, until 1922 that the company was firmly established, at Milton, Virginia, as the Eureka Art Glass Co.<sup>136</sup>

During the years of the Great Depression, the firm survived through the acumen of William H. Blenko Snr., his son, who expanded the operation to produce ornamental vases and tableware.

Today, run by a fourth generation scion of the Blenko dynasty, Richard D. Blenko, the firm is the principal employer in the town of Milton, and since the 1960's has added the manufacture of 'dalle-de-verre' to their oeuvre.<sup>137</sup>

### 11.3 STAINED GLASS SINCE THE SECOND WORLD WAR

As we have already seen, the outbreak of World War II brought many refugees from Europe, including the architects of the functionalist or as it became known, the Interna-

tional School. Historicism became a dirty word; all ornament was expendable and buildings were stripped to their barest essentials. Cubism was more attractive than most avant-garde European movements and indeed, from about 1940, aspects of cubism began to appear on the American scene. Max Ingrand (1908-1969), the French designer, for example, carried out commissions from Quebec in Canada to Sao Paulo in Brazil.<sup>138</sup>

From Holland came Joep Nicolas (1897-1972).<sup>139</sup> Freelancing for Rambusch, he stayed in America for over ten years, completing many commissions, the most important of which was probably the Memorial window in Trinity Church, Southport, Connecticut, 1944.<sup>140</sup>

'Dalle-de-verre' first appeared in America in 1939 when a window depicting 'One of the Magi' was shown in the New York World's Fair.<sup>141</sup> However, it was not until 1958 that a major architectural work using 'dalle' was built in the U.S.A. This was the First Presbyterian Church, Stamford, Connecticut - the unconventional 'Fish Church' whose walls are composed of 20 000 St. Gobain 'dalles' orchestrated by Gabriel Loire of Chartres, France, for the building designed by Wallace K. Harrison, one of the architects of Rockefeller Center, Lincoln Center and the United Nations, Manhattan.<sup>142</sup> The stained glass abstractly depicts episodes from the teachings, crucifixion and resurrection of Christ. The sections which constitute the walls tilt at ten different angles, thus creating constantly changing light values.<sup>143</sup>

Since then, many other buildings have been constructed with major walls of slab glass, including the Resurrection Mausoleum in Justice, Illinois executed by the Conrad Pickett Studios, and the New York Hall of Science, Flushing Meadows Park, Queens, executed by the Willet Studios of Philadelphia.<sup>144</sup>

Another 'master' of the 'dalle-de-verre' technique was the expatriate Frenchman, Roger Darricarrere (1912-1983)<sup>145</sup>. Darricarrere served with distinction in the Free French Army from 1940-1945, immigrating in 1946. In 1951 he joined the Goodyear Company as an architectural designer,<sup>146</sup> experimenting with stained glass and concrete, and in 1955 founded at Inglewood, California, what was to become one of the major stained glass studios in the West.

Darricarrere was an innovative artist with a particular interest in bronze, aluminium and steel sculpture.<sup>147</sup> However, it was his contribution to the creative manipulation of 'dalle-de-verre' that will best be remembered. Over 100 churches and temples in the West and numerous leaded and faceted windows and sculptures attest to his versatility and proficiency. St. Stephen's Lutheran Church, Granada Hills, California, boasts an exhibition piece, created by Darricarrere for the chapel at the New York's World's Fair, 1964, and later purchased by the congregation.<sup>148</sup>

HILL also shows reproductions of his installations at Temple De Hirsch, Seattle, and the Columbia Savings and Loan building, Los Angeles - the latter a 'dalle-de-verre' skylight.<sup>149</sup>

The problem of 'dalle-de-verre' is that (to quote Robert Sowers),

"it has been seized upon by the worst Disneyland medievalists of the trade to lend a kind of spurious modernity to their work - modernity being equated with crudity."<sup>150</sup>

In Robert Sowers (b. 1925) we meet a formidable intellect: designer, artist, photographer, historian, theoretician.<sup>151</sup> Fulbright scholar, painter, and stained glass artist since 1950, Sowers is the author of three phenomenally influential books - The Lost Art (1954), Stained Glass: An Architectural Art (1965) and The Language of Stained Glass (1981).<sup>152</sup>

Sowers was possibly the first American to recognize the outstanding contribution of post-war German designers to the stained glass renaissance, analyse the special architectonic nature of their oeuvre,<sup>153</sup> and convey his findings through his sensible and articulate writing to the English-speaking world. But more than this, Sowers re-examined old myths, as for example, the special quality of the blues in the stained glass of Notre Dame de Chartres (which had been of such significance to stained glass designers from Viollet-le-Duc



to Charles Jay Connick), and once and for all laid them to rest.<sup>154</sup>

Sowers is also the designer of one of the largest windows in the world, that of the American Airlines Terminal at Kennedy Airport, New York.<sup>155</sup> This huge mural measuring some 102 metres in length by 7 metres in height above the marquee over the terminal entrance doors,<sup>156</sup> (Architects, Kahn and Jacobs, 1958-59) is composed of flashed opal, opal-flashed antique and antique glass.<sup>157</sup>

The mural is designed to be viewed primarily from the outside both by day, for which Sowers has harnessed the beauty of surface-reflected light, and by night, when the lights within the building enliven its 'antique' surface. The interior view is unfortunately spoilt by the siting of a set of offices across large sections of the south wall.<sup>158</sup>

For a while it seemed that the stained glass at Kennedy Airport would herald a new flowering of the medium. The American Airlines Terminal led to the building in 1968, of two chapels at the airport - 'Our Lady of the Skies', the Roman Catholic Chapel, designed by Bonet and Hofman, and next door, the Protestant Chapel designed by Edgar Tafel.<sup>159</sup> The latter has abstract stained glass in blues and reds by the much acclaimed French expatriate, Robert Pinart.<sup>160</sup>

However, the barren architectural style still precluded a secular renaissance while the social distress of the 1960's and early 1970's caused many churchmen and congregations to favour social projects rather than expensive liturgical art.<sup>161</sup>

Sowers went on to complete windows, among others, for the Church of the Holy Redeemer, West Lebanon, New Hampshire; Capitol Park South, Washington, D.C.; All Saints Episcopal Church, Palo Alto, California; and the Stephen Wise Free Synagogue, New York City.<sup>162</sup>

Another fine designer to suffer from a dearth of commissions at this time, was Albinas Elskus (b. 1926).<sup>163</sup> Born in Kaunas, Lithuania, Elskus fled from the advancing Soviet army in 1944 and settled in Germany until 1949 where he attended the Technische Hochschule in Darmstadt, studying architecture, and painting at the Ecole des Arts et Métiers, Freiburg. In that year he emigrated to the U.S.A., joining the Karl Hackert Studio, Chicago, completing the four-year apprenticeship programme of the SGAA in 1949. There he soon became disenchanted with the eclectic neo-Gothic style, and in 1952 he returned to Europe.<sup>164</sup> In France he attended classes at the Paris Ecole des Beaux Arts and travelled extensively. In 1953 he returned to New York, joining the George Durhan & Sons Studio of which he subsequently became part-owner. In New York he became friendly with John Gordon Guthrie, under whose teaching he discovered his own parti-

cular talent for manipulating vitreous stains and oxides,<sup>165</sup> and about whom he said,

"I learnt more from him than from any other person. Guthrie's influence and that year in France really opened my eyes."<sup>166</sup>

Since 1974 Elskus has devoted a great deal of time to teaching, while continuing to freelance as a stained glass designer. Fordham University and the Parsons School of Design, New York; Mount Holyoke College, South Hadley, Massachusetts, and the Pilchuck School, Seattle, have, and continue to make use of his services.<sup>167</sup> In 1980 his definitive book "The Art of Painting on Glass" was published, in itself a 'tour de force' and object lesson on the difficult techniques of the glass-painter.<sup>168</sup>

At about the same time that he began to teach, Elskus completed his first set of autonomous panels of an exhibition at the Danbury Public Library in Connecticut and has subsequently completed many others. These panels have become collectors' items.<sup>169</sup> They allow him free rein to explore his passion for drawing without being subject to the rigorous demands implicit in architectural stained glass design. Although Elskus incorporates abstract elements into his designs, it is clear that he is not really at ease in an abstract idiom, as is apparent in the 'Three Marys at the Tomb'<sup>170</sup> in the Chapel of the Mausoleum of the Good Shepherd in Saint Gertrude's Cemetery, Colonia, New Jersey (1984-85) where uneasy tensions prevail between realistically painted

figures and their abstract frames which thus tend to look rather like large paper cut-outs.<sup>171</sup>

Due to his glass-painting skills Elskus is frequently called upon to assist with major restorations. These have included windows in the Catholic St. Patrick's Cathedral, Manhattan, the Episcopal Cathedral of St. John the Divine, Manhattan and the Protestant Riverside Church, Manhattan.<sup>172</sup>

Nearly all his major commissions have been in New York State, New Jersey or New York City itself.<sup>173</sup> However, his panels have been widely exhibited on exhibitions throughout America, and in 1978, at the Vatican Museum, Rome.<sup>174</sup>

Another designer with close contacts with Rambusch and with Rohlf's Stained and Leaded Glass Studio Inc., of Mt. Vernon, New York,<sup>175</sup> is Richard Millard (b. 1935)<sup>176</sup> Millard served his apprenticeship at Rambusch during their "golden years" when such renowned artists as Joep Nicolas, Stephen Bridges, Robert Sowers, William Roemer, Robert Pinart, John Nussbaum, William Haley and Alice Alter were associated with it.<sup>177</sup> He later moved to the Durhan Studios, New York, where he was fortunate to work with John Gordon Guthrie and Albinas Elskus.<sup>178</sup>

An accomplished glass-painter, sensitive draughtsman, with a particular flair for the human figure,<sup>179</sup> and an astute designer at home in both naturalistic and abstract idioms,<sup>180</sup>

Millard has also served the cause of stained glass through active participation in the affairs of the Stained Glass Association of America,<sup>181</sup> its teaching programmes, and his (regretably short-lived) editorship of their quarterly magazine.<sup>182</sup>

Like Rambusch, while employing their own 'in-house' designers, the Rohlf's Stained and Leaded Glass Studio collaborates with a wide spectrum of designers, including Frederick Cole of Canterbury, England,<sup>183</sup> Robert Sowers, Robert Pinart, Richard Millard, Silvia Nicolas,<sup>184</sup> Jean-Jacques Duval,<sup>185</sup> Yaacov Agam of Paris, France,<sup>186</sup> David Wilson,<sup>187</sup> Gabriel La Manna,<sup>188</sup> and many others.

