

The portrait drawings of Hans Holbein
the Younger: function and use explored
through
materials and techniques

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Abstract

This thesis examines the materials and techniques of sixteenth century artist Hans Holbein the Younger, with particular reference to his portrait drawings. The research reinstates the drawings as the primary source-material for investigation, thereby demonstrating the link between the materials and techniques chosen by Holbein, and the function or end-use of the drawings.

Although around one hundred Holbein portrait drawings survive, the focus of this research is the eighteen that relate to currently attributed oil and miniature paintings. By focusing the research in this manner, it is possible to establish how Holbein constructed and used the drawings in the preparation of the finished oil painting. Furthermore, it explains how his choice and use of materials and techniques can help to establish the original context and function of the drawings.

An important outcome of this research is a detailed description of the eighteen drawings that relate to a painted portrait. Having developed an effective method of examining and describing Holbein's drawings, this research provides a thorough analysis of the materials and techniques used by him. This not only increases our understanding of his drawing processes, but also broadens the limitations of traditional connoisseurship by offering a more accessible tool, allowing objective visual analysis of an artist's technique. This method of investigation can be applied to drawings in a wider context of sixteenth century artistic production. Moreover, it can also be used as a potential model for how to effectively 'read' a drawing in order to better understand its function and method of production. The results inform art historical and conservation research.

A comprehensive, systematic visual examination of the drawings has helped to reveal new information on Holbein's methods and materials, and offers insights into 16th century workshop practice. In many cases examination has clarified the sequence in which the media was laid down. Holbein's emphasis on the contours that define sitters' features has been much disputed, and their role, media, and application methods were unclear. What has previously been described as metalpoint marks were discovered by the author to be indentations, which have become filled with loose media, thereby giving the appearance of a drawn line. The indentations actually show evidence of tracing of the salient lines that capture likeness for transfer. The research has also revealed that red chalk was the preliminary media for defining features, and that Holbein developed standardised techniques for rendering flesh tones, making the drawing process more efficient. It is apparent that Holbein chose techniques to fulfill a particular role, and that there are clear links between these techniques and their location on a drawing.

Table of Contents

Introduction	1
Chapter One: A Biography of Hans Holbein the Younger and History of the Portrait Drawings	9
1.0 Introduction	9
1.1 Hans Holbein the Younger: a brief biography	9
1.2 Holbein's portrait drawings: a brief history of their collection and location	16
1.3 Holbein's portrait drawings: history of their housing, including condition and conservation	24
1.3.1 Introduction.....	24
1.3.2 Holbein's portrait drawings: history of their housing and mounting	25
1.3.3 Condition of the drawings: historical accounts of their care and conservation	32
Chapter Two: Literature Review and Methodology	45
2.1 Literature Review	45
2.2 Connoisseurship	51
2.3 Capturing Likeness	55
2.4 Optical Devices	58
2.5 Materials and techniques	60
2.6 Contours	63
2.7 Signs of transfer	65
2.8 More recent research	67
2.9 Methodology	70
Chapter Three: The Materials and Techniques of Holbein's Portrait Drawings	84
3.1 Introduction	84
3.2 Holbein's drawing materials	85
3.3 Holbein's papers	87
3.3.1 Watermarks in Holbein's papers	88
3.3.2 Holbein's unprepared papers	90
3.4 A general overview of prepared papers	92
3.4.1 Holbein's early prepared papers	95
3.4.2 Holbein's pink prepared papers	98
3.4.3 Composition and reconstruction of Holbein's pink preparation.....	98
3.4.4 Holbein's portrait drawings on pink prepared paper	100
3.5 Holbein's use of paper and parchment as a painting support	106
3.6 Holbein's drawing methods and materials	111
3.6.1 Introduction.....	111
3.6.2 Capturing likeness	111
3.6.3 Holbein's drawing process: a brief synopsis	114
3.6.4 Holbein's use of metalpoint for portrait drawing	115
3.6.5 The characteristics of metalpoint	116
3.6.6 Holbein's portrait drawings in metalpoint	117
3.6.7 The presence of metalpoint on Holbein's pink prepared paper portraits	120
3.6.8 Erasmus's hands: an example of Holbein's metalpoint drawing.....	122
3.6.9 Chalks	124
3.6.10 A brief introduction to chalks as drawing media	124
3.6.11 Holbein's use of chalk for portraiture.....	128
3.6.12 Holbein's sitters' eyes	134
3.6.13 A copy and an original: a comparison of techniques	135
3.6.14 Holbein's use of aqueous media	136
3.7 Transfer techniques	141
Chapter Four: The Function of Holbein's Portrait Drawings	147
4.1 Introduction	147
4.2 What is a drawing?	148
4.3 Classification of drawings: history and terminology in relation to function	149

4.4 The appearance of Holbein’s portrait drawings: the relationship of materials and technique to function.....	161
4.4.1 Holbein’s substrates: the significance of size to function.....	161
4.4.2 The function of Holbein’s papers.....	170
4.4.3 Holbein’s pink prepared papers.....	172
4.4.4 Pink prepared paper: its link to the coloured grounds of panel and miniature painting.....	178
4.4.5 The function of Holbein’s drawing media: the link to painting.....	183
4.5 Holbein’s portrait drawings as face patterns: contouring, signs of transfer and the drawings’ relationship to the underdrawing of paintings.....	194
4.5.1 Holbein’s portrait drawings: function of contours and signs of transfer.....	195
4.5.2 The function of aqueous black media on Holbein’s drawings.....	198
4.5.3 Signs of transfer on Holbein’s portrait drawings.....	202
4.5.4 Drawings and underdrawings: the relationship of one to the other.....	205
Conclusion.....	216
Appendix One: Analysis of the watermarks on Holbein’s portrait drawings.....	226
Appendix Two: Reconstruction of a Pink Preparation.....	233
Appendix Three: Dürer’s drawing apparatus and some observations following its reconstruction and use.....	236
Appendix Four: Tables.....	240
TABLE 1: Drawing and paintings by Hans Holbein: location & inventory information for drawings that relate to paintings of the same sitter and constitute the main body of work studied for thesis.....	240
TABLE 2: Size of drawings and size of paintings.....	242
TABLE 3a: The Watermarks of Holbein’s Portrait Drawings: By Type.....	243
TABLE 3b: The watermarks on Holbein’s drawings: by date.....	252
TABLE 4: Survey of Signs of Transfer on Hans Holbein’s Portrait Drawings.....	258
TABLE 5: Signs of transfer (*= prepared papers).....	265
Table 6: Drawing information.....	268
Table 7: Jacob Meyer zum Hasen (Figure 1).....	274
Table 8: Dorothea Kannengiesser (Figure 2).....	276
Table 9: Jacob Meyer zum Hasen (Figure 4).....	278
Table 10: Dorothea Kannengiesser (Figure 5).....	279
Table 11: Anna Meyer (Figure 6).....	280
Table 12: Sir Thomas More (Figure 8).....	282
Table 13: William Warham, Archbishop of Canterbury (Figure 10).....	284
Table 14: Sir Henry Guildford (Figure 12).....	286
Table 15: Lady Mary Guildford (Figure 14).....	287
Table 16: William Reskimer (Figure 16).....	288
Table 17: Charles de Solier, Sieur de Morette (Figure 18).....	290
Table 18: Unknown Gentleman (Figure 20).....	292
Table 19: Simon George of Quocote (Figure 22).....	294
Table 20: Sir Richard Southwell (Figure 24).....	296
Table 21: Jane Seymour (Figure 26).....	298
Table 22: Lady Elizabeth Audley (Figure 28).....	300
Table 23: Edward, Prince of Wales (Figure 30).....	302
Bibliography.....	303

In Volume II: Images to accompany the text

List of Figures

Figure 1: Jacob Meyer zum Hasen, 1516. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1823.137

Figure 2: Dorothea Kannengiesser 1516. Hans Holbein the Younger, Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1823.137a

Figure 2.1: detail

Figure 3: Double Portrait of Jacob Meyer zum Hasen & Dorothea Kannengiesser, 1516. Hans Holbein the Younger. Painting. Basel, Kunstmuseum. Oil on panel. Inv. No: 312

Figure 4: Jacob Meyer, c.1526. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1823.140

Figure 4.1: detail

Figure 4.2: detail

Figure 4.3: detail

Figure 4.4: detail

Figure 4.5: detail

Figure 4.6: detail

Figure 5: Dorothea Kannengiesser, c.1526. Hans Holbein the Younger, Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1823.141

Figure 5.1: detail

Figure 5.2: detail

Figure 5.3: detail

Figure 6: Anna Meyer, c.1526. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1823.142

Figure 6.1: detail

Figure 6.2: detail

Figure 7: Darmstadt Madonna, 1526-1528. Hans Holbein the Younger. Formerly on display at the Städel Museum as a loan, Frankfurt. Oil on panel.

Figure 7.1: detail

Figure 8: Sir Thomas More, 1527. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor. Inv. No: RL12268

Figure 8.1: detail

Figure 8.2: detail

Figure 8.3: detail

Figure 9: Sir Thomas More, 1527. Hans Holbein the Younger. The Frick Collection. Oil on panel. Inv. No: 1921.1.77

Figure 9.1: detail

Figure 10: William Warham, Archbishop of Canterbury, 1527. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor. Inv. No: RL12272

Figure 10.1: detail

Figure 10.2: detail

Figure 10.3: detail

Figure 10.4: detail

Figure 10.5: detail

Figure 11: William Warham, 1527, Hans Holbein the Younger. Musée du Louvre, Paris. Oil on panel. Inv. No: 1344

Figure 12: Sir Henry Guildford, 1527, The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12266

Figure 13: Sir Henry Guildford, 1527. The Royal Collection, Windsor Castle. Oil on panel. Inv. No: RCIN.400046

Figure.14: Lady Mary Guildford, 1527 Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.35

Figure 14.1: detail

Figure 15: Lady Mary Guildford, 1527. Hans Holbein the Younger. Saint Louis Art Museum. Oil on panel. Inv. No: 1:1943

Figure 16: William Reskimer, c.1533. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12237

Figure 17: William Reskimer, c.1533, Hans Holbein the Younger. The Royal Collection, Hampton Court. Oil on panel. Inv. No: RCIN.404422

Figure 18: Charles de Solier, Sieur de Morette, 1534/35. Hans Holbein the Younger. Staatliche Kunstsammlungen, Kupferstichkabinett, Dresden. Inv. No: C1977-156

Figure 18.1: detail

Figure 18.2: detail

Figure 18.3: detail

Figure 18.4: detail

Figure 18.5: detail

Figure 18.6: detail

Figure 19: Charles de Solier, Sieur de Morette, 1534/35. Hans Holbein the Younger. Staatliche Kunstsammlungen, Gemäldegalerie Alte Meister, Dresden. Oil on panel. Inv. No: 1890

Figure 19.1: detail

Figure 20: Unknown Gentleman, (Parker 33), 1535. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12259

Figure 20.1: detail

Figure 20.2: detail

Figure 20.3: detail

Figure 20.4: detail

Figure 20.5: melinex tracing of drawing mapping indented contours

Figure 21: Unknown Gentleman, 1535. After Hans Holbein the Younger. The Metropolitan Museum of Art, New York. Oil on panel. Inv. No: 49.7.28

Figure 21.1

Figure 21.2

Figure 21.3

Figure 22: Simon George, c.1535. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: 12208

Figure 22.1: detail

Figure 22.2: detail

Figure 22.3: melinex tracing of drawing mapping indented contours

Figure 23: Simon George, c.1535. Hans Holbein the Younger. Städelsches Kunstinstitut, Frankfurt. Oil on panel. Inv. No: 1065

Figure 23.1: detail, underdrawing showing pouncing of hand

Figure 23.2: detail, melinex tracing of drawing over painting

Figure 24: Richard Southwell, 1536. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12242

Figure 24.1: detail

Figure 24.2: detail

Figure 24.3 melinex tracing of drawing mapping indented contours

Figure 25: Richard Southwell, 1536. Hans Holbein the Younger. Galleria degli Uffizi, Florence. Oil on panel. Inv. No: 765