Rohlf's is highly respected in the field of conservation; recent restoration projects have included the French stained glass windows of Saint Patrick's Catholic Cathedral in preparation for its Centennial celebration, the protective glazing of Trinity Episcopal Church on the Green, New Haven, Connecticut, and the restoration, protection and energy conservation programme on Sower's American Airline Terminal mural at Kennedy Airport, New York City.<sup>189</sup>

Another studio with a significant reputation in the field of stained glass conservation is the Greenland Studio of 147 West 22nd Street, Manhattan.<sup>190</sup> Mel Greenland is internationally respected both as a designer, and authority in the field of stained glass restoration, and the Greenland Studio

regularly assists Jane Hayward, Keeper of The Cloisters Collection, with restoration problems.<sup>191</sup> Recent restoration commissions have included the John La Farge 'Welcome' window in the Metropolitan Museum and the Fifteenth century Boppard windows at the Cloisters.<sup>192</sup>

The Greenland Studio also works closely with such distinguished designers as Rowan Le Compte of Virginia (for example, his clerestory windows for the National Cathedral, Washington),<sup>193</sup> Robert Sowers (his two large windows for the Stephen Wise Free Synagogue, New York), Richard Avidon (his plant-form mural for the La Folie Restaurant, Manhattan)<sup>194</sup> and many others.<sup>195</sup>

There are a number of restaurants in New York City with interesting stained glass from different periods. The Maxwell Plum Restaurant, First Avenue and 64th Street has a ceiling designed by Leroy in c.1965 and a La Farge panel over the bar as well as numerous other opalescent panels and light fixtures.<sup>196</sup> The Tavern-on-the-Green Restaurant at Central Park, West 67th Street, has another interesting panel by Warner Leroy Studios (1981). This two-metre high panel is essentially 'pop' in character. It portrays a young girl with flowing hair and swirling dress riding a bejewelled and benign-looking lion through an exotic bouquet of poinsettia, rose and lily blooms, inhabited by doves and parakeets.<sup>197</sup>

Flowers and fruit are also very much the concern of the painter and stained glass designer, Lowell Nesbitt.<sup>198</sup> Born in Baltimore, Maryland in 1933, he received his Bachelor of Fine Arts degree from the Tyler School of Fine Arts at Temple University, Philadelphia, Pa., and was accepted by the Royal College of Art, London, for a post-graduate year where he studied stained glass. Lowell Nesbitt worked in a predominantly abstract style in many media, but in 1963 he moved to New York where he turned his back on abstraction to establish himself as one of the 'fathers' of the early realist movement.<sup>199</sup>

Nesbitt's 'subjects'<sup>200</sup> have included architectural features, studio interiors, flowers, nocturnal, paintings, fruits and vegetables, landscapes, animals and figures which he has explored in paint, pencil, stained glass, etching and aquatint.<sup>201</sup>

Lowell Nesbitt lives in a simple, apparently unpretentious building which once stabled horses of New York's mounted police on West 12th Street in Greenwich Village, purchased by him in 1975. Within, Nesbitt has created, choreographed or stage-designed a unique world to house the works which he has created. The ramps from the original stables have been retained for access to each floor. The building has a central atrium lit by a skylight above; the sun filters down to a ground floor pool set amongst rockery and ferns. There

are no doors to circumvent once you are past the massive front portal, and there is a continuity of flow from one area to another. Sleeping areas are placed in gazebos with bead curtains; a jacuzzi pool flanks an area used as a drawing and painting studio.<sup>202</sup> Recently he decided to design stained glass windows for all the external windows of his home. Based on floral or vegetable themes, they complement exactly the rich interior of bare floors, oriental rugs, trickling fountains and painting-bedecked walls. Fabricated by Steve Cosimano, these windows contribute significantly to the jewel-effect of the interior-concept.<sup>203</sup>

One of the most interesting stained glass designers of the Connecticut area is Fredrica Fields of Lake Avenue, Greenwich. Born in 1912, Fredrica Fields has worked in glass since 1938. However, because of an arthritic condition, she began to experiment with three dimensional stained glass. Starting with plate glass in a wooden frame, Fields adds layers of coloured glass and solid glass rods, which diffuse the light from the patterns in a panel. Ripple glass is also used to mix and spread the colours and forms.<sup>204</sup>

There are important examples of her work in the Connecticut Hospice in Branford, Connecticut (a memorial 'Tree of Life' to her son, David, who died of lung cancer at 37)<sup>205</sup> and a six panel mural in the Meditation Prayer Room of the Association of Research and Enlightenment, Virginia Beach, Virginia.<sup>206</sup>



Another busy studio is the Stained Glass Renaissance Studio, Westport, owned by Peter Green (b. 1946.)<sup>207</sup> Green's interest in stained glass came late, and the studio was founded in 1972. Green is fond of art glass, like ripple glass, and the opalescents, and has completed a body of work that is pictorial and decorative.<sup>208</sup> His most interesting recent work has involved glass slumping over an cast-iron mould.<sup>209</sup>

Let us return south down the east coast to Philadelphia and call once again at the Willet Studios.<sup>210</sup> The proprietor of this busy 'main-line' Studio which employs more than eighty artist-craftsmen is E. Crosby Willet, grandson of the founders, William and Anne Willet.<sup>211</sup> Brought into being as a protest against the opalescent pictorial 'fin d' siecle' windows which dominated the American stained glass field at the time, the Studio, with innovative management and a talented studio force, flourished. One of its designers is Charles Z. Lawrence, now a member of the Executive Committee of the Stained Glass Association of America.<sup>212</sup>

Lawrence is an outstanding designer as is evidenced by his work in the library of the Philadelphia Lutheran Seminary,<sup>213</sup> and the Healing Arts Window of the Cathedral of St. Peter and St. Paul - the National Cathedral, Washington, D.C.<sup>214</sup>

With a large number of 'in-house' designers, as well as co-operating with many freelance artists, Willets have completed projects in a wide variety of styles and techniques as is evidenced in the faceted window of St. Patrick's Episcopal Church, Washington, D.C., the leaded antique glass in St. Cyril's Catholic Church, Houston, Texas, or the almost Renaissance style window of Holy Trinity Greek Orthodox Church, Waterbury, Connecticut.<sup>215</sup>

In 1977 they completed 'The Court' Restaurant at the Smithsonian Museum of National History, eighteen-and-a-half metres long and nearly three metres high. This back-lit slab glass mural in autumn shades consists of 12 000 pieces of glass translated by Charles Lawrence from "thousands of paint dots and strokes" of the original painting in oils by Theo Becker - an amazing tribute to the patient stained glassmaker's art.<sup>216</sup>

Three years previously, the Willet Stained Glass Studio had fabricated the ten monumental windows for the Keneseth Israel, Elkins Park, Pennsylvania.<sup>217</sup> Designed by Jacob Landau, the painter and illustrator, and translated into glass by a Flemish ex-patriate, Benoit Gilsoul, the ten monumental windows portray the ten Biblical prophets who, as messengers of the Divine, summoned the people of Israel and Judah to new understandings and responsibilities.

These truly extraordinary windows - there are no others quite like them - are carried out in the traditional leaded glass. The imagery however is markedly of the Twentieth century and the colour arrangements those of German expressionism;<sup>218</sup> the entire composition dense with symbolic meaning and passion.

"(Landau) has been linked to both Goya and Blake ... if we think of Goya and Blake together as representing one artist who could be characterized as reformist-visionary, then one might allow that Landau is that. So were the prophets whom he pictures in these windows. They speak of terror, war, challenge, repentance, and change ... The prophets were not conservative. They stirred the heart and conscience of their fellow men. They railed and threatened; they cursed and lamented; they shook the very foundations of their people's complacency. Their story seems well depicted in Landau's provocative designs."<sup>219</sup>

Benoit Gilsoul is a powerful designer in his own right, and a manipulator of rich tapestries of colour and texture in a painterly style, his brushwork at times reminiscent of the Englishman Patrick Reyntiens, with its broad, fresh and spontaneous attack.

Trained at the Academic Royale des Beau Arts in Brussels, by 1960, the year that he settled in the United States, he had had 25 one-man shows and had won critical acclaim as a painter, designer of murals, mosaics and stained glass.

He now lives in the Bronx, New York City.

Examples of his work may be found in St. Francis of Assisi, Middletown, Connecticut; the Church of Immanuel Lutheran, Philadelphia; the Church of the Gates of Heaven, Hawthorne, New York; Temple Shalom, Somerville, New Jersey; the United Nations Interfaith Chapel, New York City; Cardinal Spellman's Chapel, New York City, and numerous others.<sup>220</sup>

The Cathedral Church of St. Peter and St. Paul, the National Cathedral, Washington, D.C., is the sixth largest church in Christendom and is designed in a neo-Fourteenth century Gothic style, which, in its stone traceries, harks back to Chartres, Le Mans, Bourges and Sainte Chapelle, Paris in France, and Laon in Northern Spain.<sup>221</sup> In the stained glass of the tall lancets and rose windows, repose the labours of a host of American and European artists.<sup>222</sup>

The crowning glory of the cathedral windows is the great West Rose Window, which due to the nature of its divisions was designed by Rowan Le Compte<sup>223</sup> in pure colour and free form. The artist takes his cue from the Book of Genesis, "and the earth was without form and void and darkness was upon the face of the deep." "... and God said, let there be light." The centre of this ten-petal rose has deep undefinably mysterious colours with a single piece of burning white glass at its core. From this centre, the light radiates outward and the colours of the window turn brighter as the eye moves towards the outer petals. Although the predominant colour of the window is blue, it has large areas

of fall colours - yellows, oranges, maple reds. There 108 major windows and numerous small windows, one of which was designed by Le Compte when he was sixteen. As mentioned earlier, there are important windows by Ervin Bossanyi, John Piper and Patrick Reyntiens.<sup>224</sup>

The windows by Ervin Bossanyi are characterized by clarity of drawing and compositional organization and subtle colour harmony. The theme of Christian woman as: life-giver, healer, purifier and teacher are truly biblical in their simplicity of purpose (the 'Devoted Women of the National Cathedral Association' windows). His most beautiful windows are 'War and Peace' - three great lancet windows of subtlety and descriptive colour in the rich 'Art Nouveau' manner which he inherited from his Hungarian background.<sup>225</sup>

The White Memorial Window, or so-called 'Air Force' Window is by Patrick Reyntiens. In the right lancet is the Centurion who asked Jesus to heal his servant and above is the suggestion of God's mercy. Man's aspiration is depicted in the left lancet as Moses sees the Promised Land and blesses it for God's people. He is supported by Aaron and Joshua. In the cinque-foil at the top is the United States Air Force Academy Chapel. Linking these themes, in the centre lancet is told the story of Brother Lawrence - of the disillusioned soldier on his way home from battle who sees that the withered trees will bloom again.<sup>226</sup>

Henry Lee Willet, the father of the present owner of Willet Studios was a superb designer in his own right, as is evidenced in the 'Early Missionaries of the North-west' window. Rowan Le Comte, in his equally splendid 'Maryland' window tried to bear in mind that stylistic compatibility was essential in his adjacent window.<sup>227</sup>

There is one unique window in the Cathedral, for it departs from the traditional tripartite concept and uses one design to fill all these lancets. This is the 'Scientists and Technician's Window (Space)' by Rodney Winfield. The artist drew his inspiration from photographs taken during space travel - dark spheres are punctuated by tiny white stars and, in the background, a thin white line suggests a spaceship trajectory. In the upper portion of the central lancet is a sliver of lunar rock, presented to the Cathedral by the astronauts of Apollo XI, and incorporated into the design.<sup>228</sup>

A number of the younger generation of stained glass artists fell under the pervasive influence of the German designers. Peter Mollica (b. 1941, Newton, Massachusetts) studied under Reyntiens and Schaffrath in Loudwater, Buckinghamshire after extensive study travel in England, Denmark, France and Germany, and his work has since been stamped with the linear rhythms, lenses and window geometry on the German pattern.<sup>229</sup>

Mollica is also the author of one of the better 'how to do it' manuals, his 'Stained Glass Primer', Vols. 1 and 2 (1971).<sup>230</sup> Ed Carpenter (b. 1946, Los Angeles) also studied under Reyntiens and Schaffrath, and their influence was still clearly evident in the body of work which he completed in the Oregon area up to the 1980's.<sup>231</sup>

There are also a number of highly inventive artists who (like Peter Green of Westport, Connecticut), are experimenting with blown, fused and slumped glass; are using copperfoil and diamond saws to achieve complicated effects of great virtuosity; are using glass as sculpture and as a clear means of expression which is non- or even anti-consumer by intent.