Figure 26: Jane Seymour, c.1536/37. Hans Holbein the Younger The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12267

Figure 26.1: detail

Figure 26.2: detail

Figure 26.3: detail

Figure 26.4: detail

Figure 26.5: detail

Figure 27: Jane Seymour, c.1536/37. Hans Holbein the Younger. Kunsthistorisches Museum, Vienna, Gemäldegalerie. Oil on panel. Inv. No: 881

Figure 28: Lady Audley, c.1538. Hans Holbein the Younger. The Royal Collection, Windsor Castle. Inv. No: RL12191

Figure 28.1: detail

Figure 28.2: detail, infra red image

Figure 28.3: detail, together with **Figure 29.2** (detail of miniature)

Figure 29: Lady Audley, c.1538. Hans Holbein the Younger. The Royal Collection, Windsor Castle. Miniature. Inv. No: RCIN 422292

Figure 29.1: detail showing overlaying of scaled down drawing on to miniature (image: Nick Frayling)

Figure 29.2: detail, see **Figure 28.3**

Figure 30: Edward, Prince of Wales, c.1538. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12200

Figure 30.1: detail

Figure 31: Edward, Prince of Wales, c.1538. Hans Holbein the Younger. National Gallery of Art, Washington DC, Andrew W Mellon Collection. Oil on panel. Inv. No: 1937.1.64

Figure 32: Lady Margaret Butts, c.1540/43. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12264

Figure 32.1: detail

Figure 32.2: melinex tracing of drawing mapping indented contours

Figure 33: Lady Margaret Butts, c.1540/43. Hans Holbein the Younger. Isabella Stewart Gardner Museum, Washington. Oil on panel. Inv. No: P21e5

Figure 34: John Godsalue, c.1532-34. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12265

Figure 34.1: detail

Figure 34.2: detail

Figure 35: A Boy with Marmoset, c.1532-36. Hans Holbein the Younger. Kunstmuseum Basel, Kupferstichkabinett. Inv. No: 1823.139

Figure 36: Lady Elyot, c.1532-34. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. no: RL12004

Figure 36.1: detail, together on same page as Figure 36

Figure 37: Portrait of a Young Man, 1517. Ambrosius Holbein. Kunstmuseum Basel, Kupferstichkabinett. Inv. No: 1662.207a

Figure 37.1: detail, on same page as **Figure 37**

Figure 38: Sir Thomas More, (Parker 2), 1527. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12225

Figure 38.1: detail

Figure 38.2: detail showing melinex tracing of Parker 2 laid over painting

Figure 39: Lady Ratcliffe, 1532-43, Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12236

Figure 39.1: detail, infra-red image

Figure 40: Nicholas Carew, 1527. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.34

Figure 41: Studies of Hands, c.1502. Hans Holbein the Elder. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.195

Figure 42: Portrait of a Young Boy, 1516. Ambrosius Holbein. Basel, Kunstmuseum, Kupferstichkabinett. Inv. No: 1921.44

Figure 43: Portrait of an English Nobleman. c.1527. Hans Holbein the Younger. Basel, Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.122

Figure 44: Portrait of an English Noblewoman. c.1527. Hans Holbein the Younger. Basel, Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.123

Figure 45: Jean de France, Duke of Berry, 1524. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.125

Figure 46: Jeanne de Boulogne, Duchess of Berry, 1524. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.126

Figure 47: Jan van Eyck, Portrait of a Cardinal (?Niccolò Albergati), c.1435. Kupferstichkabinett, Staatliche Kunstsammlungen, Dresden. Inv. No: C775

Figure 47.1: detail

Figure 48: Portrait of Anne, 1518. Hans Holbein the Elder. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.207

Figure 49: Self Portrait, c.1502. Hans Baldung Grien. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: U.VI.36

Figure 50: Design for a pendant set with ruby, sapphires and pearls, c.1532. Hans Holbein the Younger. The British Museum, London. SL,5308.107

Figure 51: Portrait of a Member of the Wedigh Family, probably Hermann Wedigh, 1532. Hans Holbein the Younger. The Metropolitan Museum of Art, New York. Oil on panel. Inv. No: 50.135.4

Figure 51.1: detail

Figure 51.2: detail

Figure 52: Benedict von Hertenstein, 1517. Hans Holbein the Younger. Metropolitan Museum of Art, New York. Oil on paper on panel. Inv. No: 06.1038

Figure 53: The More Family Group, 1527. Hans Holbein the Younger. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.31

Figure 54: Drawing Apparatus, 1525. Albrecht Dürer. The British Museum, London. Inv. No: 1895,0122.730

Figure 55: reproduction of the drawing apparatus in use

Figure 56: detail of the drawing of Charles de Solier, Figure 18, illustrating the felt side of the paper

Figure 57: detail of the drawing of An English Nobleman, Figure 43, illustrating the wire side of the paper

Figure 58: Portrait of a Man in a Hat, 1518. Hans Holbein the Elder. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: 1662.186

Figure 58.1: detail

Figure 59: Portrait of Sigmund Holbein, 1512. Hans Holbein the Elder. The British Museum, London. Inv. No: 1895,0915.987

Figure 60: Bildnis des Zimprecht Schwarz, c.1508. Hans Holbein the Elder. Basel Kunstmuseum, Kupferstichkabinett. Inv. 1662.190

Figure 60.1: detail

Figure 61: Portrait of a Young Boy Looking Down, Hans Holbein the Elder. Basel Kunstmuseum, Kupferstichkabinett. Inv. 1662.192

Figure 62: pink preparation reconstruction showing difference on drying

Figure 62.1: painting out the pink preparation during reconstruction showing cockling paper

Figure 63: Portrait of a Young Lady, 1520/22. Hans Holbein the Younger. Musée du Louvre, Cabinet des Dessins, Paris. Inv. No: 20.737

Figure 64: Head of a Woman, c.1540. Cornelius van Cleef. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12955

Figure 65: Portrait of a Man Wearing a Hat, c.1510/15. Lucas Cranach the Elder. The British Museum, London. Inv. No: 1896,0511.1

Figure 66: photograph illustrating laying out of Holbein drawings in The Royal Library

Figure 67: Two Studies of the Left Hand of Erasmus of Rotterdam; Study of the Right Hand Writing, c.1523. Hans Holbein the Younger. Musée du Louvre, Cabinet des Dessins. Inv. No: 18697

Figure 67.1: detail

Figure 67.2: detail

Figure 67.3: detail

Figure 68: Study of the Right Hand of Erasmus of Rotterdam and Portrait Study, c.1523. Hans Holbein the Younger. Musée du Louvre, Cabinet des Dessins. Inv. No: 18698

Figure 68: detail

Figure 69: photograph, use of raw sienna chalk

Figure 70: Bust Portrait of a Young Woman, 1518. Niklaus Manuel Deutsch. Basel Kunstmuseum, Kupferstichkabinett. Inv. No: U.X.10

Figure 71: Portrait of a Man Wearing a Fur Lined Coat and Broad Rimmed Hat, 1522. Wolf Huber. Kupferstichkabinett, Städel Museum, Frankfurt. Inv. No: 16336

Figure 72: Cecily Heron, 1527. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12269

Figure 73: Sir Thomas Wyatt, c.1535-37. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12250

Figure 73.1: detail

Figure 73.2: detail

Figure 74 Sir Thomas Wyatt – copy. c.1535-37. (Parker 65) Anon. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12251

Figure 74.1: detail

Figure 74.2: detail

Figure 75: Portrait of Guillaume de Saulx, Sieur de Tavannes, c.1529-40. Jean Clouet. The British Museum, London. Inv. No: 1910,0212.54

Figure 75.1: detail

Figure 76: Elizabeth, Lady Vaux, c.1536. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle. Inv. No: RL12247

Figure 77: reconstruction of the carbon paper transfer technique with charcoal

Figure 78: reconstruction of the carbon paper transfer technique with black chalk

Figure 79: reconstruction of the carbon paper transfer technique with red chalk

Figure 80: photograph of all three techniques and reconstruction of a Holbein portrait

Figure 81: The Leoni Album binding.: The Royal Collection, The Royal Library, Windsor Castle.

Figure 81.1: The Leoni Album binding, interior. The Royal Collection, The Royal Library, Windsor Castle.

Figure 82: Cecily Heron and Lady Audley, a comparison of unprepared and pink prepared paper. The Royal Collection, The Royal Library, Windsor Castle.

Figure 83: historic mount example with red wash lines, The Royal Collection, The Royal Library, Windsor Castle.

Figure 83.1: detail of historic mount example with red wash lines.

Figure 83.2: detail of historic mount example illustrating overspill of wash line on to edge of drawing

Figure 83.3: example of a Holbein drawing (William Reskimer) in the solid and sealed mounts prior to removal in the 1970s. The Royal Collection, The Royal Library, Windsor Castle.

Figure 83.4: detail showing silk hinge attachment holding the drawings in place within the Perspex sandwich mounting system. The Royal Collection, The Royal Library, Windsor Castle.

Figure 83.5: Example of two Holbein portraits in the Perspex sandwich mounts. The Royal Collection, The Royal Library, Windsor Castle.

Figure 84: John More the Younger, 1527. Hans Holbein the Younger. The Royal Collection, The Royal Library, Windsor Castle.

Figure 84.1: detail of John More the Younger from the drawing of The More Family Group, Basel Kunstmuseum Kupferstichkabinett.

Figure 85: Lady Heveningham, George Vertue oiled paper tracing, Sudeley Castle, Winchombe, Gloucestershire.

Figure 85.1: Lady Berkeley, George Vertue oiled paper tracing, Sudeley Castle, Winchombe, Gloucestershire.

Figure 85.2: detail of Lady Berkeley oiled paper tracing by Vertue, showing pink preparation under the oiled paper

Figure 86: Portrait of an Unknown Man, c.1535. Hans Holbein the Younger. The Victoria and Albert Museum, Word and Image Department, London. Dyce 363

Figure 87: photograph of four shades of pink prepared paper during reconstruction

Figure 87.1: reconstruction of the pink preparation showing dry composition of 'salmon pink'.

Figure 87.2: reconstruction of pink preparation showing mixed preparation of 'salmon pink'.

Figure 88: Watermark example, Type A

Figure 89: Watermark example, Type B

Figure 90: Watermark example, Type C

Figure 91: Watermark example, Type D

Figure 92: Watermark example, Type E

Figure 93: Watermark example, Type F

Figure 94: Watermark example, Type G

Figure 95: Watermark example, Type H

Figure 96: Watermark example, Type I

Figure 97: Watermark example, Type J

Figure 98: Watermark example, Type K

Figure 99: Watermark example, Type L

Figure 100: Watermark example, Type M

Figure 101: Watermark example, Type N

Figure 102: Watermark example, Type P

Figure 103: Watermark example, Type Q

(NB: there is no image of Watermark Type O)

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Author's Declaration

During the period of registered study in which this thesis was prepared, the author has not been registered for any other academic award or qualification.

The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

Victoria Button May 2013

Introduction

Whilst the portrait drawings of sixteenth century artist Hans Holbein the Younger (1497/8-1543) are by no means neglected, their materials and techniques have never undergone the same scientific and visual scrutiny as the oil paintings. Furthermore, existing studies on Holbein's drawings are problematic for a number of reasons: firstly, none effectively explore the relationship between the materials and techniques that Holbein chose and the function of the drawings; and secondly, the emphasis on the art historical aspects of his drawings has meant that technical information is limited, approximated, inexact or unknown. This has resulted in inaccurate descriptions of the drawings' materials and techniques, and therefore limited our understanding of their function as preliminary drawings for transfer to miniature or panel.

Accurate characterisation of the materials and techniques utilised by an artist is fundamental if that artist's work is to be understood and interpreted accurately. Addressing this aspect, the focus of this research is the function of Holbein's portrait drawings explored through the examination of his techniques and choice of materials. Although many other drawings were examined, the 18 drawings that relate to attributed paintings of the same sitter were the focus. This research combines visual and scientific analysis, art historical research and art reconstruction, with the view to addressing the gaps in knowledge regarding Holbein's working practices. This multi-disciplined approach is lacking in previous studies of Holbein's portrait drawings, but bringing these disciplines together enables a more accurate understanding of the materials and techniques of the drawings, which in turn enables us to understand how they were used.

This research is the first to identify the materials Holbein used, examine in detail the sequence in which they were applied, and discuss how this relates to the function and use of the drawings. For a conservator, knowledge of the materials and techniques involved in the production of an artefact are important for numerous reasons: as well as providing an understanding of an artist's working practice, such factors also inform treatment and display decisions. The default stance of a conservator is to ask questions regarding an object's composition and, importantly, to note its condition by mapping any deterioration and damage. Damage, admittedly not always easy to define, may however reveal information about how an object was used, treated, displayed or stored:

signs potentially indicative of its function. These aspects highlight the importance of rigorous examination of the drawings, which was undertaken as part of this research.

The research presented here was initially prompted by the confusion surrounding the attribution of a drawing held at the Victoria and Albert Museum, London.¹ In an attempt to place this drawing within Holbein's oeuvre, many inconsistencies in the art of connoisseurship were brought to light. Although the problems of approaching Holbein's drawings from a traditional connoisseurial perspective are discussed and challenged within this thesis, the approach of the author is a continuation of some of its methods, rather an opposition to it.

Making sense of the V&A drawing's attribution history revealed a number of weaknesses in the reasoning behind attribution decisions in terms of the subjectivity of traditional connoisseurship. The drawing in question, depicting a man in three quarter profile, was bequeathed to the V&A Museum in 1869, Figure 86.² It was executed in chalks on pink prepared paper with touches of watercolour or ink or both. The mount was inscribed 'Holbein'. It was one of two drawings catalogued as Holbein from the collection of Reverend Alexander Dyce, (1798-1869) – the second of which has since been reattributed to a different artist.³ Since the bequest, the V&A portrait drawing has been described in literature as 'by Holbein', 'School of Holbein' and more recently in the Tate 2006 exhibition catalogue as 'Holbein *and* workshop'.⁴ By making a case for this drawing to be solely by Holbein, the drawing's provenance had to be pieced together, but more importantly its physical and stylistic characteristics had to be investigated and discussed in order to place it within Holbein's oeuvre. Despite the similarity of many of the drawing's physical attributes to firmly attributed works, including the composition of the pink preparation and the paper bearing the same watermark, its attribution to Holbein has still not been fully agreed upon. Such a project not only provided a springboard for further studies but also opened up a multitude of

¹ For a fuller account of the drawing and its related research, see: Lois Oliver et al, 'New evidence towards an attribution to Holbein of a drawing in the Victoria and Albert Museum', The Burlington Magazine, March 2006 Vol. CXLVIII, 168-172

² Dyce 363, Portrait of an Unknown man, Word and Image Department, V&A Study Room

³ George W. Reid, The Dyce Collection Catalogue. London: Eyre, 1874

⁴ Susan Foister, Holbein In England London: Tate Publishing. 2006

questions, many unanswered, surrounding an artist's use of materials and techniques to suit the purpose of portrait drawing.

Hans Holbein the Younger is one of the most discussed artists of the sixteenth century. His life and work has been the subject of hundreds of books and numerous exhibitions and catalogues, with his portraiture courting particular emphasis. However, in comparison to published information on Holbein's painted portraits, there is a lack of technical information regarding the artist's drawing materials and techniques, and many existing studies are concerned with attribution. Authenticity and authorship was not the focus of this research. It was driven more by a desire to be able to understand Holbein's drawing processes, the materials utilised and the rationale behind their use. The 'purpose' of Holbein's drawings became a more important focus and a potentially more answerable question than the more uncertain questions regarding attribution. Whilst there is value, not just monetary, in knowing the creator of a drawing, it can be an unproductive emphasis when it comes to understanding the methods involved in its production and its function.

Initial research led me to question how in turn we 'read' a drawing. In other words, why does a drawing look the way it does and how can we interpret and describe what we see in order to make it better understood? The importance of looking at the primary source material was paramount. Working within the central question "why do the drawings look the way they do", a characterisation of materials and techniques, whilst taking in to account condition and signs of use, enables links to be made between the appearance of the drawings and their probable function.

In order to contextualise Holbein's work as a draftsman, it became equally apparent that it was important to make a comparison with his contemporaries and to widen this comparative circle. A number of portrait drawings were examined in museum collections in order to make comparisons. Many of these were executed in monochrome, with black or red chalk and metalpoint commonly used as the only media. Historically, Holbein's work has been most likened to that of French 16th century artist, Jean Clouet, but this thesis discusses the portrait drawings in the context of others' work, including Albrecht Dürer (1475-1528), Leonard Beck, (1480-1542), Niklaus Manuel Deutsch (c1484-1530) and Wolf Huber (c1485-1553). Although many 16th

century portrait paintings exist, very few portrait drawings survive; this makes Holbein's body of drawn work exceptional and not necessarily easy to compare to existing contemporaneous examples, which are also limited in number. It is not the materials that Holbein utilised that are exceptional, but the way that he combined techniques. Holbein's portrait drawings on paper covered in a pink preparation are unusual and added to this is their use as face patterns, with physical signs of their use still visible on the drawings themselves: a combination of elements not seen commonly on other contemporaneous portrait drawings examined. Holbein's descriptive use of colour, and the often complex sequencing of the media is more intricate than Clouet's and is closer in technique to fellow German artist Wolf Huber; although only one of his coloured chalk drawn portraits survives.⁵ This is considered in more detail in Chapter Three. Similarities of Holbein the Younger and Elder's workshop practices are also discussed: for example, reinforcement of a portrait's contours or salient features with black aqueous media is common to both artists' drawings

The original function of a drawing is not always easily ascertained. For example, a presentation drawing is not necessarily distinguishable from a preparatory drawing. Materials and techniques can result in certain assumptions regarding a drawing's function. This is illustrated by Schütt and Sonnabend's assertion that Wolf Huber's Portrait of a Man Wearing a Fur Lined Coat and Broad Rimmed Hat, 1522, is a 'work in its own right' because it has been 'executed with extreme care and sophistication'.⁶ This conclusion may have been made because there is no painting to which it relates and because it is executed in descriptive colour. However, given the sophistication, colour and levels of completeness of Holbein's portrait drawings, as well as the lack of corresponding painted portraits for some, suggests that the function of Huber's drawing and others like it might need to be revised. Holbein's portrait drawings could function in multiple ways: as a presentation drawing, a preparatory study for a portrait painting, and subsequently used as a face pattern.

⁵ Portrait of a Man Wearing a Fur Lined Coat and Broad Rimmed Hat, 1522, 277 x 215mm, red, black and yellow chalk, aqueous black, white highlights on cream laid paper, Inv.16336, Kupferstichkabinett, Städel Museum, Frankfurt. No sign of transfer.

⁶ Jutta Schütt & Martin Sonnabend, Masterpieces of the Department of Prints and Drawings, Städel Museum. 2008.62

Holbein's choice of drawing medium is in contrast to Albrecht Dürer's material of choice for portrait drawing. In his letters from Antwerp and Venice during the 1520s, Dürer records at least thirty-five portraits in charcoal, which far outweighs the three recorded in black chalk, fourteen in silverpoint and just one in ink. Apart from signifying a preference for charcoal, it was no doubt a practical media for drawing whilst constantly on the move during his travels, and further highlights the uniqueness of Holbein's portrait drawings in the more descriptive medium of coloured chalks. Furthermore, these charcoal drawings functioned differently: there is no evidence to suggest that Dürer's drawings were initially produced to function as face patterns, but more likely as finished sketches, as a means of making some money as he travelled.⁷ The portrait drawings of Leonard Beck, (1480-1542), are closer to the materials of Holbein's portrait drawings and show an early use of coloured chalk and wash as well as the use of aqueous media for salient parts of the face; elements more in keeping with Holbein's technique.⁸

The use of the drawings as face patterns for transfer to the panel for painting is discussed within this thesis, which sets them in the context of their function as preparatory drawings. However, it should also be noted that the interpretation of the relationship between drawing and painting in terms of correlation of lines transferred is not always straightforward, and highlights the complexity in understanding the function and use of the drawings. There are certain aspects that signify the portrait drawings' use for and connection with the related painting. The more obvious signs may be the compositional similarities of the drawing to its painted version, but there are also less readable aspects such as signs of transfer in the form of indentations. It cannot be said with absolute certainty that Holbein traced his own drawings, nor can we be sure that the indented lines that may signify transfer were not made after his death.⁹ However, there is little doubt that the drawings were used as face patterns, demonstrated by the fact that the indented lines can be closely linked to the transfer of

⁷ See Roger Fry, Ed. Dürer, Albrecht. Memoirs of Journeys to Venice and the Low Countries. Trans Rudolf Tombo. London: Dodo Press, 1913.

⁸ See Portrait Bust of a Young Man wearing a cap, c.1500-42, Leonard Beck, UCL Collection, Inv. G.145, for example. A portrait on unprepared paper, but with some blue coloured wash applied around the sitter. Also, Portrait of a Young man in a cap, turned to the right, c.1500-1542, UCL Collection, Inv. G.146, coloured chalks on unprepared paper with some yellow wash in eyes and cloak. No signs of transfer.

⁹ As is the case with those drawings traced over by George Vertue, for a discussion of this see Chapter One.

the drawings to the paintings' underdrawings. For example, certain contours on the drawings with indented lines correspond to those of the underdrawings, and it is reasonable to conclude from this close relationship that the drawings were used for transfer in the creation of the paintings.

Structure of the Thesis

Chapter One, 'A Biography of Hans Holbein the Younger and History of the Portrait Drawings', is divided into three parts. The first part is a brief biography of Holbein, placing him in the context of sixteenth century European art production and in the different geographic locations he worked. The second part examines the history of the drawings with regards to their location, number and ownership in both England and Basel. Although geographically separated, this establishes the connection of the drawings as a body of work for comparison. The third part discusses the history of the housing and storage of the drawings, as well as their condition; these are subjects not previously addressed in Holbein literature. Such a survey relies on repeated access to the drawings for re-examination, and this third section therefore focusses on the Windsor drawings, to which the author had virtually unlimited access. This collection is the largest of Holbein's portrait drawings and the drawings have a more or less shared storage history. Access to archival documentation held at the Royal Library provided further insight into the drawings' mounting, organisation and conservation history.

Chapter Two, 'Literature Review and Methodology', constitutes a review of Holbein-related literature, resulting from a thorough investigation of historic and current material. This section examines the vast amount of Holbein literature, introducing some of the issues regarding Holbein's materials and techniques that warranted clarification or further investigation. The literature review is a summary of how the drawings have been written about and why certain inaccuracies have become embedded within Holbein discourse. It also highlights the need for a re-investigation into the materials and techniques of Holbein's portrait drawings. The literature review also illustrates the bias of literature towards the artist's painted works. The reasoning behind the selected research methodology is explained and sets the structure of the rest of the thesis in context of the chosen 'archaeological' approach to examining the drawings; this is described below. Since visual examination was central to this research, being able to illustrate what I was trying to describe became an important aspect of the final

thesis. The large number of images that accompany this thesis are presented in volume II.

Chapter Three includes an overview of the availability of the materials for drawing in the geographic locations Holbein worked. It also describes Holbein's drawing materials and process, using an archaeological approach by discussing the drawings in terms of the sequence in which they were made, starting with the substrate and working upwards through the drawing media to the signs of transfer on the drawings' surface. Discussion of the materials and techniques includes findings from in-depth examination and some scientific analysis of the drawings. Each of the materials that make up the drawings is discussed in turn, along with the inclusion of some case studies that illustrate Holbein's drawing techniques. The practicalities of capturing likeness and transfer techniques are also explained.