Paul Marioni lives in Seattle, Washington, where he currently explores sculptural window techniques.<sup>232</sup> In 1976 he visited the Fischer Glass Factory in Germany where, by attaching bits of glass to the gathers of hot glass that were to be blown into cylinders which were cut and unrolled in the annealing lehr he made sheet glass with free-form appendages.<sup>233</sup> In 1981 he constructed a stained glass panel called 'Rain'<sup>234</sup> in which he combined hot glass drips with Spectrum water glass.<sup>235</sup> By 1983 he was adding powdered enamel oxides direct to the surface of hot sheet glass. This was done by pouring glass onto pre-arranged patterns of enamels, then inverting the glass which would then be put through metal rollers to the correct thickness of window

glass. The result was a series of human faces within the glass which were installed as 'Free Spirits' at Woodinville High School, Washington State.<sup>236</sup>

In California Narcissus Quagliata (b. 1942, Rome, Italy) devotes time to both what he calls "art-pieces" and commissioned work. Like Marioni he has also taught at Pilchuck Summer Schools. A successful entrepreneur, "one eye fixed on what clients will pay for, and at the same time as an artist (trying) to follow his mental life ...", he combines in his character both the visionary and the craftsman.<sup>237</sup> He delights in intricate and unusual shapes. In his giant portraits ('Virginia Lewis, for example, is 132 cm x 173 cm),<sup>238</sup> which are entirely made up of fragments of glass with no glass painting, there are necessarily many pieces of glass - as many as 54 pieces constitute the eye alone.

Quagliata is equally at home on giant mural projects, as for example, his abstract mural 'Glass Painting' in the lobby of an office building at 2101 Webster Street, Oakland, California, completed in 1985. This mural, initiated as a water-colour, a medium in which he enjoys working, is over 3,6 metres high and 15,5 metres long.<sup>239</sup> Quagliata is currently working on designs for the Corning New Glass Gallery at Corning, New York State.<sup>240</sup>



Richard Posner (b. 1949, Los Angeles) studied under Paul Marioni at the California College of Arts and Crafts for his MFA degree in 1976, and it is to him that he owes his superb skills.<sup>241</sup>

In his qualifying year he was awarded a commission to design and construct a series of stained glass windows for the Exploratorium Museum in San Francisco. Founded in 1969, the Exploratorium is a "participatory educational facility dedicated to the demystification of science and technology", and has, from time to time, commissioned artists to create perceptual, kinetic and phenomenological displays. Posner, as artist-in-residence 1977-78, created 'The Dream Chartres of Four Gone Conclusions', a tour de force of stained glass innovation and visual complexity.<sup>242</sup> Laminated Cibachrome transparencies, Fresnel lenses, mirrored and dichroic glass, multiplate glazing techniques, are all used in the construction of the panel.

The Victoria and Albert Museum, London, acquired Posner's original drawings and plans for 'Dream Chartres' as well as his panel 'Paddle Your Own Canoe', also created in 1976, for their permanent collection. In 1982 the Metropolitan Museum of Art, New York, acquired his "The Persistence of Vision".

In 1979, with the assistance of both a Fulbright and American-Scandinavian Foundation grant, Posner visited Sweden to study glass aesthetics and technology. A series of

visual puns and humorous parodies of cultural consumption were the result.

Posner settled in Seattle in 1980, after a period of itinerant teaching at the Pilchuck School, the Penland School of Crafts, North Carolina; Summervail in Colorado; Arrowmount School of Arts and Crafts in Tennessee, and the Haystack Mountain School of Crafts in Maine.<sup>243</sup>

Ray King (b. 1951, Philadelphia), financed by a Louis Comfort Tiffany Foundation fellowship, studied under Reyntiens at Burleighfield in 1975. His admiration for Reyntiens is frank,

"a world peer, a Renaissance man."<sup>244</sup>

At first King, like Mollica and Posner, worked in a markedly Schaffrath-manner, but by the late 1970's he had broken free of the traditional shape and construction of a stained glass panel, to manipulate the medium in totally new ways. Using a variety of materials: glass prisms, aluminium, brushed bronze, laminated glass, neon, mirror - even lasers, King creates sculptural pieces in which glass plays a rôle, sometimes dominant, at other times incidental.<sup>245</sup>

"Mistral", created in 1980, is a triptych screen of etched stained glass. Across a formal landscape of grids flutter translucent yellow "formlings"<sup>246</sup> and a red-orange ribbon surrounded and topped by narrow horizontal bands of clear

seedy glass, creating different depths of field and heightening the illusion of the third-dimension.<sup>247</sup>

Some of King's latest works are clearly inspired by his love of science, and take the form of large metal wall works, or "sconces"<sup>248</sup> with streamlined shapes, backlit with neons of red and blue. "Nora" (1983) and "Zona" (1984) are two such pieces, the latter is crowned with a red laser.<sup>249</sup>

In a country as large and as populous as the United States of America, it is evident that stained glass artists of distinction abound; only a small proportion have received the attention that is their due. This study might therefore serve as an introduction to the field. Ardith Gray of Seattle, Washington; Nancy Siegel of New York City; Kenneth von Roenn Jnr. of Branford, Connecticut; Bill Cummings of San Francisco; Marni Bakst of New York City; Ralls C. Melotte of Springfield, Illinois; Lutz Haufschild of Vancouver, British Columbia; James Hubbell of San Diego County; Kate Shulok of Sarasota, Florida - these and so many more are making a positive contribution to the environments in which they work and the communities which they serve.<sup>250</sup>

#### 11.4 REFERENCES AND NOTES - CHAPTER 11

1. The majority of magazine articles are superficial eulogies in glossy colour and glowing language written frequently by amateurs and laymen. The modern renaissance of the medium has also spawned a proliferation of 'How to do it' books which are addressed to the burgeoning numbers of hobbyists. These all too often are filled with half-truths - mines of misinformation.
2. BRADY, D., and SERBAN, W. (1980) Stained Glass - A Guide to Information Sources. p. 414.
3. For example, LEE, SEDDON, STEPHENS; BRISAC.
4. See Acknowledgements.
5. STURM, J.L. (1982). Stained Glass from Medieval Times to the Present : Treasures to be seen in New York. p. vii.
6. HAYWARD, J. (1972). Painted Windows. Metropolitan Museum of the Bulletin. Dec. 1971/Jan 1972.  
Stained glass from the early thirteenth century is held in such high esteem that it seldom if ever appears on the market.
7. A special branch of the Metropolitan Museum of Art. Tryon Park is at the northernmost tip of Manhattan; The Cloisters tower over the Hudson River below.
8. STESIN, N. (et al.) (1978). The New York Review of Art. pp. 6-10.
9. Ibid. p. 6.
10. HAYWARD. p. 97.
11. STURM. p. 10.
12. Ibid.
13. Ibid. p. 11.
14. The windows of Old St. Patrick's, Motte Street, for example, were the gift of the Louis Philippe, King of France. These windows were later installed in the Fordham University Chapel in The Bronx. They were made in the Sèvres Studios discussed in the Chapter on France. St. Patrick's Cathedral at Fifth Avenue and 50th Street, has 70 highly detailed enamelled windows by the Lorin Studios of Chartres.  
COOK, L.A. (1980). St. Patrick's - America's largest Roman Catholic Cathedral celebrates Centennial. Stained Glass (SGAA). Vol. 75, No. 1 (1980). pp. 36-40.  
STURM. p. 16.

15. There are examples of stained glass by many of the Victorian 'line' studios in the U.S.A.: Clayton & Beil; Burliston & Grills; Heaton, Butler & Bayne; William Morris & Co., and others. (STURM. pp. 27-32).
16. 'Munich glass' was also popular; fine windows by the Mayer Studios of Munich can be seen in the Grace Episcopal Church, Jamaica Avenue and 153rd Street, Queens. (STURM. pp. 32-33).
17. STURM. p. 12.
18. SLOAN, J.L. (1983). A New Look at Bolton Windows of the Church of St. Ann and the Holy Trinity. Stained Glass (SGAA). Vol. 78, No. 3 (1983). pp. 230-235.  
  
STURM. pp. 15-18.
19. Ibid.
20. Ibid. p. 235.
21. ADAMS, D. (1982). The Last Stained Glass Lamb : Katharine Lamb Tait (1895-1981). Stained Glass (SGAA). Vol. 77, No. 1. pp. 41-45.
22. Ibid.
23. Ibid.
24. SOLOMON, J. (1984). Lamb Studio's craftsmen restored church treasure. The Courier. Section B, Thursday Aug. 16, 1984. p. 5.
25. SACKS, B.H. (1983). Henry Holiday : Practitioner and Theoretician of Stained Glass Art. Stained Glass (SGAA). Vol. 78, No. 2 1983. pp. 141-143;  
  
RAQUIN, V. (1983). Henry Holiday's Theology Window : Variations on a Theme. Stained Glass (SGAA). Vol. 78, No. 2. pp. 144-145.
26. Ibid. pp. 143, 144.
27. STURM. p. 34.
28. McNALLY, S.M. (1985). John La Farge, Stained Glass. Vol. 80, No. 3 1985. pp. 219-226.
29. DUNCAN, A. (1980, 1982). Tiffany Windows;  
McKEAN, H.F. (1980). The 'Lost' Treasures of Louis Comfort Tiffany
30. STURM. pp. 37, 38.
31. McNALLY. p. 225.

32. Op. cit. p. 37.
33. Op. cit. p. 225.
34. STURM. p. 38.
35. Ibid.
36. Ibid.
37. McKEAN. pp. 2, 3.
38. STURM. p. 39.
39. McKEAN. p. 32:  
"He learned, to his cost that it would be useless to expect to make really beautiful windows unless he could control furnaces of his own where his ideas would be carried out without interference from those who either could not or would not understand! This decision led him to bring Arthur J. Nash, a 'practical glass manufacturer' from Stourbridge, England. He also engaged a full-time chemist, Dr. Parker McIlhenny, who helped with his research for over twenty years."
40. McKEAN. p. 32.  
"The Corona factory burnt once, but Nash's record was better than Boldini's, who seems to have burnt one glasshouse a year."
41. STURM. p. 39.
42. Op. cit. p. 32.
43. Metallic oxides were sprayed into the air of the annealing kilns and the hot glass attracted them to the surface; McKEAN. p. 34.
44. Sheets of molten glass were covered with drops of another colour to achieve mottled effects; McKEAN. p. 34.
45. Minute crystals of gold and silver introduced into the glass had a dichroic effect - red in transmitted light, green in reflected light; McKEAN. p. 34.
46. Flakes of coloured glass floating in a clear matrix produced kaleidoscopic effects; McKEAN. p. 34.
47. Not unlike the 'favreile' glass produced at the same time by the Nancy School of glass-makers; See Chapter 6 : France.
48. McNALLY. p. 226: "... three and four thousand by his own count ..."