Chapter Four comprises a detailed analysis of the function of the materials and techniques introduced in Chapter Three. The core of this chapter is an examination of how Holbein's choice and use of materials indicates the purpose of the drawings. How the drawings informed the painting process in terms of their possible physical use as face patterns, and their aesthetic use as reference whilst painting is also explored; this includes a discussion on Holbein's use of colour and how information about colour was recorded and transferred from drawing to painting. This chapter tackles some of the more complex issues regarding the drawings' relationship to extant paintings of the same sitter, and also explores the connection between drawings and underdrawings.

Four appendices contribute further to support the research: Appendix One contains information gathered regarding watermarks; Appendix Two discusses reconstruction of the pink preparation; Appendix Three describes the use of Albrecht Dürer's sixteenth century drawing apparatus which, as is discussed in Chapter Two, some authors believed Holbein used; and Appendix Four contains all the other tables referred to within the text, including a data sheet for each of the main corpus drawings.

Employing a comprehensive and systematic visual examination of the drawings has helped to reveal new information on Holbein's methods and materials. In many cases it has clarified the sequence in which the media was laid down and broadened our understanding of Holbein's drawing techniques. It has also sought to re-evaluate and

clarify some of the confusion and inaccuracies in the literature relating to Holbein's choice and use of materials. This is especially so in relation to the drawings' purpose as face patterns and the marks made that signify this aspect. An effective method of studying Holbein's portrait drawings was developed, which can be applied to the examination of other drawings, especially in relation to the signs of use on drawings that illustrate their function as face patterns.

Chapter One: A Biography of Hans Holbein the Younger and History of the Portrait Drawings

1.0 Introduction

This chapter will comprise a brief discussion of what is known of Holbein's life, including the variety of his work, thereby locating him within the artistic practice and material culture of 16th century Europe. It will also discuss the history of the portrait drawings in terms of collections and locations. Leading on from this, findings relating to the history of the drawings' housing, with an emphasis on the drawings' condition, will be discussed. As will be seen in Chapter Two, literature regarding a general history of Holbein's portrait drawings has been covered comprehensively. Such discourse includes speculation about the years in which the drawings 'disappeared' from view as well as what the collection now in Windsor originally constituted, but a summary of their history in this chapter will set them in context of their ownership and resulting display and storage history. How the drawings have been housed, such as in albums or mounts and its impact on the drawings' condition has never really been fully investigated. Furthermore, whilst the condition of the drawings has driven some art historical interpretation, it is this very aspect that is important in building on our understanding of the use of the portrait drawings both during and after Holbein's lifetime. Art historical interpretation of these drawings has not always taken in to account how condition, display and storage of the drawings have not only affected their appearance but the interpretation of their function. This is important because this is where some of the misunderstandings in reading their appearance have entered the literature, especially with regards to Holbein's drawing processes.

1.1 Hans Holbein the Younger: a brief biography

Hans Holbein the Younger's life and work should be seen in the context of a 16th century Europe that was experiencing changes in all areas of life: culturally, spiritually and politically. Commercial expansion of European trade routes opened up possibilities for travel and therefore intellectual and cultural exchanges. These factors inevitably had consequences for the patrons and artists of the time. The Catholic Church was challenged by the Protestant Reformation and altered the balance of power, creating an atmosphere of uncertainty. Holbein was to paint many influential people of the time,

both in Basel and in England. For example, the humanist, Desiderius Erasmus of Rotterdam (1466/69-1536) proved to be a vital connection for Holbein, commissioning his portrait on more than one occasion and instigating Holbein's introduction to England.

Unlike Dürer, Holbein did not leave behind a great opus of theoretical writing. We have little to go on apart from the work itself. Contemporaneous documentation exists in the form of passages in treatises¹, some correspondence² and in particular there is Karel van Mander's *Het Schilder-Boeck: The Lives of the Illustrious Netherlandish and German Painters* of 1604, in which Holbein's biography is included.³ Karel van Mander (1548-1606) is an important personage in his contribution to the Holbein biography. With very little documentary evidence relating to Holbein's life and work, what we do know has been somewhat speculated and embellished. For example, Karel van Mander claimed Basel in 'rocky, desolate Switzerland' and not Augsburg as Holbein's place of birth.⁴ What we do learn from van Mander is that after his death, Holbein's portraiture was still praised and considered of high quality, and he points out his craftsmanship and the vivacity of the paintings.⁵ Not only that, but van Mander is the first biographer to mention Holbein's left handedness, the effects of which on his drawings are often used as a factor in attribution.⁶ We also get some sense of the quantity of portraits that Holbein must have carried out, '... so many in fact that it is astounding that he was able to make during his lifetime such a great deal of neat, precise work'.⁷

Hans Holbein the Younger was born in Augsburg in 1493/94 into artistic parentage. His father, Hans Holbein the Elder (c1465-1524), was an artist and craftsman with a large and successful workshop in Augsburg. This is where Hans and his elder brother, Ambrosius (c1493/94-c1519), are believed to have started their training as

¹ Nicholas Hilliard. *A Treatise Concerning the Arte of Limning. Together with A More Compendious Discourse Concerning Ye Art of Limning* by Edward Norgate. Parallel modernized text edited by R.K.R Thornton and T.G.S Cain. London: Mid Northumberland Arts Group in association with Carcanet New Press. 1981

² Erasmus's letters to Sir Thomas More, Nicolas Bourbon letters etc

³ Karel van Mander. *Het Schilder-Boeck* 1604, trans. as *The Lives of the Illustrious Netherlandish and German Painters*, ed.H. Miedema, 6 vols, Doornspijk 1994-9

⁴ Karel van Mander *Het Schilder-Boeck*, ed.H. Miedema, Fol.220v p141

⁵ Karel van Mander *Het Schilder-Boeck*, ed.H. Miedema, Fol 221v p145

⁶ Karel van Mander, *Het Schilder-Boeck*, ed.H. Miedema, Fol 223v. p153

⁷ Karel van Mander, *Het Schilder-Boeck*, ed.H. Miedema Fol 222r . p146 of trans

draughtsmen, designers and painters, in c.1509.⁸ Hans Holbein the Elder's brother, Sigmund, (Figure 59), also took part in this workshop set up.⁹ Such familial practice was common in 16th century Europe, for example artist Lucas Cranach the Elder (1472-1553) ran a successful business in which his son Lucas Cranach the Younger (1515-1586) worked and continued to do so after his father's death. Holbein's training in his father's workshop would have equipped him with the numerous skills of draughtsman, painter and designer, all typical of 16th century workshop practice. For example, Holbein the Younger would have helped his father with commissions for printers, goldsmiths and stained glass makers as well as working on altarpieces, religious paintings, decorative work and portraiture. Holbein's portraiture, therefore, should not be seen in isolation from his other work; not only in stylistic terms but also because it was not the only thing he produced. Van Mander, confirms such variety of workshop practice when he lists the type of work Holbein undertook, other than that of portraiture:

...not to mention the amount he drew so accurately for goldsmiths, painters, engravers, woodcut-makers, sculptors and others...for he was a man who was able to manage nearly all the techniques and who worked equally masterfully in oil paint, watercolour and gouache.¹⁰

The story of Hans Holbein the Younger is also the story of a 16th century journeyman. By definition, this was an artist who may have been employed by a master craftsman but could charge a fee for each day's work. A journeyman could not employ others but could live apart from the master, unlike an apprentice who usually lived with the master and was employed for a period of several years. The life of a 16th century artist-craftsman, therefore, was not a static one. Holbein, like many fellow artists had to travel to find work. German artist Albrecht Dürer (1471-1528) for example, spent several years travelling, within and without German territories, including Antwerp and Venice.¹¹ Travelling from town to town, journeymen would have gained experience in

⁸ Susan Foister, *Holbein in England*, Tate: London. 2006.161

⁹ German 16th artist, Leonard Beck, 1484-1530, born in Augsburg, also trained in Holbein the Elder's studio.

¹⁰ Karel van Mander, *Het Schilder-Boeck*, ed. H. Miedema, Fol.222v p 149. Van Mander's reference to 'gouache' is a reference to the miniatures.

¹¹ Albrecht Dürer, *Memoirs of Journeys to Venice and the Low Countries*. 1506 and 1520/21. The original edition of this text was translated into English by Dr Rudolf Tombo, in 1913, published by The Merrymount Press, Boston. It has also been republished, unabridged, by Dover Publications, Inc, in 1995.

other workshops. In terms of artistic education, a German artist would have learned their trade through an affiliation with a workshop and as a journeyman. Art academies, whose foundations were already laid in 15th century Italy, were not known in Germany until the 17th century.¹² The countries that are significant in terms of Holbein's working life and subsequently where the majority of his extant work resides are Basel in Switzerland, and Windsor in England. Holbein spent a number of years in both countries, establishing a workshop in Basel and his reputation as painter in the Court of Henry the VIII in England. Travel was a necessary part of his job, making sojourns to capture the likeness of Henry's prospective wives, for example.

Holbein worked in Basel from 1515-1526, taking time to travel outside of the city on numerous occasions. From 1515, he worked alongside his brother, supposedly in the workshop of artist Hans Herbst (1470-1552), where he began to make a name for himself as a portrait painter. In 1516, at the age of 18 Holbein was commissioned to paint his first official portrait of the new mayor Jacob Meyer zum Hasen (1482-1531) and his wife Dorothea Kannengiesser, for which two portrait drawings and a double portrait painting survive, (Figures 1,2 &3). These were to prove important commissions for Holbein and almost ten years later he was to paint another group portrait of Jacob and his wife, immortalised in what is now known as the Darmstadt Madonna painting of 1526-28, (Figure 7). In the year that Martin Luther disseminated his *95 Theses*, a catalyst for the Reformation, it is thought that Holbein worked with his father in Lucerne (1517-19), working on commissions for the merchant and mayor, Jacob von Hertenstein (1460-1527), whose son, Benedict, Hans the Younger painted in 1517, (Figure 52). Whether Holbein actually ever travelled to Italy and the influence of Italian art on Holbein is much debated in the literature.¹³ Although there is no proof that

A digitised version was prepared by John Mamoun, 2000 and is available for non-commercial and academic use.

¹² See Lothar Schmitt, 'Education and Learning among Sixteenth-Century German Artists', 'Hans Holbein: Paintings, Prints and Reception'. Studies in the History of Art. 60. 2001. New Haven: Yale University Press. 73-81.

¹³ For example, see A E Popham, 'Hans Holbein's Italian Contemporaries in England', The Burlington Magazine for Connoisseurs . 84.490.12-15+17. Italian artists were working in England, London during 16th century and Popham speculated that Holbein might have had some contact with them - ie: G da Maiano and Rovezzano. See also Oskar Batschmann, 'Holbein and Italian Art'. Hans Holbein: Painting, Prints and Reception. Studies in History of Art. Yale University Press: 2001.37-53

Holbein travelled to Italy during this time, it is clear that he would have had access to artwork of an Italianate nature, such as prints that might have influenced his work.¹⁴

Back in Basel in 1519, Holbein was admitted to the Painters' Guild and painted the portrait of the lawyer, Bonifacius Amerbach (1495-1562). Amerbach was a fellow humanist and friend of Erasmus' and was a collector of Holbein's art. This collection, later added to by his son, Basilius, makes up the core collection of Holbein material now at the Kunstmuseum in Basel. In 1520 Holbein became a citizen of Basel, working extensively for Basel printers and publishers as an illustrator as well as being elected Chamber-master of the painters' guild. He painted frescoes, panel paintings and designs for stained glass, all of which reflect typical outputs of a 16th century Northern Renaissance artist. Basel was a thriving, commercial city as well as a literary centre for its leading lights of 16th century political thinking such as the humanist scholar Erasmus of Rotterdam (c.1469-1547). Holbein painted several portraits of Erasmus in 1523 and it was these, together with his letter of introduction to his friend, fellow humanist Sir Thomas More (1478-1535), that proved to be Holbein's entrance into the English court. In 1524, Erasmus sent two of these portraits by Holbein to More in England. It seems somewhat paradoxical that Erasmus agreed to have his portrait painted given the animosity humanists directed toward the art of painting.¹⁵ It is from Erasmus's correspondence that we learn that Holbein travelled to France in 1524, the same year in which his father died, hoping for work at the Court of Francis I (1494-1547), given the impending Reformation and the uncertainty it may have brought.¹⁶ This trip is further evidenced from the two drawings of the statues of the Duke and Duchess of Berry (Figures 45 & 46), drawn as if from life, with the addition of coloured chalks, media said by Christian Müller to signify a change in his style.¹⁷

¹⁴ See the Italianate architectural features in Holbein's portrait of Hertenstein for example.