49. STURM. p. 44: "Both La Farge and Tiffany were too ambitious and talented to confine themselves to the drudgery of making the actual windows."
50. Op. cit. p. 221.
51. Ibid.
52. Ibid.
53. Ibid.
54. Ibid.
55. STURM. Plate 53, p. 56.
56. McKEAN. Figure 15, p. 20 "On the Hudson River at Dobbs Ferry" c.1880, oil on canvas 37cm x 68,5cm is an admirable example.
57. STURM. pp. 40, 41.
58. JANETSKI, J.A. (1980). The First Vision and Mormon Stained Glass. Stained Glass (SGAA). Vol. 75, No. 1, 1980. pp. 47-50.
59. STURM. pp. 40, 41.
60. Ibid.
61. Ibid.
62. STURM. Plate 29, p. 37. Now in the Metropolitan Museum of Art.
63. McNALLY. p. 220.
64. McKEAN. Plates 83-86.
65. FRUEH, E.R., and F. (1982). The Ivanhoe Window. Stained Glass (SGAA). Vol. 77, No. 2 1982. pp. 130-133.
66. Ibid. p. 132.
67. Samuel Bing and his Parisian Shop, 'L'Art Nouveau'.
68. DUNCAN, A. (1980, 82). Tiffany Windows. pp. 105-131.
69. STURM. p. 60:  
Theodore Roosevelt so disliked Tiffany's opulent screen in the White House "that he was not satisfied merely to have it gone, (he) ordered it smashed to pieces."
70. DUNCAN. p. 129: The 1900 'Exposition Universelle' in Paris.

71. HATJE. p. 320; NERVI. p. 176.
72. HATJE. p. 320.
73. Ibid.
74. STERN, A. (1982). The Wright Way. Stained Glass (SGAA). Vol. 77, No. 2 (1982). pp. 136-137.
75. NERVI. p. 78.
76. WRIGHT, O.L. (1970). Frank Lloyd Wright.  
The author discusses the architect's constant reference in his talks, teaching and writing to nature as a source of learning as well as inspiration - a plant form, a nautilus shell, the 'architectonia marina' or sundial shell, the 'oliva mauritiana' shell, and so on. Wright's constant return to Oriental Art-Sculpture, painting bronzes and pottery were also of cardinal importance in the development of his oeuvre.
77. STERN. p. 136.
78. Ibid.
79. Author's emphasis, not architect's.
80. This was written in 1928. However, it must be remembered that the windows were created from 1900 - four years before Thorn Prikker, for example, emigrated to Germany - ten years before Prikker's first commission, the Railway Station at Hagen.
- Wright's geometrical abstracts also predated those of the De Stijl group in Holland - Piet Mondrian (1872-1944), Gerrit Rietveld (1888-1964), Theo van Doesburg (1883-1931) - and the artists of the Bauhaus, like Joseph Albers (1888-1976).
81. PIPER, J. (et al.) (1978). Glass/Light, plate 11.
82. MORSE, R.R., and MELOTTE, R. (1982). The Dana-Thomas House. Stained Glass (SGAA). Vol. 77, No. 2. pp. 138-141; and The Dana-Thomas House : Symbol of a Revolution. Stained Glass (SGAA). Vol. 77, No. 3 1982. pp. 265-268.
83. RUB. T.F. (1984). Architecture and Ornament : Frank Lloyd Wright's Art Class. Stained Glass (SGAA). Vol. 79, No. 2 (1984) pp. 130-135.
84. WILSON, H.W. (1980). Field Guide to American Residential Stained Glass. Stained Glass (SGAA). Vol. 75, No. 2 1980.



85. VINING, D. (1983). Wright at the Met. Metropolitan Home. April 1983. pp. 67-69.
86. STURM. pp. 64-75.
87. Ibid. p. 64.
88. Now the very centre of Manhattan.
89. MONTGOMERY, N.S. (1983). Guide to Washington Cathedral. p. 8.
90. GLEN, E.B. (1980). Bryn Athyn, The Cathedral of the New Church Commemorates Sixty Years. Stained Glass (SGAA). Vol. 75, No. 1 1980. pp. 41-46.
91. STURM, J. (1981). Louis Comfort Tiffany : His Windows and His World. Stained Glass (SGAA). Vol. 76, No. 4. p. 327.
92. STURM. (1982). p. 64.
93. DUNCAN, A. (1979). The American Renaissance.
94. STURM. (1981). p. 327.
95. Ibid.
96. PAPANICOLAOU, L.M. (1982). J. Gordon Guthrie. Stained Glass (SGAA). Vol. 77, No. 4. pp. 356-359.
97. Ibid. p. 358.
98. Ibid. p. 359.
99. Ibid. p. 359.
100. STURM. p. 68.
101. See Bibliography.
102. Ibid.
103. SOWERS, R. (1981) deals with the subject in Chapter V, 'Radiance'. The Language of Stained Glass. pp. 44-54.
104. STURM. Plate 67, p. 69.
105. Ibid. Plate 66, p. 68.
106. BAYLESS, J.H. and MONTGOMERY, N.S. (1975). Jewels of Light - Stained Glass at Washington Cathedral. p. 7.

107. KEISMANN, R.H. (1983). Working with Lawrence Saint : An Interview with John Hathaway. Stained Glass. Vol. 78, no. 3, 1983. pp. 238-242.  
In this interview, Hathaway relates how Saint had fragments of antique glass from Chartres chemically analysed. By the end of his long career Saint had some 3 000 glass formulae - all preserved today at the Corning Glass Museum, Corning, New York.
108. Op. cit. p. 7.
109. Ibid. p. 7
110. KEISMAN. pp. 240-241, in an interview with John Hathaway who, as a young man, was one of Saint's artists.
111. Ibid.
112. Ibid.
113. STURM. p. 71.
114. Ibid. p. 71.
115. TEMME, N. (1982). The Burnhams : A Story of Outstanding Achievement. Stained Glass (SGAA). Vol. 77, no. 4, 1983. pp. 366-370.
116. Ibid.
117. Ibid.
118. TEMME, N. (1983). In Memoriam : Henry Lee Willet. Stained Glass (SGAA). Vol. 78, No. 4 (1983). p. 380.
119. Ibid. Visited by the author in October 1984 : See Acknowledgements.
120. BURCHETT, K. (1985). Grant Wood. Stained Glass (SGAA). Vol. 80, no. 1, 1985. pp. 78-79.
121. Ibid.
122. MILLARD, R. (1984). Hiemer & Company. Stained Glass (SGAA). Vol. 79, no. 3, 1984. pp. 252-257.
123. Ibid.
124. SMITH, C.R. (1978). Eight Decades of Craftsmanship - The Rambusch Studios 1898-1978; Rambusch Stained Glass (A.I.A. File No. 26-A-7) (undated);

Glass in new techniques integrated with and complementing both traditional and contemporary architecture. (AIA File No. 26-A-5);  
Carving (AIA File No. 26-A-5);  
See Acknowledgements.

125. SMITH. p. 2.
126. Ibid.
127. Ibid.
128. RAMBUSCH, V.B.A. (1981). Preservation and Restoration of Leaded Glass Windows. APT, Vol. XIII, no. 3, 1981. pp. 11-17.
129. Op. cit. Visited by the author in November 1984.
130. MALONE, W.R. (1984). Making Kokomo Colors for a Century. Stained Glass (SGAA). Vol. 79, no. 1, 1984. pp. 34,35.
131. Although Tiffany produced much of his own glass, by the late 1880's his many thousands of commissions necessitated the purchase of glass from other sources.
132. MALONE. p. 35 tells us of two 3 000 pound day tanks, one 8-pot furnace and one 12-pot Sisney & Linforth (England) furnace.
133. MANNING, M. (1983). Four generations of Blenko makers. Stained Glass (SGAA). Vol. 78, no. 4, 1983. pp. 350-355.
134. 'Normal slab glass' was made by blowing glass into a square iron box measuring about 10cm x 10cm x 25.4cm. The result was a square glass 'bottle' shape, thickest on the sides and bottom and thinnest at the corners. Cut along the corners, it made five pieces of irregular shaped glass, "the 'non plus ultra' of antique effects, and much favoured by the English artists of the Arts and Craft Movement, like Christopher Whall and the Scot, Duncan Strachan; MANNING. p. 350.
135. Ibid. p. 350.
136. Ibid. p. 351.
137. The New York Hall of Science, Flushing Meadow Park, Queens, New York, has 'dalle de verre' walls 25 metres high. Created by Willet Studios, Philadelphia in collaboration with the architectural firm of Harrison & Abramovitz in 1964 for the New York World's Fair, the thousands of inch thick slabs constituted then the largest installation of 'dalle de verre' in the world. See STURM. Plate 80, page 82; MANNING. p. 353.

138. Unpublished documentation obtained from Leo Theron, Stained Glass Designer, Pretoria, October 1986.
139. WHITE, C.N. (1978). Joep Nicolas, leven en werk.
140. MILLARD, R. (1980). Joep Nicolas, 'Father' of Twentieth Century Stained Glass. Stained Glass (SGAA). Vol. 75, no. 3, 1980. pp. 226-230.
141. STURM. pp. 82-84.
142. BURCHARD, J.E. (et al.) (1974). Treasures of America. pp. 132, 133.
143. Ibid.
144. MANNING. p. 353.
145. KENYON, D.H. (1983). In Memoriam : Roger Darricarrere. Stained Glass (SGAA). Vol. 78, no. 4, 1983-84. p. 391.
146. Ibid.
147. Ibid.
148. HILL, R., and J. and HALBERSTADT, H. (1976). Stained Glass - Music for the Eye. pp. 70-72; 74-75; 78.
149. Ibid.
150. SOWERS (1981). p. 68.
151. The author visited him in November 1984. See Acknowledgements.
152. See Bibliography.
153. SOWERS (1981). p. 112, writing on the special qualities of contemporary German stained glass.
154. SOWERS (1965). pp. 28-32;  
SOWERS (1981). pp. 44-45, writing on the radiance of the blues at Chartres.
155. SOWERS (1965). Plate 39, plate 59.
156. UHL, W. (1984). A Storm Window for the World's Largest Stained Glass Window. Stained Glass (SGAA), Vol. 79, no. 1, 1984. pp. 57-58.
157. Op. cit. Examined by the author in 1984.
158. STURM. p. 84
159. SOWERS (1981).

160. STURM. Plate 157, p. 131. The author was frequently asked whether he knew the work of Pinart - this, the only example he could find, which, although interesting, hardly enough to form an opinion of his oeuvre.
161. Ibid.
162. SOWERS (1981).
163. The author was privileged to meet Elskus at the Rambusch Studios in November 1984, where the designer was working on his windows for the Chapel of the Mausoleum of the Good Shepherd in Saint Gertrude's Cemetery, Colonia, New Jersey.
164. KEHLMANN, R. (1985). Albinas Elskus Explores the Possibilities of Vitreous Paint. American Craft. Dec. 1985/Jan. 1986. pp. 10-15.
165. KEHLMANN. p. 14 says, "His remarkable facility with the handling of vitreous paints is unparalleled in the United States today."
166. Ibid.
167. Ibid.
168. Ibid.
169. Including The Corning Museum of Glass, Corning, New York.
170. Reproduced in ELSKUS, A. (1986). Elskus: on designing. Stained Glass (SGAA), Vol. 81, no. 1, 1986. p. 44.
171. ELSKUS. p. 44. Author's opinion.
172. TEMME, N. (1981). Elskus: The Fun of Learning through Sharing. Stained Glass (SGAA). Vol. 76, no. 3. p. 234.
173. Ibid.
174. Ibid.
175. Visited by the author in November 1984. See Acknowledgements.
176. At the time of his visit to New York In November 1984, Richard Millard was the editor of Stained Glass, the quarterly magazine of the Stained Glass Association of America.

- Millard kindly gave of his time to take the author on excursions to the private home-cum-studio of Lowell Nesbitt, to Rohlf's Stained and Leaded Glass Studio Inc., and to the Rambusch Company.
177. The term 'renowned' is used in the 'club' sense, for alas, the art of the glass-painter has not yet received wide acknowledgement.
178. PARTRIDGE, E. (1980). Meet Richard Millard. Stained Glass. Vol. 75, no. 3. pp. 206-209.
179. Stained Glass. Vol. 79, no. 4, 1984-85. pp. 314, 315 illustrates a 6' x 14' (1 830mm x 1 220mm) private commission, a naturalistic portrait of a woman made up of kiln-fired glass fragments carefully abutted and applied to six millimetre plate glass.
180. An abstracted angel from a private collection is illustrated on the cover of Stained Glass. Vol. 79, no. 4, 1984-85.
181. Of which more, later.
182. 1984-1986.
183. Since his retirement from Canterbury Cathedral Stained Glass Studio, Cole has sent many designs to Rohlf's for execution.
- See MILLARD, R. (1984), Folio-Nativities of Frederick W. Cole. Stained Glass (SGAA). Vol. 79, no. 4, 1984-85. pp. 345-349.
184. Sylvia Nicolas O'Neill. b. 1928 in Schoorl, Amsterdam, daughter of Joep Nicolas and painter, sculptor and stained glass designer.
- See PAUL, A. (1983). Sylvia Nicolas O'Neill. Stained Glass (SGAA). Vol. 78, no. 3, 1983. pp. 260-263.
185. DUVAL, J.J. (1975). Working with Stained Glass - fundamental techniques and applications.
186. Again completed three-dimensional windows\* for the Hebrew Union College, Jewish Institute of Religion, New York City, in collaboration with Rohlf's in 1980.
- Refer: POPPER, F. (1983). Again. Plates 560-562 'The Twelve Tribes of Israel'.
187. David Wilson, b. 1941 in North Yorkshire, England. Discussed under English Stained Glass.

- See: CLARKE, B. (1979). Architectural Stained Glass. pp. 207-212; MALARCHER, W. (1980). David Wilson. Stained Glass (SGAA). Vol. 75, no. 2, 1980. pp. 121-124.
188. There is a fine window by this artist (fabricated at Rohlf's) in the Church of St. Thomas Aquinas, Brooklyn, New York City.
189. In respect of 181-186 above, see also:  
ROHLF'S STUDIO, INC., & PAYNE STUDIOS OF NEW JERSEY (no date). For the Clergy, Architects and Lay People. Mt. Vernon, New York: Rohlf's Stained and Leaded Glass Studio, Inc.
- See also: UHL, W. (1984). A Storm-window for the World's Largest Stained Glass Window. Stained Glass (SGAA). Vol. 79, no. 1, 1984. pp. 57-58.
190. Visited by the author in 1984: See Acknowledgements.
191. During the author's visit the Greenland Studio was carefully restoring a delicately foiled and heavily plated C. Tiffany window.
192. AVIDON, R. (1980). The Greenland Studio and the Quest for Quality. Stained Glass (SGAA). Vol. 75, no. 3, 1980. pp. 210-205.
193. See: BAYLESS, J.H. (1975) (Revised). Jewels of Light: Stained Glass at Washington Cathedral.
194. STURM. Plate 87, p. 88.  
The La Folie Restaurant and Discotèque is on Madison Avenue at 61st Street, Manhattan. It contains a ten metre long wall of stained glass by Richard Avidon. Fabricated by the Greenland Studio (1976), it is a free interpretation of the eroticism of flower blossoms, pistels and stamens. Constructed of pot metal and various types of opalescent glass, all are sandblasted on their rear surfaces to produce an even translucent effect.
195. AVIDON. p. 203.
196. STURM. p. 136.
197. Ibid. See Plate 158, p. 132.
198. Richard Millard arranged a visit to the home of this prolific artist where the author spent a morning viewing his paintings and stained glass and other works, November 1984.

Lowell Nesbitt was intrigued to meet another Nesbitt from the other side of the world, born in the same year as himself. After tea and a tour of the building, the author departed laden with catalogues from previous exhibitions by the artist.

199. Lowell Nesbitt. Butler Institute of American Art, Youngstown, Ohio, 1982. Exhibition Catalogue.
200. Nesbitt says,  
"... the subject matter of my paintings has become so completely buried that it doesn't matter what I paint, whether it is my shoes, my dog, the work clothes, my easels, flowers, or Niagara Falls ... It is painting first and subject matter later." (Op. cit.)
201. In particular, his gigantic paintings of irises, for example, 'Three Iris on Black'. 1977. (228,5cm x 482,5cm).
202. MILLARD, R. (1984). The World of Lowell Nesbitt. Stained Glass (SGAA). Vol. 79, no. 3. pp. 233-243.
203. Ibid.
204. VINCELETTE, D. (1986). Stained Glass is the light of Fredrica Field's life. Greenwich Time, Monday, Sept., 8, 1986. p. B3.
205. FIELDS, F.H. (1982). Tree of Life. Stained Glass (SGAA). Vol. 77, no. 3, 1982. pp. 262-264.
206. FIELDS, F.H. (1982). Stained Glass for a Meditation Center. Stained Glass (SGAA). Vol. 77, no. 4, 1982-83. pp. 378-380.
207. Visited by the author in 1984: See Acknowledgements.
208. For example, the idyllic waterfall scene for a Southport home, reproduced in  
NEENAN, J.M. (1984). A labor of love and light creates a Glass Jungle in Westport. Southern Connecticut Newspapers Inc., Sunday, March 18, 1984. p. D1.
209. See cover, Stained Glass (SGAA). Vol. 80, no. 1, 1985.
210. See 11.1 Forebears
211. Willet Studios (undated). Colour brochure published by the Studios.
212. See Acknowledgements.
213. Visited by the author.



214. MILLARD, R. (1985). Richard T. Feller, Aesthetic Beacon of Washington Cathedral and Folio Views of Washington Cathedral. Stained Glass (SGAA). Vol. 80, no. 1. pp. 30-43.
215. Illustrated in their catalogue.
216. BECKER, T. (1977). Making a windowless restaurant big and beautiful as all outdoors. Stained Glass (SGAA). Vol. 72, no. 2, 1977. pp. 89-91.
217. KORN, B.W. (1974). The Prophetic Quest: Keneseth Israel, Elkins Park, Pennsylvania - The Stained Glass of Jacob Landau.
218. Contrasting reds and greens, yellows and purples, blues and oranges as in the work of Emil Nolde (1867-1956), Max Pechstein (1881-1953) or Erich Heckel (1883- ).
219. Op. cit.
220. WEIS, H. (1985). Benoit Gilsoul. Stained Glass (SGAA). Vol. 80, no. 3, 1985. pp. 244-249.
221. MONTGOMERY, N.S. (1983). Guide to Washington Cathedral.
222. BAYLESS, J.H. (1975). Jewels of Light - Stained Glass at Washington Cathedral.
223. See Acknowledgements. Rowan Le Compte has worked on the stained glass of the Cathedral for his entire adult life. He undertook the long journey from his home in Virginia in order to personally accompany the author and his family on a tour of the building.
224. See References and Notes.
225. BAYLESS. p. 34, colour plate.
226. MILLARD, R. (1985). p. 33, colour plate.
227. Op. cit.
228. LEE, SEDDON, STEPHENS. p. 163, colour plate.
229. CLARKE, B. (1979). pp. 199-206.
230. See Bibliography.
231. Op. cit. pp. 214-221.
232. WICHERT, G. (1983). Free Spirits. Paul Marioni's Floating Figures. Stained Glass (SGAA). Vol. 78, no. 4. pp. 370,371.
233. Ibid.

234. Stained Glass (SGAA). Vol. 76, no. 3, 1981. p. 246.
235. Made by Spectrum, Seattle, Washington State, and so called because the texture is rippled in a 'watery' manner.
236. Ibid.
237. TARSHIS, J. (1986). A Painter's World Brought to Glass - Narcissus Quagliata. American Craft. Vol. 46, no.2, 1986. pp. 34-40.
238. See reproduction in TARSHIS. p. 38.
239. See Glass Portfolio, CRAFTS. Vol. 79, March, April 1986. pp. 44,45.
240. Ibid. Narcissus Quagliata's address:  
2325 Third Street No. 331  
San Francisco  
California 94107.
241. GLOWEN, R. (1984). Glass Encounters: Richard Posner. American Crafts. Vol. 44, no.3, 1984. pp. 43-47.
242. POSNER, R. (1982). The Dream Chartres of Four Gone Conclusions. Stained Glass (SGAA). Vol. 77, no. 3, 1982. pp. 243-249.
243. Op. cit.
244. JARMUSCH, A. (1984). Light Experiences: Ray King's use of glass and light. American Craft. Vol. 44, no. 1, 1984. pp. 17-21.
245. Ibid.
246. King's own description.
247. Ibid. p. 17.
248. King's description.
249. Ibid. p. 20.
250. From the pages of Stained Glass (SGAA), American Craft, Neues Glas, New Glass, Verre Nouvcau, and others.

CHAPTER 12 : EDUCATION, THE STAINED GLASS ASSOCIATION OF  
 AMERICA, STEUBEN GLASS AND THE CORNING GLASS  
 MUSEUM

12.1 EDUCATION

12.1.1 American Artist 1983 Directory of Art Schools and Workshops<sup>1</sup> recorded the following information, listed according to State, number of Institutions, number offering courses in stained glass and glass blowing:-

Alabama	18	1	0
Alaska	14	3	0
Arkansas	15	1	2
California	136	21	16
Colorado	19	1	0
Connecticut	25	1	0
Delaware	2	0	0
District of Columbia	8	1	0
Florida	48	4	2
Georgia	32	0	2
Hawaii	10	0	1
Illinois	61	7	2
Indiana	29	1	2
Iowa	30	1	0
Kansas	28	8	3
Kentucky	24	1	0
Louisiana	19	2	1

Maine	10	0	0
Maryland	23	2	0
Massachusetts	58	6	1
Michigan	58	6	0
Minnesota	29	2	3
Mississippi	23	0	0
Missouri	39	2	2
Montana	8	1	1
Nebraska	17	4	2
Nevada	2	0	0
New Hampshire	8	1	1
New Jersey	47	0	2
New Mexico	16	2	0
New York	140	15	5
North Carolina	42	2	1
North Dakota	57	10	8
Oklahoma	21	2	1
Oregon	26	6	2
Pennsylvania	73	6	3
Puerto Rico	5	0	0
Rhode Island	7	0	1
South Carolina	20	1	1
South Dakota	8	0	0
Tennessee	19	0	1
Texas	70	2	2
Utah	8	1	1
Vermont	6	0	0
Virginia	31	4	1
Washington	31	11	1
West Virginia	13	1	0
Wisconsin	35	3	2
Wyoming	8	2	0
	<hr/>	<hr/>	<hr/>
TOTAL	1 476	145 (9,82%)	73 (4,94%)
	=====	===	==

The following types of institutions are included in this Survey: Universities, State Universities and Church Universities, Colleges and Schools of Art, Colleges and State Colleges, Institutes of Technology, Community Colleges, Art League Schools, Museum Schools, Art Centers, Craft Centers.<sup>2</sup>

**Courses:** Stained Glass and Glassblowing are included as subjects for the award of: Diplomas, Certificates, Degrees (BA, BA Ed., BFA, MFA); are taught as part of semester curricula, summer schools, evening classes. There are, however, no courses of the type offered by the West Glamorgan Institute for Higher Education (WGIHE) Wales, which awards a Higher Diploma after four years of concentrated specialization in Architectural Stained Glass.