¹⁵ In the *Praise of Folly*, Erasmus speaks of the dangers that painting holds for the believer, contending that a portrait may be a likeness but did not embody the body, soul and mind of that person. Desiderius Erasmus 'Dialogus Ciceronianis' trans and annotated by Betsy L Knott as *The Ciceronian: A Dialogue on the Ideal Latin Style* vol 28 of *Collected Works of Erasmus*, ed. John W O'Malley. Toronto and London:1974-1993. 374-376. (Ref cited on page 142 *Yale Studies in the History of Art*,60. 2001, Jürgen Müller, 'The Eye of the Artist: Hans Holbein's Theory of Art'. 141-153.)

¹⁶ Letter from Erasmus to Willibald Pirckheimer, June 3 1524 in which he mentions Holbein's journey to France. As cited by Christian Müller, *Hans Holbein the Younger: The Basel Years 1515-1532*. Prestel, Munich, Berlin, London, New York. 2006. 316 (Reinhardt 1982, p259f; Allen/Garrod 1906-1958 nos 534, 535)

¹⁷ Müller.2006. 316

In 1526, with two letters of introduction from Erasmus, Holbein travelled to London via Antwerp. His introduction to Sir Thomas More proved useful, with some of his most prominent first visit commissions coming from him. Holbein's talent prompted More to write to Erasmus, stating 'Your painter, my dearest Erasmus is a wonderful artist'.¹⁸ This first stint in England saw him producing more portraiture than ever before, but this would not rival the numbers of his second visit. He was commissioned by various dignitaries from the Court of Henry to paint portraits, including a large group portrait of the More family. Although the painting is lost, the preparatory study for the grouping still survives (Figure 53, Basel Kunstmuseum, Kupferstichkabinett) along with seven individual portrait drawings in the Royal Collection that may have been used for the final painting.¹⁹ Holbein was also part of the large contingent of painters and craftsmen who took part in the elaborate scheme of designing and carrying out the decorative work for the festivities held at Greenwich by Henry VIII to welcome a delegation from France in May 1527. The temporary sumptuousness of it is brought to life by reading the inventories from the Royal household at this time, where invoices list some of the materials that were used.²⁰ The two years spent in England were productive in laying the foundation of his second stay, but during this time his workshop in Basel was still in operation. In order for Holbein to retain his Basel citizenship, he could not be absent from Basel for more than two years at a time. This, and the fact that his wife and children were still in Basel, were perhaps reason enough to need to return there from England in 1528. During the four-year period in Basel, Holbein purchased more property and continued to work as a portrait painter. He made changes to the portraits of the Meyers in the original commission for the Darmstadt Madonna, painted his wife Elsbeth and their children, and completed the frescoes on the south wall of Basel's Great Council Chamber.

Holbein's decision to return to England again in 1532 no doubt owed something to the ramifications of Reformist changes and iconoclasm in Basel, which had affected artistic

¹⁸ Oskar Bätschmann & Pascal Griener, Hans Holbein. Reaktion Books. 2008.160, citing letter of 18 December 1526.

¹⁹ There are also paintings after the group portrait, such as Rowland Lockey's miniature version in the V&A Museum, London, c.1593/94, watercolour on vellum and card, 242 x 291mm, Inv. no: P.15-1573; see also S. Morison and N. Barker, The Likeness of Thomas More, London. 1963. 18-19

²⁰ See <http://www.british-history.ac.uk/> (British History Online), for transcripts of Letters and Papers, Foreign and Domestic, Henry VIII Vol.4 1524-1530; see also Susan Foister. 'Holbein's Paintings on Canvas: The Greenwich Festivities of 1527'. 109-123, 'Hans Holbein: Paintings, Prints and Reception'. Studies in the History of Art. 60. 2001. New Haven: Yale University Press.

production to a far greater degree to what had occurred in England. Despite the atmosphere of xenophobia, artistic circles in 16th century London included many fellow foreign artists such as illuminators, embroiderers, joiners, glaziers and goldsmiths. Depending on their craft, they seemed to emanate from particular regions of Europe.²¹ The population of London by foreign artists in the 16th century must have been an added attraction for Holbein, but as a foreigner, the guild regulations were stringent and there were many rivalries and much competition. The Basel Council were obviously keen for him to return as they twice tried to lure him back to the city with an offer of an annual salary, reflecting Holbein's sought after talents. In 1538 they raised that offer and reminded him that if he did not return he would lose his citizenship.²²

Holbein's position as a foreign artist in the court of Henry VIII is intriguing and more so because of how little we know about such artists' working practices. Although an exploration of trade and use of materials can shed some light on workshop and artistic practices during this period, we have little sense of how Holbein, or indeed any Tudor artist in England would have worked during the early 16th century. With Royal accounts of the 1530s incomplete it is hard to pinpoint the exact date of Holbein's entrance into Henry VIII's service. He was first recorded as one of the King's painters in a letter written by poet Nicolas Bourbon in c1535/36, so it is assumed that he became one of the King's painters prior to this. The royal accounts of 1537 mark the first official documentation relating to his position in court. With an annual salary of £30 as painter to the King, this fee would not just have included portraits, but also designs for goldsmiths and jewellery, for example. This fee was not substantial: Flemish miniaturist Lucas Horenbout (Hornebolte) (c1490/95-1544), for example was paid £33 6s.²³ Horenbout became a denizen in 1534 and this may account for his higher status as well as the fact he could legitimately run a workshop, employing four foreign assistants.²⁴

²¹ Sophie Cassagnes-Brouquet, Université de Toulouse le Mirail, Making Art in Tudor Britain workshop attended by the author. See: Abstracts from Academic Workshops (2007-8) □ Funded by the Arts and Humanities Research Council: <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/workshops.php> (current as of September 2012)

²² Oskar Bätschmann, Oskar & Pascal Griener, *Hans Holbein*. Reaktion Books. 2008.11

²³ T Kren & S McKendrick (eds), *Illuminating the Renaissance - The Triumph of Flemish Manuscript Painting in Europe*. Getty Museum/Royal Academy of Arts: 2003.434.

²⁴ See Susan Foister, 'The Production and Reproduction of Holbein's Portraits'. *Dynasties: Painting in Tudor and Jacobean England 1530-1630*. Ed Karen Hearn, Rizzoli International Publications: New York. 1996. 21. This essay discusses how contemporary copies can shed light on workshop practice.

Holbein only became a denizen in 1541.²⁵ Not being a denizen prior to this would have been significant, as non-denizen artists were prohibited from establishing a workshop and employing assistants. Despite no documentary evidence of a Holbein workshop in England, with works on a large scale in terms of size and commissions, it seems unlikely that Holbein would not have had some assistance at stages in production of his artwork. Further, as Susan Foister has suggested, being an employee of the King may have provided some form of protection so that he could avoid the potential legal wrangles.²⁶ Despite this employment, Holbein would have had to supplement his income with private commissions.

Although the exact date of Holbein's death has not been confirmed, he is believed to have died in London in 1543.²⁷ Holbein's legacy included drawings, paintings, and miniatures, which provide us with the source material for an investigation into Holbein's working practice, and into 16th century artistic practice in general.

1.2 Holbein's portrait drawings: a brief history of their collection and location

Historian Ralph Wornum described Hans Holbein the Younger has been described as a 'highly perfected drawing machine'.²⁸ Although this was said in reference to his skills rather than his output, his portraiture drawing does survive in unprecedented numbers for a 16th century Northern Renaissance artist in England or Germany. What is more, they have survived in the main as part of a large group. The original context of the collections of Holbein's portrait drawings generally link back to the collection of the artist himself, which indicates they held significant value for him. Prior to the 16th century, drawing as a genre was not established to the extent that it was a prime independent and commercial medium. It was, in general, a preparatory process towards a finished piece such as a painting or sculpture. Therefore, relatively few

²⁵ Susan Foister, *Holbein & England*. Yale University Press. 2004.11 & 263

²⁶ Susan Foister.1996.21-22

²⁷ Ralph Wornum, *Some Account of the Life and Works of Hans Holbein, Painter of Augsburg*. Chapman & Hall:London 1867.366-367

²⁸ Tristan Klingsor, Hans Holbein 1497-1543. Collections des Maitres. Paris: Braun.1951, as cited by Erika Michael in *Hans Holbein the Younger: A Guide to Research*. New York and London: Garland Publishing Inc. 1997. 285.25/26

survive, which has an impact on our interpretation of them.²⁹ Clarification of the number of Holbein portrait drawings, paintings and miniatures, and particularly those drawings that relate to a finished painting or miniature is crucial on a number of counts, especially in terms of the function of the drawings. Where and how the drawings are grouped can offer valuable information about the history of how they were used, collected and whether they were once part of Holbein's body of work. Making sense of all these art works, especially when they can be linked, is a complex business but it is essential if the function of his portrait drawings is to be further established and better understood.

Basel and England are the main areas in which Holbein worked and where much of his extant work can be found. This geographic distinction is usually how his work is separated and discussed within Holbein literature. This separation has meant that we do not consider the drawings in groups or think about the fact that most of the portrait drawings were once kept as a group in Holbein's ownership. It is also often neglected that in some cases, the portrait drawings would have been created in pairs. For instance, the 1527 portrait drawing of Lady Mary Guildford, 1527, at the Basel Kunstmuseum is now separated from that of her husband, Sir Henry Guildford, 1527, in the Royal Collection, Windsor, (Figures 12 & 14). This separation in itself makes us consider these drawings differently and singularly when it is more useful to consider them together. In this way we can compare and contrast materials and techniques and how one may relate to the other as pendant portraits. Furthermore, a separation of the preparatory portrait drawing from the finished painting further limits the possibilities of comparison and understanding of their function. The history and ownership of Holbein's English period portrait drawings have been well documented.³⁰ The story of the Basel collection of Holbein drawings of all types of genre has also been documented and is of equal importance in piecing together the history of his drawings in terms of

²⁹ Maryan Ainsworth, 'Northern Renaissance Drawings and Underdrawings: A Proposed Method of Study'. Master Drawings 127.1.5 Spring 1989, in which she links dearth of Northern Renaissance drawings to lack of understanding and information about their purpose and further, their authorship.

³⁰ Karl Parker and later Susan Foister in particular have followed and recorded the complex documentary evidence of the history of the Windsor drawings and how and why they came to be there. See Karl Parker.1945 & Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes, & also Susan Foister, Holbein and England. Yale University Press: New Haven & London. 2004.

collectors.³¹ A brief summary is warranted here so as to highlight the number and location of Holbein's portrait drawings.