12.1.2 Not listed is the most important Glass School in America - Pilchuck.

The Pilchuck Glass School's postal address is:

107 South Main Street  
Seattle  
Washington 98104  
U.S.A.<sup>3</sup>

However, the School is situated on a beautiful 40 acre campus, located 50 miles north of Seattle, Washington, overlooking the Olympic Mountains, Skagit Bay and the islands of Puget Sound.<sup>4</sup>

The School offers a five-session summer programme from 31 May to 4 September. Within each session (2 weeks, 2½ weeks or 3 weeks), a wide variety of workshops are conducted by international celebrities.<sup>5</sup>

Pilchuck has been in operation for sixteen years this year; Students have come over the years from Japan, Australia, Thailand, India, England, Ireland, Sweden, Germany, Switzerland, Austria, France, Czechoslovakia, Honduras, Mexico, Brazil, Canada and from every part of the United States of America.<sup>6</sup>

The founder and moving force behind the School was the outstanding hot glass artist Dale Chihuly,<sup>7</sup> a native of Tacoma, Washington, who still actively supports the Glass School through his teaching.

The School is run by a Board of Trustees, and supported financially by private donors, companies, and by grants from such instances as the Burlington Northern Foundation, Corning Glass Works Foundation, German Consulate of the Federal Republic of Germany, Goethe Institute, Seattle,

National Endowment for the Arts, Seattle Foundation, Washington State Arts Commission and others.<sup>9</sup>

A number of scholarships are offered "so that no talented student is prevented from coming to Pilchuck for financial reasons". In 1986, 61 partial or full scholarships were awarded.<sup>9</sup>

Classes are restricted to 10 students; 20 for glass blowing. Every lecturer is assisted by a teaching assistant or assistants, depending on the size and type of class. Accommodation is provided on campus.<sup>10</sup> Workshops, studios are in operation 24 hours a day and are equipped with up-to-date furnaces, ovens, hot and cold glass working equipment, sandblast units, diamond saws, fabricating tables, compressed air, and indeed every possible facility for both three- and two-dimensional projects.<sup>11</sup>

International Lecturers. As has been mentioned in earlier chapters, such celebrities as Ludwig Schaffrath, Patrick Reyntiens, Jochem Poensgen, Johannes Schreiter, and many others, have been Artists in Residence at Pilchuck.

Stained Glass during the 1987 Session will include such internationally acclaimed figures as: Albinas Elskus, Paul Marioni, Kathie Bunnell and Narcissus Quagliata.

Hot Glass will include Dale Chihuly, Paul Marioni, Harvey Littleton, William Morris and Klaus Moje.

Pâte de Verre will include Diana Hobson (U.K.).

(In all there are 44 invited lecturers assisted by numerous teaching assistants).

Subjects will include: Stained Glass, Glass Casting, Hot Glass, Surface Decoration, Pâte de Verre, Printmaking from Glass Plates, the Art and History of Glass, Sandblasting and Enamelling, Glass Engraving, Glass Fusing.<sup>12</sup>

Professor Johannes Schreiter, visiting Pilchuck and observing its activities, said that he was reminded of the workshops in the Middle Ages where students and teachers, without any distraction from the outside world, lived and worked together. Life and art were inseparable, interwoven ways of existence, dependent yet nourishing each other.<sup>13</sup>

Klaus Moje, a distinguished glass worker from West Germany said,

"For me Pilchuck is one of those places that, if you are lucky enough, you happen upon in your lifetime. It reminds me very much of a monastery. Pilchuck has the same absolute concentration, except here one is dedicated to glass."<sup>14</sup>



12.1.3 The Stained Glass Association of America runs Summer Schools at different regional locations between the months July to October.<sup>15</sup> Workshops are conducted by senior Associates of the SGAA, and both primary and advanced classes are catered for. Members of the SGAA may attend these classes free; a tuition fee is charged to non-members. Professional studios throughout the country are selected as Host Studios.

Past lecturers have included (1981, for example):

Charles Lawrence	- Design Elements
Ray King	- Panel Structure
Albinas Elskus	- Glass Painting
Richard Millard	- Advanced Stained Glass Methods
Bill Cummings	- Stained Glass Roots <sup>16</sup>

Enquiries may be made to:-

Stained Glass Association of America<sup>17</sup>

Ms. Florence Welborn Telephone: (206) 392-1600

Chairman Education

8821 Bridgeport Way

Tacoma

Washington 98499

U.S.A.

## 12.2 THE STAINED GLASS ASSOCIATION OF AMERICA

The Stained Glass Association of America is a non-profit organization founded in 1903 to encourage the finest development of this ancient craft in contemporary America. The Association will give advice to intending clients on possible designers or conservators who, as SGAA craftsmen, will be best suited to handle the particular requirements of the commission.<sup>18</sup>

The Head Office of the Association<sup>19</sup> is:

1221 Locust Street                      Telephone (314) 231-5582  
Suite 405  
St. Louis MO 63103

The Association publishes quarterly, the magazine Stained Glass, which surveys all aspects of architectural and autonomous stained glass both contemporary and historic.

The current editor<sup>20</sup> is:

Richard L. Hoover                      Telephone (816) 561-3903  
4050 Broadway, Suite 200  
Kansas City MO 64111

The affairs of the Association are conducted through a President, currently Gerhard E. Hiemer, an Executive and a

Board of Directors. Standing Committees represent the affairs of the SGAA at Government and at other levels. These include Apprenticeship Training, audio visual aids, education, health and safety, historic studies, marketing, membership, conferences, processes and development, publications, repair and restoration, and the SGAA at Corning Museum.<sup>21</sup>

### 12.3 STEUBEN GLASS AND THE CORNING MUSEUM<sup>22</sup>

12.3.1 Steuben Glass may be viewed under ideal conditions in their superb display shop at 56th Street on 5th Avenue, Manhattan.

The history of Steuben Glass goes back to 1903 when Frederick Carder, a respected English glass designer and chemist opened a glasshouse in New York's Steuben County near the Pennsylvania border, already a major glassmaking area. The Company, named after the County, produced exceptional Art Nouveau vases, bowls and art pieces until the First World War, when Carder, unable to get coal for his furnaces, merged with the neighbouring Corning Glass Works, named after the little town of Corning.<sup>23</sup>

During the War the firm produced light bulbs and glass for aviators' goggles; after the war returning to "Gold Aurene, Pomona Green, Amethyst"<sup>24</sup> and other coloured melts.

But times had changed and Carder's glassware was losing ground to the new Scandinavian ware and its clear, simple lines.

In the 1930's a young entrepreneur, Arthur Amory Houghton Jnr., took over the firm, whose chemists had just produced a new optical glass which, by transmitting, rather than absorbing ultraviolet light, allowed the entire spectrum of light waves to pass through. This material was adopted as the sole manufacturing material, which, in the hands of a series of talented sculptors and glassworkers were renowned for their design excellence.<sup>25</sup>

In 1934 their shop in 5th Avenue, Manhattan, was opened, and today Steuben's is an organization of 250 people within the structure of a 1,5 billion dollar a year corporation.<sup>26</sup>

### 12.3.2 THE CORNING GLASS CENTER AND MUSEUM<sup>27</sup>

The new Corning Glass Center (which houses the Steuben Glassworks)<sup>28</sup> and Museum, was opened on June 1, 1980.<sup>29</sup> It is, perhaps, one of the most carefully planned museums in the world, and is, outside of the Victoria and Albert Museum, London, one of the most comprehensive.

It traces the history of glass with exhibits ranged chronologically from Ancient Egypt circa 1500 BC and Syria to modern contemporary 'Art Glass'. The collection is meticu-

lously displayed and annotated, and includes a small collection of stained glass, with some particularly fine Tiffany windows and glass lampshades.

Indeed, since its opening originally in 1951, contemporary glass has been an important focus, and annually a number of important exhibitions there have surveyed the field worldwide.

From 1980 the Corning Museum began to publish the New Glass Review<sup>30</sup> which serves as a forum for the presentation of new work and provides an overview of the most unusual and innovative in terms of aesthetics, function and technique. Slides are submitted from artists working in glass (including stained glass) from all over the world. All slides are retained by the Museum; a panel of judges decide on those which will be published.<sup>31</sup>

The Corning Library of the Museum attempts to cover the entire range of glass knowledge, including magazine articles published in many languages, carefully filed under relevant headings.<sup>32</sup>

#### 12.4 REFERENCES AND NOTES - CHAPTER 12

1. HUDOBA, R. (et al.) 1983. American Artist Directory of Art Schools and Workshops. American Artist. March 1983. pp. D.1-40.
2. American spelling is retained.
3. Pilchuck Glass School Prospectuses. 1986, 1987.
4. Ibid. p. 1
5. Ibid.
6. Ibid. p. 2.
7. COWART, J. and CHAMBERS, K. (1984). Chihuly, A Decade of Glass. p. 5.

Chihuly was born in Tacoma, Washington in 1941, and received his BA degree from the University of Washington, his MS degree from the University of Wisconsin and his MFA degree from the Rhode Island School of Design. In 1968 he was awarded a Fulbright Scholarship to study glass in Italy, the first American glass blower to work at the Venini Glass Factory, Murano, Venice. Formerly Head of the Rhode Island School of Design; since 1979, Artist in Residence.

In 1971 he established the Pilchuck School in Stanwood, Washington, an independent art school devoted exclusively to the study of glass.

With Harvey Littleton, who initiated the Studio Glass movements over two decades ago, he is considered to be the most important figure working in hot glass today.

8. Op. cit. p. 12
9. Ibid.
10. Ibid. p. 3.
11. Ibid.
12. Ibid.
13. HAUFSCHILD, L. (1983). The Pilchuck Glass School - Teaching What Cannot be Taught. Stained Glass (SGAA). Vol. 78, no. 1, 1983. pp. 35-39.
14. Ibid., p. 38.

15. LINDENBERGER, L.A. (1981). The Stained Glass School (SGAA). Stained Glass (SGAA). Vol. 76, no. 2, 1981. pp. 126,127.
16. Ibid.
17. Stained Glass (SGAA). Vol. 81, no. 6, 1986. p. 2.
18. The Stained Glass Association of America. Information brochure published by the SGAA.
19. Stained Glass. Vol. 81, no. 2, 1986. p. 82.
20. Ibid.
21. Ibid.
22. See Acknowledgements.  
Visited by the author both in Manhattan and Corning, New York State.
23. BLOCK, J.L. (1985). Steuben Glass. American Craft. Vol. 45, no. 1, 1985. pp. 10-14.
24. Ibid. p. 12.
25. Ibid.
26. An appointment had been made for the author with Mr. Davis Chiodo, President, and Mr. Paul Schulze, Director of Design.  
The author's interests were discussed over lunch in a nearby restaurant and an arrangement was made to fly him to the Corning Glass Center in Corning, New York, in the Steuben jet the following week, in order to observe the Steuben Factory at work, view their extensive museum of glass, and do research in the library.
27. See Acknowledgements.
28. A special tour of the glass-blowing, casting, polishing and copper wheel-cutting was arranged.
29. WEIS, H. (1980). The New Corning Museum of Glass. Stained Glass (SGAA). Vol. 75, no. 3, 1980. p. 233.
30. New Glass Review 1-7. Corning, New York: Corning Museum of Glass.
31. Ibid.
32. The author spent two hours researching 'pâte de verre' (paste glass) methods, in which he is interested, and the titles of the books published under the aegis of the Corpus Vitrearium Medii Aevi, discussed elsewhere in this study.

## CHAPTER 13 : CONCLUSION

### 13.1 STUDY TOUR

13.1.1 The overseas study tour undertaken from 4 July 1984 to 1 December 1984 took the author to six European countries - the United Kingdom of Great Britain (England, Scotland, Wales), France, Switzerland, Austria, West Germany, Belgium, and the east coast of the United States of America. The following cities, towns, villages or places of interest were visited:-

#### United Kingdom

Arundel, West Sussex; Bath, Avon; Bridgend, West Glamorgan; Brighton, East Sussex; Bristol, Avon; Cambridge, Cams; Canterbury, Kent; Chester, Cheshire; Chichester, West Sussex; Coldstream, Borders; Corsham, Wiltshire; Coventry, West Midlands; Durham, County Durham; Edinburgh, Lothian; Ely, Cams.; Glasgow, Strathclyde; Gloucester, Glos; Great Malvern, Hereford and Worcester; Henfield, East Sussex; Lincoln, Lincs.; Liverpool, Lancs.; London; Monkwearmouth, Tyne and Wear; Nesbit, Borders; Paisley, Strathclyde; Rottingdean, East Sussex; St. Helens, Merseyside; Salisbury, Wiltshire; Storrington, East Sussex; Sunderland, Tyne and Wear; Swansea, West Glamorgan; Tewkesbury, Glos.; Warwick,



War.; Wells, Somerset; Worcester, Hereford and Worcester;  
York, North Yorkshire.

France

Chartres, Langeais, Le Mans, Lyon, Paris, Poitiers, St.  
Denis, St. Etienne-sur-Loise, Tours, Ussé.

Switzerland

Geneve, Luzern

Austria

Innsbruck

West Germany

Aachen, Alsdorf-Ofden, Bocholt, Düsseldorf, Eschweiler,  
Essen, Frankfurt, Kvelaer, Köln, Leverkusen-Küppersteg,  
Linnich, München, Schaag-Nettetal, Schwesternheim,  
Taunusstein-Wehen, Walbeck, Waldsassen, Veert.

Belgium

Brussels, Bruges

## United States of America

Alexandria, Virginia; Corning, New York; Morristown, New Jersey; Mount Vernon, New York; New Haven, Connecticut; New York City; Old Greenwich, Connecticut; Philadelphia, Pennsylvania; Princetown, New Jersey; Purchase, Connecticut; Stamford, Connecticut; Washington, District Columbia.<sup>1</sup>

### 13.1.2 CATHEDRALS AND CHURCHES

Over one hundred cathedrals and churches were visited in Europe and America while a spectrum of stained glass from circa 1164 A.D. (the Le Mans 'Ascension' and the Poitiers 'Crucifixion') to contemporary glass was viewed. Many of the windows discussed in the Preliminary Study (see Introduction, Chapter 1) were examined, sometimes with the aid of binoculars with an authority such as the Rev. Canon MacDonald of Ely, or Peter Gibson of the York Glazier's Trust.<sup>2</sup> Without a thorough understanding of the history of stained glass, a successful assessment of the medium of the contemporary 'milieu' would have been impossible.<sup>3</sup>

### 13.1.3 CONSERVATION AND RESTORATION

Conservation and Restoration are the continuing concern of the ancient edifices of Europe, furthermore, as stained glass of all ages has become a collectable commodity it is also the concern of the museums. The author was fortunate in

obtaining introductions<sup>4</sup> which enabled him to view conservation and restoration programmes in action at the Victoria and Albert, London, under June Lennox,<sup>5</sup> the York Glazier Trust at York Minster under Peter Gibson, FSA,<sup>6</sup> the Stained Glass Studio at Canterbury Cathedral, Kent, under Frederick Cole,<sup>7</sup> the Wilhelm Derix GmbH at Taunusstein-Wehen under Karl Traut,<sup>8</sup> the Hein Derix GmbH. at Kavelaer under Peter Derix,<sup>9</sup> the Dr. H. Oidtmann Weststätten at Linnich,<sup>10</sup> under Ludovikus and Friederich Oidtmann,<sup>11</sup> and the Greenland Studios, Manhattan, under Mel Greenland.<sup>12</sup> Much practical information<sup>13</sup> was obtained from these visits while contacts were established with authorities in the field, with whom much subsequent correspondence has ensued. Societies and Associations whose concern is the field of conservation and restoration<sup>14</sup> were brought to the attention of the author.<sup>15</sup>

#### 13.1.4 MUSEUMS

Stained Glass forms part of both specialist stained glass collections as at Ely, Cambridge, and Langen, West Germany; specialist glass collections, as at Pilkingtons Museum, St. Helens, Merseyside or the Corning Museum, Corning, New York; or general collections, such as the Suermondt Museum, Aachen, the giant Victoria and Albert Museum, London, the Musée Arts Decoratif, Paris, the huge Metropolitan Museum of Art, New York City, and its satellite, The Cloisters, Tryon Park, New York City, the Cooper-Hewitt Museum, New York City

and many others, outlined in the text. Many of these enjoyed the attention of the author.

#### 13.1.5 ART GALLERIES

As was indicated in the Introductory Chapter to this Study, the author wished to consider the subject of stained glass in the context of contemporary activity throughout the Fine Arts, and to this end many exhibitions were viewed.

These included:-

- Summer exhibition, Royal Academy, London.
- The Hard-Won Image, Tate Gallery, London.
- Crafts in Northumberland, Lincoln.
- Exhibition of the Guild of Sussex Craftsmen, Shipley, West Sussex
- Exhibition of the Guild of Gloucestershire Craftsmen, Gloucester
- Tournée autour du pot, Musée du Mans.
- Salon, Musée des Arts Decoratif, Paris.
- Chagall, and De Kooning, Pompidou Centre, Paris.
- Studio Ceramics at Paisley, Strathclyde.
- Royal Worcester at the Dyson Perrins Museum, Worcester.
- Hans Coper and Lucie Rie at Fischer Fine Art, London.
- Artist Potters Now, Shipley Art Gallery, Tyne & Wear.
- Modern Masters from the Thyssen-Bornemisza Collection, Royal Academy, London.

- Master of Modern and Contemporary Sculpture, Marlborough Gallery London.
- Henri Matisse, Sculpture, at the Hayward Gallery, London.
- Grosse Kunstausstellung, München.
- Kunst Salon, Haus der Kunst, München.
- Deutsche keramik Heute, Museum, Düsseldorf.
- Blam! Pop, Minimalism and Performance 1958/1964, Whitney Museum of Modern Art, New York.
- Charles Simonds, Leo Castelli Gallery, New York.
- Primitivism, Museum of Modern Art, New York.
- Golub, New Museum of Contemporary Art, New York.
- Directions 1985, Hirshorn Museum, Washington D.C.
- Vladimir Grigorovich, Edwart Nakham Kin Fine Arts, New York.
- Walter De Maria, 393 West Broadway, New York.
- Michele Oka Doner, Germans Van Eck Gallery, New York.
- Australian Visions, The Guggenheim, New York.
- Masters of the Sixties, Marisa Del Re Gallery, New York.
- Eric Sealine, Rosenfeld Gallery, Philadelphia.
- Mei Ling Hom, Marian Locks Gallery, Philadelphia.
- Natalie Surving, Ceramic Sculpture, Rosenfeld Gallery, Philadelphia.
- Robert Rauschenberg, Sonnabend Gallery, New York.
- James McNeill Whistler at the Freer Gallery of Art, Washington, D.C. 20th Century American Art, Whitney Museum of American Art, New York.
- Italo Scanga at the Neuberger Museum, Purchase University, Connecticut.

- and many more.<sup>16</sup>

A great many major galleries in each large centre were visited, as for example:-

London : National Gallery, National Portrait Gallery,<sup>17</sup> Victoria and Albert Museum, Craft Council Gallery, Design Institute, Hayward Gallery, Royal Academy, British Museum.

Paris : Louvre, Gallery of Modern Art, Pompidou Centre.

Munich : Alte Pinokatek, Haus der Kunst.

New York : Guggenheim Museum, Museum of Modern Art, Metropolitan Museum of Art, Cooper-Hewitt Museum, The Frick Collection, The Whitney.

Washington : National Gallery of Art, National Air and Space Museum, the Freer Art Gallery, the Hirshorn Museum.

#### 13.1.6 DESIGNERS AND WRITERS

The author was signally privileged in being able to meet some of the best designers working in the medium today and each visit was a rich experience. He was treated courteously and with attention in every instance and made to feel part of the special family of glass-workers. Trade secrets did not exist; all information was freely given.

- Joachim Klos and his daughter devoted a full day to the author and his family, conducting them to important stained glass sites and to Hein Derix Werkstätten, Kevelaer.<sup>18</sup>
- Patrick Reyntiens took the author into his home for a memorable long weekend.<sup>19</sup>
- Mark Angus conducted the author around the churches of the Bath area and discussed his book.<sup>25</sup>
- Roy Coomber demonstrated his glass painting skills and provided a tour of the churches of Bristol.<sup>26</sup>
- Ludwig Schaffrath conducted the author on a tour of his important stained glass in the Aachen area.<sup>20</sup>
- Paul Weigmann and his translator provided an entertaining afternoon with schnapps.<sup>21</sup>
- Richard Millard spent a day conducting the author to Rohlf's Studio at Mount Vernon, New York, Rambusch, Manhattan and Nesbitt's home and studio, Greenwich, New York.<sup>22</sup>
- Robert Sowers spent an afternoon discussing art and stained glass.<sup>23</sup>

- Rowan Le Comte travelled a hundred miles to show the Nesbit family the stained glass of Washington Cathedral.<sup>24</sup>

#### 13.1.7 THE STUDIOS AND MANUFACTURERS

- Roy Coomber of Clark-Eaton, Bristol has been mentioned.
- Ludovikus Oidtmann<sup>27</sup> of Linnich, West Germany, was extremely courteous and helpful and included, as a farewell present, an inscribed copy of the history of the firm, Licht Glas Farbe.
- Ursula Derix<sup>28</sup> of Wilhelm Derix Werkstätten, Taunusstein-Wehen, West Germany provided accommodation and transport back to Frankfurt.
- Peter Derix of Hein Derix GmbH, Kevelaer, had a drawing by the author's daughter transcribed into stained glass.<sup>32</sup>
- Peter Rohlf<sup>29</sup> personally conducted the author over the Rohlf Studios and took the author to lunch.
- Helene Weis<sup>30</sup> P.R.O. for the Willet Studios, Philadelphia, spent her birthday conducting the author around the churches and synagogues of Philadelphia and provided lunch with E. Crosby Willet, the Director.



- Clark-Eaton of Bristol, Goddard and Gibbs of London, the two Wilhelm Derix Studios of Düsseldorf and Taunusstein-Wehen and the Hein Derix Studio of Kevelaer, the Oidtmann Studio, Linnich, Rambusch and Rohlf's Studios, New York, and the Willet Studios, Philadelphia, all provided the author with brochures, catalogues and other information.<sup>31</sup>

Two manufacturers of antique glass were visited and the glass-making process observed:

Hartley, Wood and Company of Sunderland, Tyne and Wear,<sup>32</sup> and the Lamberts Glass Factory at Waldsassen, on the Czechoslovakian border.

#### 13.1.8 EDUCATIONAL INSTITUTIONS

Although this study surveys the broad field of glass education, only four schools of Art and Design were visited. This was partly due to the timing of the tour, for French and German Schools were in recess at the time of the author's visit to the Continent. However, subsequent surveys as detailed in this Study indicate current interest in studio- and stained glass. A number of course syllabi are also outlined.<sup>34</sup>

13.1.9 SPECIALIST ORGANIZATIONS

During the tour contacts were established with a number of specialist organizations who are concerned either solely or peripherally with the conservation, restoration, recording or promotion by various means of stained glass. Subsequent correspondence has provided further information and here special mentioned must be made of:

Peter Cormack<sup>35</sup>

Tel. : 015275544 Ext. 4390

Keeper, William Morris Gallery

Lloyd Park Forest Road

Walthamstow E17 4PP

England

and

Philidda Shaw<sup>36</sup>

Tel. : 01-403 3300

Information Officer

The Worshipful Company of Glaziers

and Painters of Glass

Glaziers Hall

9 Montague Close, London Bridge

London SE1 9DD

England

#### 13.1.10 SLIDES

One of the initial objectives of the tour was to accumulate visual reference. Some 3 000 slide transparencies were the result.