Omitting the marginal drawings for Erasmus of Rotterdam's *In Praise of Folly*, around 400 Holbein drawings survive. Just under a third of these drawings date to Holbein's years in Basel 1515-32, with the remaining drawings the result of his English periods. This number becomes significant in relation to his portraiture output. There are 103 portrait drawings currently attributed to Holbein. Of the eighty-five drawings at Windsor that were part of Holbein's 'great Booke', five are thought to be by another hand.³² One of those five drawings is a copy of the portrait drawing of Sir Thomas Wyatt, (Figures 73 - original and 74 - copy) and, according to Parker, appears to be a contemporaneous copy.³³ A comparison of these two drawings is made in Chapter Three. George Vertue referred to the Wyatt copy and a number of other duplicates in the collection, as well as copies in the collection of a Lady Elizabeth Germain, none of which are identifiable today.³⁴ Of the twenty-three portrait drawings outside of the collection at Windsor, ten are located in the collection at Basel, in the Kupferstichkabinett of the Kunstmuseum. The remaining thirteen are scattered amongst collections worldwide. Considered together, this brings the total number of widely accepted autograph portrait drawings to 103. It should be pointed out that of the 103 portrait drawings, three are drawn after sculptures and not after the life of a sitter and may partly explain why there is no painting of these persons from this format.³⁵

All but 14 of the Windsor Holbein drawings are inscribed with the sitter's name, although it is not known how accurate these identities are. Although not contemporaneously inscribed, according to historical literature, these names were

³¹ See Paul Ganz, *Die Handzeichnungen Hans Holbeins d.J.: Kritischer Katalog*. Berlin, 1937 & Ganz *Handzeichnungen Hans Holbein des Jüngeren in Auswahl*, Basel 1943, and Christian Müller, *Hans Holbein the Younger: The Basel Years 1515-1532*. Prestel, Munich, Berlin, London, New York. 2006.

³² There are 85 portrait drawings in the Windsor Holbein catalogue compiled by K.T Parker, 1945, 5 of which Parker has catalogued as not being by Holbein: these are Royal Library numbers: RL12251; RL12213; RL12261; RL12235; RL12202

³³ See Parker.1945.54, catalogue entry: "This is an old, close and very skilful copy of the preceding, the only case in the Windsor series of an original and copy having been preserved together." There are a number or copies of drawings outside of the Royal Collection: see the portrait of Bishop John Fisher at the British Museum, for example.

³⁴ See Susan Foister, *Windsor Drawing catalogue*, 1983.7-8

³⁵ Jeanne de Boulogne, Duchess of Berry, 1523-24 Kunstmuseum, Basel Inv.1662.126; Jean de France, Duke of Berry, 1523-24 Kunstmuseum Basel, Inv. 1662.125 and John Colet, Parker 59 Royal Collection, Royal Library, Windsor, RL 12199.

copied from Sir John Cheke's notes from the Great Book.³⁶ Sir John Cheke (1515-1557), a tutor of Edward VI's, was a contemporary of Holbein's. The majority of the inscriptions are in crimson and gold, but some are in ink only and not all the inscriptions are by the same hand, implying that some of them were done at different times over the years. None of the drawings taken by Holbein to Basel have an inscribed name. None of Holbein's drawings bear a date, which makes the precise dating of the drawings problematic.³⁷ For those known sitters, whose biography is documented, a relatively good estimate can be given in relation to the age of the sitter. Dating of a drawing is obviously more accurate when relating to a dated painting of a sitter or through contemporary documentation. Or, for example, the date of the drawing of Nicholas Bourbon (Parker 37, RL12192, 309 x 260mm, The Royal Collection, Windsor) is determined by the date of a woodcut after Holbein, dated 1535. Further, the status of the sitter and/or the date can be supported by their style of clothing.³⁸ For all other drawings, the dating can be somewhat arbitrary. Parker's catalogue arranges them roughly in order of earliest to latest execution whilst in England, according to his knowledge of the sitters as well as the shade of the preparation, without actually allocating specific dates unless certain of them in the catalogue entries. The Royal Collection Online cataloguing has cast a wider date margin on those drawings on prepared papers. For example, for many of these drawings where there is no certainty of dating but are known to be from Holbein's second period in England, the dating is bracketed from 1532-1543.

Of the eighty drawings at Windsor, twelve are from Holbein's first visit to England. Four drawings from this first visit are now in the Kunstmuseum, Basel. There are seventy-two drawings where neither a painting nor miniature of the same sitter exists. There are fifty-nine portrait paintings and ten miniatures that are attributed to Holbein. Currently, therefore, there are just seventeen drawings that relate to thirteen accepted

³⁶ See K T Parker. The Drawings of Hans Holbein in the Collection of His Majesty the King at Windsor Castle. Oxford and London: Phaidon Press.1945.10, in which he quotes from the 1590 Lumley catalogue, and see, R. N Wornum, Some Account of the Life and Works of Hans Holbein, Painter of Augsburg. London: Chapman and Hall, 1867.247 & 397; and Jane Roberts, Drawings by Holbein from the Court of Henry VIII: 50 Drawings from the Collection of Her Majesty Queen Elizabeth II, Windsor Castle. Museum of Fine Arts Boston: 1987.21

³⁷ The nearest we get to a date on a drawing is the age of the sitter, Richard Southwell, written in black chalk across the drawing: '..NNO...ETTATIS SVA...33'.

³⁸ See for example Susan Foister's catalogue entry for Portrait of a Man c.1532-5, Holbein in England. London: Tate Publishing. 2006.59

autograph oil paintings and one miniature painting, (Table 1, Appendix Four). These embrace Holbein's earliest and last known portrait drawings and comprise the main study of this research. There are a number of drawings that historians have concluded were used to create the painting, in terms of transfer to panel, but that Holbein did not execute the paintings themselves.³⁹ One of these, portrait of an Unknown Gentleman (Parker 33, RL12259, The Royal Collection, Windsor, Figure 20) of 1535, is also included in this study as its connection via transfer to the painting may reveal more interesting facts relating to the use of Holbein's drawings and workshop practice.⁴⁰ This is discussed in Chapter Four. There are two drawings of Sir Thomas More (Parker 2, RL12225, Figure 38 and Parker 3, RL12268, Figure 8), which are quite different in execution and style, but so similar in composition that one clearly is based on the other.⁴¹ These drawings are discussed at greater length in Chapter Four.

Most of Holbein's drawings from his Basel period still reside in that city. The history of Holbein's Basel drawings are connected to the collection of the Basel lawyer, Basilius Amerbach (1533-1591), who began collecting in the late 1560s, primarily from estates of artists in Basel. Gleaning evidence from his inventories, it is thought that in the 1570s Amerbach probably acquired a large number of Holbein drawings over a brief period from a small number of sources.⁴² Curator and Holbein specialist, Christian Müller believes that it is possible that Holbein's workshop had access to these drawings and continued to work with them until they ended up being dispersed after his death in 1543.⁴³ These drawings are thought to be workshop drawings since amongst them were drawings by Hans Holbein the Elder as well as his brother, Ambrosius, including a wide variety of workshop pieces and copies.

The collection of the humanist Bonifacius Amerbach and his son Basilius now forms the core of Holbein's holdings of the Amerbach-Kabinett, housed in the

³⁹ Maryan Ainsworth, "'Paternes for phiosioneamyas': Holbein's portraiture reconsidered'. The Burlington Magazine. 132.1044. March 1990. 173-186.

⁴⁰ There are a number of other paintings not attributed to Holbein but which the drawings may have played a part, for example: the Portrait of Lady Rich at the Metropolitan Museum of Art, New York (Acc.no: 14.40.646). See also Susan Foister, Holbein & England.69-71.

⁴¹ Parker thought that Sir Thomas More, RL12225, Parker 2, was not by Holbein for reasons of style and lack of quality. See Parker.1945.36

⁴² Paul Ganz and E. Major, Die Entstehung des Amerbach'schen Kunstkabinetts und die Amerbach'schen Inventare. Basel: Emil Birkhäuser, 1907. Inventory D of the Amerbach Kabinett, Basilius Amerbach compiled 1585-87

⁴³ Christian Müller.2006.33

Kupferstichkabinett in the Basel Kunstmuseum.⁴⁴ Parker distinguishes between the two collections in England and Switzerland, highlighting that the Basel collection was 'due to an insatiable urge for collecting on the part of a contemporary admirer', whereas 'the Windsor contingent, or at least the bulk of it, was a natural and self-informed unit, being simply a part of that gradual accumulation of working material which piles up in every artist's studio, though seldom remains so undisturbed and undispersed'.⁴⁵

The collection in Basel constitutes more than just Holbein's portrait drawings. The Amerbach estate contained no fewer than 15 of Holbein's paintings, 104 drawings, a sketchbook, Erasmus's illustrated copy of *In Praise of Folly*⁴⁶, 111 woodcuts, the *Icones* and the *Images of Death*. Included in the 104 drawings are the ten portrait drawings mentioned above. We can assume that the drawings from his first stay in England, now located in Basel, of Lady Mary Guildford, (Figure 14), Nicholas Carew, (Figure 40), and drawings of an English Nobleman, (Figure 43), and an English Noblewoman, (Figure 44), all thought to date from his first visit to England (c.1527), were taken to Basel on his return there in 1528. From this, we can conclude that these drawings were kept by the artist as part of his working material and not for the retention of the sitters, further reinforcing their function as preparatory, working drawings or as presentation drawings to show future clients.⁴⁷

Between 1515 and 1526, whilst living and working in Basel, Holbein produced a number of portraits. Six portrait drawings and eight portrait paintings survive from this period.⁴⁸ Of these drawings, five relate to two paintings. These are the two drawings for the double portrait of Basel's mayor Jacob Meyer zum Hasen and his wife Dorothea Kannengiesser, (both in the Basel Kunstmuseum, Kupferstichkabinett, Figures 1 and 2) dated 1516, and the three drawings of 1525/26, again of Jacob and his

⁴⁴ 1661 Basel city council purchase Holbein's collection, a catalyst for the creation of the Kunstmuseum, Basel making it one of the first public museums in the world. For more information on the history of the collection, see Nicholas Meier, 'Scholarship, Creativity and Good Fortune: On the History of the Kupferstichkabinett of the Öffentliche Kunstsammlung Basel', in *From Dürer to Gobeir*, 101 Master Drawings from the Kupferstichkabinett of the Kunstmuseum Basel. Ed. Christian Müller, Hirmer Verlag: Basel. 2009.

⁴⁵ K. T. Parker. *The Drawings of Hans Holbein in the Collection of His Majesty the King at Windsor Castle*. (Oxford and London: Phaidon Press, 1945) 8

⁴⁶ *In Praise of Folly*, an essay written by Desiderius Erasmus in 1509, published in 1511. A copy of which was illustrated with marginalia by Holbein, 1515.

⁴⁷ Christian Müller, Hans Holbein the Younger: The Basel Years 1515-1532. Prestel: Munich, Berlin, London, New York. 2006. 384

⁴⁸ Three of these portraits were of Erasmus.

wife along with their daughter, Anna, for The Darmstadt Madonna. There are, no doubt, many lost works: van Mander's biography of Holbein is not only a source of information regarding what Holbein painted, but it is also useful in terms of what does and does not still survive, who may have owned what painting and in some cases, descriptions of those works no longer extant.⁴⁹

A series of drawings of sitters who were connected to the Court of Henry VIII, executed by Hans Holbein during his two periods of stay in England from 1526-28 and 1532-43, the majority of which are now housed in the Royal Library at Windsor Castle, were at some stage bound into an album, often referred to as the 'Great Booke'. The changing ownership of this album on the death of Holbein in c.1543, illustrates that they passed through various noble hands and in and out of the Royal Collection. (See flow diagram mapping change in the ownership of the Great Booke, below):

Hans Holbein (d.1543) → Edward VI (d.1553) → 12th Earl of Arundel (d.1580) → Lord Lumley (d.1609) → Henry, Prince of Wales → 1612 Prince Charles, (later King Charles I) → Philip, 4th Earl of Pembroke (d.1649/50) → Thomas Howard, 14th Earl of Arundel (d.1646) → c.1675 the series of drawings re entered the Royal Collection → 1690 last recorded as being seen and then temporarily out of literature until rediscovery in bureau at Kensington Palace in 1728 → drawing album disbound (and framed at Richmond) → 1737 back to Kensington Palace → drawings now at Windsor, Royal Library

The account of engraver and antiquary George Vertue (1684-1756) indicates that Queen Caroline 'discovered' the group of portrait drawings within an album in a bureau in Kensington Palace, 1728. The 'wanderings' of what came to be called 'the great Booke' prompted Parker to liken its history to a 'veritable Odyssey'.⁵⁰ After Holbein's death in c.1543 until 1550, the whereabouts of the drawings is unknown. There seems to be little disagreement that the great Booke was in Crown property under the rule of Edward VI (1547-53). An inventory dated 1590 listing the possessions of John, 1st Baron Lumley, included:

⁴⁹ Karel van Mander. Karel van Mander, Het Schilder-Boeck, ed.H. Miedema, Fol222v/Fol223r. p 149-150

⁵⁰ Parker.1945.7. Parker also notes on this page that the book of drawings by Leonardo along with many other treasures were also discovered at this time

a great Booke of pictures done by Haunce Holbyn of certyne Lordes, Ladyes, gentlemen and gentlewomen of Henry 8: his tyme, their names subscribed by Sr John Cheke Secretary to King Edward the 6 wch booke was King Edward 6.⁵¹

Lumley had had the drawings in his ownership since 1580, inheriting them from his father in law, Henry FitzAlan, Earl of Arundel. It is not known how FitzAlan came to have the drawings but as the Lord Chamberlain in the Court of Edward VI, he may have been given them as a gift or purchase after the King's death in 1553. Lumley died in 1609 when the drawings again passed back in to the Royal collection. Around 1627-28, Charles I exchanged the book of Holbein drawings with Philip, 4th Earl of Pembroke, for Raphael's painting of St George and the Dragon, now in the National Gallery of Art, Washington. The portrait drawing of George Neville, 3rd Baron Bergavenny, removed from the group and retained by the Earl of Pembroke after he acquired the book in around 1627/28 and before he passed the rest of the collection to the 14th Earl of Arundel, is still at Wilton House, in Pembroke's possession. By 1675, most of the drawings appear to have been returned to the Crown collection, disappearing again until Queen's Caroline's 'discovery'.