#### 13.1.11 DOUBLE-GLAZING TECHNIQUES

Different systems of double glazing were observed at such places as York, where leaded glass following the pattern of the ancient stained glass in a system devised by Peter Gibson is used; at Bristol, Avon, where Roy Coomber was supervising the fitting of polycarbonate sheeting to the stone mullions of city churches and cathedrals; and at numerous sites in West Germany and the United States of America.

Because of its lightness, which makes it easy to handle, because it can be easily shaped to fit the complicated stone mullions, and because of its strength, polycarbonate<sup>37</sup> is much favoured as a protective screening in an age of vandalism and terrorism.

## 13.2 THE ROAD AHEAD

### 13.2.1 GLASS IN THE ENVIRONMENT

In April 1986 three institutions, the Craft Council, the Royal College of Art and the Royal Institute of British Architects collaborated to sponsor a three-day conference on "Glass in the Environment".<sup>38</sup>

The defined goal of the conference was to examine new developments in the use of glass in architecture and interior design and assess the possibilities which new technologies offer for the future.<sup>39</sup>

Glass artists, architects and designers would be brought together with manufacturers, engineers and technicians from the glass industry,

"in order to stimulate an intense exchange of information and ideas which would lead to collaborative work between these groups."<sup>40</sup>

Coinciding with the conference programme of 34 lectures and events, 27 glass exhibitions of various kinds were shown in galleries and institutions around London.<sup>41</sup>

These included every possible form that glass can take:-

Kiln-formed and blown glass objects, pâte de verre, architectural stained glass, and displays of architectural models

in which glass is used in various high technology ways, and neon as a medium were shown.<sup>42</sup>

In the lectures several new buildings in the Post-Modernist style were presented, including the giant new Lloyds building by Richard Rogers, architect of the 1977 Centre Pompidou in Paris. The Lloyds building utilizes 2.2 acres of a specially designed multiple skin glass which possesses very unique technical optical qualities.<sup>43</sup>

The range and content of the exhibitions demonstrated yet once again that glass was attracting truly creative and innovative artists, however, the conundrum persists as to how the re-marriage of architecture and stained glass can be performed.

ANNE WOLFE of Sweden said of the Conference,

"Art and Architecture which arise from the basic philosophy that technique = beauty, and big and new = wonderful and grand is destined to bankrupt its creators of form and content."

"the attending artists who consider themselves handcrafts men would have been much less disappointed if they had remembered that the word 'handcraft' has long been a degrading expression among the European architects. There was hardly any chance for (even) discussing this problem."<sup>44</sup>

REYNTIENS, in considering the humanizing influence of stained glass on modern architecture puts his finger squarely on the problem,

"All the disparate efforts of Post-Modernism spell out a realisation that the success of a building is not to be measured by the mere penetration of form into form, or the relationship between form and void, but in the total fulfilment of the client's needs, spiritual, sensual, aesthetic and social. With this kind of architectural ideal, stained glass can ally itself unreservedly."

"To be truly human we need to be in contact with artefacts made by human hands, and to accept their flexibility and risk of fallibility; these may exist side by side with the by now inescapable presence of the machine-made, the computer-designed. But in the interests of humanity, the machine can and must be contained; no amount of computer design can usurp the rôle of the individual artist and the one-off work of art. Stained glass is incapable of mechanized manufacture and, if only in this, represents all those collaborative arts that in the past have gone towards making a complete statement in architecture - arts that have been neglected for so long."<sup>45</sup>

Of course successful collaborations between sensible architects and sensitive stained glass artists abound - many of them have been the subject of discussion in this study.<sup>46</sup>

POENSGEN refers to the re-appearance of such architectural phenomena as the skylight and dome: the "Heart Tent" of the Diplomatic Club, Riyadh, Saudi Arabia,<sup>47</sup> by the architect Frei Otto and his wife, Bettina, executed by the Mayer Hofkunstanstalt, Munich; the glass dome by the architect Gottfried Böhm for the new pavilion in the garden court of the State Theatre in Stuttgart; Ed Carpenter's Glass pyramid in the Aberdeen Building, Dallas, Texas, and Karl-Heinz Traut's glass ceiling in the staircase of a private home, Taunusstein, West Germany - all executed during 1986.<sup>47</sup>

### 13.2.2 STYLE

In an age of internationalism it is difficult to say whether the stained glass of a particular country has a marked national style. Perhaps this is true only of Germany where a non-figurative linear architectonic form has prevailed, but not, it must be pointed out, at the expense of a figurative or a more painterly style with which it has successfully cohabited.<sup>48</sup> The "painterly" rather than the "linear" (the romantic approach rather than the constructivist) is inherent in the stained glass of the British Isles (with marked exceptions)<sup>49</sup> and France, where the German contribution has had no apparent effect at all.

Reyntiens (who, it must be remembered, was one of the first to realize the contribution of the German designers and to invite them to England) says,

"Linear designed stained glass has an immediate appeal; glass design in blobs or areas, on the other hand (the "painterly" approach), though of far greater complexity and difficulty, when it is well done, is far more satisfying."<sup>50</sup>

Stained glass designers in America still look to Europe; young designers still make pilgrimages to England, France and Germany, which is hardly surprising as many of them are second generation Americans, the sons and daughters of Europeans who fled the 'old' countries before and after the

Second World War. As in all other art forms, a multiplicity of styles exist.

As Reyntiens says,

"The return of human figuration in painting has encouraged an urge to re-interpret the figurative image in glass ..."<sup>51</sup>

He points out that as Western painting during the fourteenth and fifteenth centuries resolved the marriage of the figurative invention with architecture, so

"Our problem ... is to address ourselves to the question of reconciliation between architectural discipline and the freedom and spontaneity demonstrated in good paintings. This calls for the closest collaboration between artist and architect ..."<sup>52</sup>

### 13.2.3 AUTONOMOUS WORKS

The fourth edition of the Concise Oxford Dictionary, 1950, defines autonomy as "personal freedom; freedom of the will".

Certainly this study revealed that a great many contemporary stained glass artists design, make or have made, panels of stained glass which are no longer conceived as part of an architectural environment, which are created without any significant change of style or complexity - stained glass that can be said to be "independent, or free" works.<sup>53</sup> In this study, for example, reference has been made to works, some viewed by the author, created by such designers as



Schaffrath and Schreiter, Reyntiens and Clarke, Millard and Poensgen. The conceptual works of Posner are essentially created to be viewed in the non-architectural environment.<sup>54</sup>

The main problem of the autonomous work is that it must be displayed somewhere. The flat and static back-lighting of the museum does not do justice to the singular refractive qualities of stained glass, while equally, the halation of light around the edges of a panel hung in the middle of, say, a picture window, mitigates against the true qualities of the work. Nevertheless, as a vehicle for the exploration of ideas, the importance of the autonomous panel is self-evident. Von Stockhausen says of his own work in this regard,

"The 'free glass panel' was a necessary reaction for the author in the early 60's, who, at the time, was engulfed in monumental architectural constructions. Small scale tests, exercises in thinking in colour, attempts at meditative concentration, windows for a new architecture."<sup>55</sup>

#### 13.2.4 HYPOTHESES

The author concludes that this Study confirms the first three hypotheses stated in the Introduction.

The fourth hypothesis, namely "that the introduction of stained glass in a South African institution of tertiary

education is a viable proposition", is validated by the fact that such a course was successfully introduced at the Port Elizabeth Technikon in January 1985.<sup>56</sup>

The thesis has established the link between conservation and the creation of contemporary works; both remain neglected fields in South Africa. Perhaps this Study will herald a new beginning and a satisfactory realization of the fifth hypothesis.

### 13.3 REFERENCES AND NOTES - CONCLUSION

1. At times complex travel arrangements were necessary in order to reach out of the way places of interest. Waldsassen, for example, the home of the Lamberts Glass Factory, was two train journeys and a bus ride, taking nearly six hours to reach, and necessitating an overnight stay. The designers Weigmann at Leverkusen-Küppersteg and Klos at Schaag-Nettetal were equally difficult to reach, as was the Wilhelm Derix GmbH at Taunusstein-Wehen.

Pilgrimages were made to view single important stained glass works; the prime reason for visiting Le Mans was to view the early Twelfth century "Ascension" window, and Poitiers half-way down France, the great early twelfth century 'Crucifixion' window.

The vicissitudes of foreign travel took their toll. The theft of camera and passports between Köln and Bruxelles shortened the visit to Belgium, which is thus not included in this study; in Liverpool, England, the author's car-windows were smashed while he was taking photographs in the great new Catholic Cathedral, and his diary and appointment book - a year's preparation - stolen.

2. See Acknowledgements.
3. The preliminary Theoretical Study, with all its shortcomings nevertheless provided the author with a suitable background and framework of reference. See Introduction.

The rôle of the stained glass at Chartres in the neo-Gothic style of the American artists Cram and Goodhue, and the stained glass designers who filled their historicist churches with windows, such as Connick and Saint.

- 4.- See Acknowledgements and text.  
12.
13. For example, the light tables at York, and adhesives and consolidants at the Victoria and Albert Museum. See Text.
14. With special reference to the IIC - The International Institute for Conservation of Historic and Artistic Works, London, of which the author is now a member, and from whom much valuable information is obtained.
15. June Lennox of the Victoria and Albert Museum provided the introduction.



Wiggintin, an architect, discusses new glass technology including the use of thin film which by "sputtering techniques" layers of any material may be deposited on to glass - so thin that they are transparent. Several layers can turn glass into tinted mirror.

Electrochromism is a method producing glass whose colour can be modified by electrical switching leading to dynamic-surface glasses, and the "thinking" glass which modifies its own appearance and performance in response to outside stimuli.

He also refers to the appalling ranges of so-called decorative glass - tinted, rolled, screenprinted and coated, produced by specialists - production technologists, performance-inspired research marketing men - glasses with which we are only too familiar in South Africa.

44. WOLFE, A. (1986). Letter. Neues Glas, New Glass, Verre Nouveau. 3/1986. p. 214.
45. REYNTIENS, P. (1986). A Complete Statement - the humanizing influence of stained glass on modern architecture. Crafts. Vol. 79, March/April 1986. p. 13.
46. For example, the successful collaboration between Johannes Schreiter and the architect of the Chapel of the Johannesbund Convent, Leutesdorf, West Germany.
47. POENSGEN, J. (1968). Glass in Architecture - Skylights. Neues Glas, New Glass, Verre Nouveau. 4, 1986. pp. 248-257 and cover.
48. For example, the work of H.G. von Stockhausen, mentioned in the text.
49. Reyntiens's own work in the 1960's and Brian Clarke's constructivist stained glass.
50. REYNTIENS, P. (1986). p. 13.
51. Ibid.
52. Ibid.
53. SOWERS, R. (1979). also writes about the topic: 'Autonomy as a Spurious Absolute in CLARKE, B. (1979). Architectural Stained Glass. pp. 55-59; and 'The Quest for Autonomy' in SOWERS, R. (1981). The Language of Stained Glass. pp. 164-171.
54. The whimsical character and visual puns in Posner's work have been commented on in the text.

55. VON STOCKHAUSEN, H.G. (1983). 'The Glass Panel' in  
RICKE, H. (et al.) (1984). New Glass in Germany. pp.  
63-66.

56. See Appendix III, IV.