With gaps in the album's provenance and various bindings and re-bindings, there would no doubt have been opportunities for individual sheets to leave the main group of drawings as they passed in and out of the Royal Collection. In terms of original contents, Foister has noted seven drawings that are now in various collections that appear to have come from the album, listed here⁵²:

1. George Neville, Wilton House, Wiltshire
2. A lady called Anne Boleyn, British Museum, London
3. Charles de Solier, Sieur de Morette, SKD Museum, Dresden
4. Portrait of a Scholar or Cleric, J Paul Getty Museum
5. Unknown English Woman, British Museum, London
6. Unidentified Gentleman, Kupferstichkabinett, Berlin

⁵¹ Parker.1945.10

⁵² S Foister, Drawings by Holbein from the Royal Library Windsor Castle, London 1983.4-12.

7. Thomas Wriothesley, Earl of Southampton, Louvre, Paris

A Lady Called Anne Boleyn, (The British Museum, Inv.no.1975, 0621.22) and Charles de Solier, Sieur de Morette, 1534/35, (Staaliche Kunstsammlungen, Kupferstichkabinett, Dresden, Inv.no: C1977-156), passed to Arundel along with the main group, as they are recorded in etchings by Hollar as being in his collection. But they did not re enter the crown collection with the others and by the early 18th century were owned by Jonathan Richardson the Elder. In his 1743 catalogue, George Vertue recorded three drawings in the Royal Collection that are no longer there.⁵³ These must have been removed before 1774 as they are not listed in Musgrave's inventory of that date.⁵⁴ Physical evidence of these drawings now outside of the album seem to support the assumption they were once part of it: the materials and techniques, the pink prepared paper, their physical size, in some cases the central folds and some truncated corners are all features in common with a number of those in the Royal Collection from Holbein's second visit. Such 'movement' of these drawings supports Foister's caution in assuming that the group of drawings now at Windsor have always been a defined group and that there may have been more additions and subtractions than have been accounted for.⁵⁵

1.3 Holbein's portrait drawings: history of their housing, including condition and conservation

1.3.1 Introduction

In order to establish the setting for 'reading' Holbein's portrait drawings, this section will concentrate on the history of the drawings in terms of their condition and how their changing housing and treatment may have affected the way they appear today; these are all contributory factors to how the drawings have been interpreted. The collection of drawings in general and the housing of them in albums is a fascinating topic and when

⁵³ An "unidentified gentleman", a head apparently dated 1531, neither of which have since been identified, and a drawing by an unknown artist of the Earl of Surrey (now at the Pierpont Morgan library). G Vertue: A Catalogue of the Collection of Pictures etc., belonging to King James the Second, to which is added a Catalogue of Pictures and Drawings in the Closet of the Late Queen Caroline, London 1758.

⁵⁴ London, British Library MS ADD.6391, fols.124r-125r, as cited in 'New Evidence Towards an Attribution to Holbein of a Drawing in the Victoria and Albert Museum'. Lois Oliver, with Button, Victoria Button, Alan Derbyshire, Nick Frayling & Rob Withnall, The Burlington Magazine, March 2006. 148.1236.168

⁵⁵ Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983.12

still intact these albums can tell us much about historic bindings, how the contents were secured, the taste of the collector and the nature of collections in general.⁵⁶ However, if left undocumented, a disturbing amount of information can be lost from breaking up albums and dispersing their contents.⁵⁷

The fact that Holbein's collection of portrait drawings was first noted as being part of a 'great Booke', would suggest that they were originally housed in an album.⁵⁸ Nothing is really known about this album and consequently, no one has ever really questioned its appearance, size or how such an array of drawings may have been secured: if indeed they were. It is impossible to say if this was how the drawings were housed during Holbein's lifetime or if it was carried out after his death. However, on a purely practical level, binding the drawings within a volume would make them less accessible if they were to be used again within a workshop situation. Furthermore, the fact that Holbein took some portrait drawings that were executed in England in 1527 with him to Basel on his return there in 1528 could, perhaps, indicate that at this stage, they were loose.⁵⁹ The drawings, in fact, could have remained loose, stored between covers of an album or in a portfolio format.⁶⁰

1.3.2 Holbein's portrait drawings: history of their housing and mounting

We can only speculate what any of Holbein's albums of portrait drawings would have originally looked like.⁶¹ Alluded to as the 'great Booke', did this, perhaps, reflect its size or the significance of its contents? The diversity of sizes of Holbein's portrait drawings

⁵⁶ See: Collecting Prints and Drawings in Europe c.1539-1750. Eds. Christopher Baker, Caroline Elam and Genevieve Warwick. Ashgate: London. 2003

⁵⁷ See Peter Bower, 'Information Loss and Image Distortion Resulting from the Handling, Storage and Treatment of Sketchbooks and Drawings'. The Institute of Paper Conservation, Manchester Conference post prints 1992. 61-66. Also of interest in same volume is Carlo James' paper: 'Old Master Prints and Drawings - An Art Historical Survey of Collection and of Preservation Methods'. 86-90.

⁵⁸ As noted in the 1590 inventory of the possessions of Lord Lumley, cited in Jane Roberts. 1993. 20

⁵⁹ Portrait drawings of Nicholas Carew, Lady Mary Guildford, English Nobleman and Noblewoman are part of the collection in the Kupferstichkabinett, Kunstmuseum, Basel

⁶⁰ Cennini mentions the support whilst drawing that doubled as housing and transportation folder for drawings: "Make a satchel of of sheets of paper glued together, or of light wood, square shaped, large enough to hold a foglio reale....and also to serve for a desk to draw on.", Cennino Cennini The Craftsman's Handbook. Trans. Daniel V Thompson. Dover Publications: New York. 1954. 16. Drawings have been documented as having been stored loose in chests or boxes - see Susie Nash, Northern Renaissance Art. Oxford University Press. 2008. 168

⁶¹ See <http://www.british-history.ac.uk/report.aspx?compid=22177#n4>, for further information on bindings, listing: William Page, Ed. A History of the County of Middlesex: Vol 2: General; Ashford, East Bedford with Hatton, Fletham, Hampton and Hampton Wick, Hanworth, Laleham, Littleton. 1922. 201-203.

raises questions about the size, format, structure and therefore the contents of the Great Booke. The changing ownership of the drawings, discussed above, would have impacted on how the drawings were housed and displayed, reflecting the individual tastes of the drawings' owners. For example, on the alleged rediscovery of the Great Booke in 1728, Queen Caroline had a number of the drawings framed, which would imply a dis-binding of any album the drawings may have been in at the time.⁶² In relation to Holbein's drawings being housed in album format, we must also take into account not just the Great Booke, if indeed that was an album, but also at least two re-bindings of the Windsor portrait drawings alluded to in historical literature. These re-bindings during the late 18th century or early 19th century could also have affected the condition and appearance, including the size, of the drawings. According to historian Ralph Wornum, writing in 1867, some time after being unframed in the late 18th century the drawings were placed into two volumes: one containing portraits of the male sitters, the other female.⁶³ In his 1945 catalogue of the Windsor drawings, Parker mentions another re-binding of the drawings in what he considers a 'more intelligent arrangement' with a reordering of the drawings without a division of the sexes.⁶⁴

If Holbein's portrait drawings were kept in albums at various stages of Royal ownership, then these would have been one of many hundreds of albums that once housed drawings in the Royal Collection. The large collection of Leonardo da Vinci drawings, numbering some 600, the binding for which still survives, is one such example, (Figure 81).⁶⁵ Known as the *Leoni Album* after its collector, Pompeo Leoni (c1533-1608), it was documented as being at Whitehall Palace in 1690 in album format.⁶⁶ The binding, measuring 470 x 330 x 65mm, contained the drawings pasted on to 234 leaves. The drawings were not all removed at once, since in 1883 the album still contained 19 drawings on 17 folios.⁶⁷ Whilst the *Leoni Album* is not necessarily what Holbein's album would have looked like, it does give us some idea of the housing possibilities of early drawing collections. The *Leoni Album* contained drawings that had

⁶² Horace Walpole, *Anecdotes of Painting*. Ed. Dalloway & Wornum 1862, Vol.1 p85, note 5.

⁶³ Ralph Wornum, *Some Account of the Life and Works of Hans Holbein, Painter of Augsburg*. Chapman and Hall: London. 1867.401-413

⁶⁴ Karl Parker, *Holbein's Drawings at Windsor Castle*. 1945.20

⁶⁵ With thanks to Martin Clayton and Alan Donnithorne

⁶⁶ See A.H Scott-Elliott, 'The Pompeo Leoni Volume of Leonard drawings at Windsor'. *The Burlington Magazine*. January 1956. 98.364.11-14 +17

⁶⁷ A.H Scott-Elliott. 1956.11

been pasted on to leaves either around the edges or inlaying them into the pages, (Figure 81.1).⁶⁸ The larger drawings were folded.⁶⁹

Holbein's portrait drawings that are thought to have been part of the Great Booke include those executed on unprepared papers and pink prepared papers, encompassing both stints in England. Of the drawings that still remain in the Windsor collection, the tallest portrait drawing on unprepared paper, an Unknown Lady, 1527, Parker 11, measures 405 x 292mm.⁷⁰ The tallest on pink prepared paper is the portrait of Jane Seymour, c1536/37, Parker 39, measuring 500 x 285mm. The smallest portrait drawing, also on pink prepared paper, measuring 242 x 209mm, is the portrait of Sir Thomas Strange, Parker 43. The widest drawing is that of William Warham, 1527, measuring 401 x 310mm. This range of sizes and all the nuances in between give us some idea of the diversity of sheet sizes that would have to be accommodated in such a volume. As with a number of the Leonardo drawings in the *Leoni Album*, some Holbein portrait drawings (around 24, including those outside of the Royal Collection) show signs of having been folded and this could have been to make sure they fitted into an album or portfolio of a certain size. However, 16th century bindings could be large. For example, an Italian 16th century gradual in the Robert Garratt Collection (call no. Garrett MS45) measures 670 x 480mm and such a size could have accommodated the drawings without being folded. Fold marks could also indicate that the paper was folded after manufacture prior to selling or that the drawings were folded for transportation. For example, the portrait drawings of both Lady Mary Guildford, 1527, (Basel Kunstmuseum, Kupferstichkabinett, Figure 14) and Nicholas Carew, (1527), both of which were drawn in England on unprepared paper, were taken to Basel by Holbein during his time there in 1528-32.

The position of most fold marks on the drawings, which do not always avoid the facial area, is nearly always horizontal and roughly half way down the sheet. An exception to this is the portrait drawing of William Warham 1527, executed on unprepared paper,

⁶⁸ Written communication with Alan Donnithorne. For more information on the Leoni Album see Clark & Pedretti, Royal Library Leonardo catalogue. 1968/9; and A H Scott-Elliott, 1956.12. Indications of an inlay included residues of adhesive and apertures cut from the support pages.

⁶⁹ A.H Scott-Elliott. 1956.11

⁷⁰ The largest drawing on unprepared paper is the portrait of Lady Mary Guildford, 552 x 385mm. But this drawing is now in Basel and most likely taken there when Holbein returned in 1528, which means it may never have been part of the album. This drawing also has a fold but this could have been done to make transportation easier.

which shows signs of having been folded both vertically and horizontally. Re-folding this drawing along each fold would leave only his face visible, and from this it could be speculated that it was folded as such for framing. Drawings with folds that were known to have been part of the Great Booke range from 281mm in height to 500mm and there are many of sizes ranging in between these that do not have folds. Folding these drawings in half would not necessarily have made them all of similar size, which would suggest that there was no deliberate attempt to fit them in to something of generic format. Something important to consider is that it is not always clear if the paper had been folded prior to drawing. It would not be unusual, for instance, for paper to have been folded following manufacture. The portrait drawing of Sir John Gage, c.1532-43 (Parker 78, 393 x 290mm) has an accumulation of pink preparation along the fold that would seem to suggest that the preparation was applied after the fold had been made.

From the 16th century until the early 1900s many of the drawings in the Royal Collection, now numbering over 40,000, were removed from the usual method of housing in albums. During this time, they were mounted, pasted down, de-backed and re-mounted on numerous occasions. Holbein's portrait drawings would have been caught up in some of these re-housing campaigns. Alan Donnithorne, current Head of Paper Conservation at the Royal Collection, has documented what is known of the collection's mounting practice spanning a period of 250 years and comments that there is little evidence from the early period to get a clear picture of mounting prior to the 1760s.⁷¹ Information relating to the history of housing and storage of Holbein's portrait drawings in Basel is also sparse.⁷² The reasons for various mounting changes over the centuries are a result of changes of taste as well as reinterpretation and classification of

⁷¹ I am indebted to Alan Donnithorne for his thoughts and breadth of knowledge on the mounting of the Holbein portraits. See also Donnithorne's paper: 'The Royal Mount: 250 years of mounting practice in the British Royal Collection' in Art on Paper: Mounting and Housing. Ed. Judith Rayner, Joanna M Kosek, Birthe Christensen. Archetype Publications: London 2005. 3-12. For the history of the care and display of the Royal Collection see: Sir John W Fortescue, Author and Curator. Edinburgh & London: Wm Blackwood and Sons Ltd.1933, especially 108-111 & 194 -203, discussing mounting campaigns and J Marsden, Royal Treasures: A Golden Jubilee Celebration ed Jane Roberts. Royal Collection Enterprises Ltd. 2002 that contains information on display care and conservation of the Royal Collection.

⁷² Verbal and written communication with paper conservator at the Kunstmuseum, Basel, Chantal Schwendener relates that in the 18th century, the drawings were also pasted down on to blue secondary backboards, not necessarily with a window mount. All the drawings were detached from these boards in the 1990s. The portrait drawings from Holbein's English period are now inlaid in to secondary paper sheets and window mounted. The early portrait drawings of Jacob Meyer and Dorothea Kannengiesser, 1516 are currently both framed. The drawing of Dorothea is laid on to a piece of thin wood. A number of the portrait drawings have been lined with Japanese paper. See the Meyer family portraits of c.1526 for example.

artworks. With regards to the Royal Collection, such issues are highlighted by the remarks of its current Director, Jonathan Marsden, when he wrote that ‘...arrangements of works of art either remained static or changed with remarkable frequency depending on the intensity of royal occupancy and use’, reflecting one of the significant catalyst for change.⁷³ The campaigns for remounting in the late 19th and early 20th centuries were also partly driven by increasing requests for loans as well as enabling the display of the Royal Collection within its own residences open to the public. The history of the mounting of the drawings in the Royal Collection is also, therefore, the history of their changing status and interpretation through display.⁷⁴ Not necessarily produced with the intention for public display, mounting and framing Holbein’s portrait drawings has altered our perception of them, and therefore, perhaps, a loss of the thread of their original purpose: as preparatory drawings for a painted portrait.

Prior to specialist conservators and mounters being employed in the 1970s, the Royal Bindery carried out the remounting of drawings in the Royal Collection.⁷⁵ It seems that Holbein’s portrait drawings may have been remounted at least three times since Queen Caroline first discovered them in 1728. There is some physical evidence remaining on Holbein’s drawings that suggest a certain type of mounting. The linear pink residues around the outer edges of drawings executed on both the unprepared and prepared paper suggest a certain type of mount, particular to George III’s reign. Such marks may be explained by the following. During the reign of George III (1760-1820), some of the collection underwent a re-mounting and rebinding programme.⁷⁶ Two different mount types were used for parts of the prints and drawing collection, after which they were rebound into albums. One mount type consisted of a two-ply card with decorative wash-lined borders onto which a drawing would have been pasted down, rather like that on which the portrait drawing of Charles de Solier is mounted upon, (Figure 18). The second mount style consisted of a single-ply paper card onto which the drawing was pasted down. Offering slightly more protection, a window mount of the same ply card was then adhered over the top, with a 2-3mm overlap that clipped the drawing,

⁷³ J Marsden, Royal Treasures: A Golden Jubilee Celebration, ed. Jane Roberts. Royal Collection Enterprises Ltd. 2002.27

⁷⁴ For summaries of the general history of drawing in the Royal Collection see: J.Roberts, Master Drawings in the Royal Collection. London: Collins Harvill.1986 and Martin Clayton, Holbein to Hockney: Drawings from the Royal Collection. London: Royal Collection Enterprises Ltd. 2004

⁷⁵ Alan Donnithorne.2005.3

⁷⁶ Alan Donnithorne. 2005.5

(Figures 83 and 83.1). This overlap would have been coloured with a wash line as part of a series of other wash lines and coloured to match the overall tone of the image. It is this type of mount that the Holbein drawings seem to have been housed in.

What remains of a pink-coloured linear residue around the outer edges of most of the Windsor drawings, (Figure 83.4), could indicate the residues of such a border applied after the mount has been stuck down. This over-painting can be seen on mounts of this type still in the Royal Collection, as illustrated in Figure 83.2. Parker believed that these marks had been mis-described as intentional borderlines. Instead he maintained that they must have been applied, albeit poorly colour-matched, in order to re-touch damage caused to the pink preparation from the rebate or the glass of a frame. It was also noted in conservation treatment records from the 1970s that these residues may have been 'gilders rouge'.⁷⁷ However, these linear pink marks are also found on portrait drawings on unprepared papers that would not need to be retouched in pink.⁷⁸ For example, Parker had commented on these pink marks in his catalogue entry for the drawing of Sir John More, 1527, (Parker 1).⁷⁹ It seems more likely that these marks were caused by over-spilling of the wash line from the mount. This type of mount still exists in album format, but many were broken up in the 1860s during another re-mounting campaign, instigated by Royal Librarian the Rev. B. B Woodward.

John Fortescue (1859-1933) was Royal Librarian from 1905-1926. His early description of the state of the collection of prints and drawings in the early 20th century is fascinating and provides an insight into the housing of the drawings.⁸⁰ He describes drawings still being bound in volumes, numbering some 200, in portfolios as well as piles of loose drawings. During his time, Fortescue oversaw the re-mounting of some 12,000 drawings.⁸¹ In a memo of 1945 in the Royal archives from the then Librarian Owen Morshead, there is mention of the history of the mount style of the Holbein drawings during the time of the Prince Consort, when thin card and 'sunk mounts' were used and that smaller drawings were mounted together. It was Fortescue who decided that the thin card was insufficient protection and, objecting to the double mounting, he had

⁷⁷ Note in Windsor conservation treatment record for the drawing of Henry Guildford, Windsor 1977.

⁷⁸ The drawings of Lady Guildford and Nicholas Carew, taken to Basel by Holbein in 1528 do not have signs of this pink residue.

⁷⁹ Parker. 1945.35

⁸⁰ J. Fortescue.1933.110.

⁸¹ J.Fortescue. 1933.202.

them removed from the mounts and de-backed 'down to the very paper on which they were drawn'.⁸²

At the time of compiling the Windsor catalogue during the 1940s, the drawings were clearly still stuck down and it was not possible for Parker to study the papers properly, nor see the verso.⁸³ In the same aforementioned memo, Morshead says that he regrets forgetting to show Parker previous tracings of the watermarks of the Holbein portrait drawings.⁸⁴ The mounter, F.W Barry had taken these tracings after the removal of the drawings from old mounts around 1915-16. The only Royal Collection historic mount type that we can be sure that Holbein's portrait drawings were mounted in are the ones that they were photographed in prior to removal in the 1970s and this style of mount was introduced during the Librarianship of John Fortescue. After de-backing from their old mounts, the Holbein drawings would have been pasted down onto a thick backboard. An equally thick bevelled card window mount, the aperture of which was cut 5mm larger than the drawing, was then pasted solidly to the backboard, (Figure 83.3).

The drawings remained in this heavy style of mount until their remounting in the 1970s, when the current style of mount used to house the Holbein portrait drawings was introduced. The drawings were removed from the old backings and mounted in between two sheets of polymethyl methacrylate, a transparent thermoplastic, known as 'acrylic' or the brand names of *Perspex* or *Plexiglas*.⁸⁵ This method of encapsulation has been in existence since the early 20th century and was developed at the British Museum to help house drawings that were double-sided and those that were physically fragile. In 1972, Michael Warne, the then Head of Paper Conservation at the Royal Library proposed the acrylic 'sandwich' technique for the Leonardo drawings that were requested for loan on a regular basis. The Holbein drawings also got swept up in this scheme, which became a standard and generic mounting method whether the drawings were double sided or not. The drawings are held in place at each corner by narrow silk hinges, as seen in Figure 83.4, adhered to the drawing with starch paste (rice and

⁸² Memo from Morshead 23 March 1945, File note, Royal Library archives, Windsor

⁸³ The backings were removed in the late 1970s by the conservation department at The Royal Library, Windsor and subsequent work has been done on identifying the watermarks.

⁸⁴ Memo from Morshead 23 March 1945, File note, Royal Library archives, Windsor

⁸⁵ Perspex with UV filter, Clarex N113 brand used since 2008.

potato). These hinges are then adhered to the UV filtering Perspex back sheet with a reversible polyvinyl acetate adhesive. The top sheet of Perspex is laid over the top of the drawing and the whole package sealed with 3M 'Magic' Tape 310. The Perspex sheets are placed in an aperture cut to size in conservation grade mount board and bevelled board place either side, completing a sealed unit, (Figure 83.5).

There are pros and cons to this mounting method. Protected in this way, the drawings are easy to handle, and direct contact with the drawings is avoided entirely. The backs of the drawings are also accessible for viewing, as are all four edges. However, this type of mount prohibits a full comparison of paper-type as it is not possible to align sheets, for example.⁸⁶ Transmitted light can still be utilised but raking light viewing is more problematic due to the reflective properties of Perspex. Further, the glare from this surface can prohibit proper microscopic inspection in some circumstances. This type of mount style obscures information about paper texture and weight. Certain analytical techniques, such as XRF, are not possible through Perspex. Finally, the static nature of Perspex is not ideal for friable materials such as chalks. However, much thought and research has gone in to this method, not least by the Royal Librarians and Head Conservators, to ensure that this is not a harmful method for such drawings.⁸⁷ The conservators have not encountered any problems associated with such an encapsulation, such as mould growth or off-setting of the now abraded chalks.

1.3.3 Condition of the drawings: historical accounts of their care and conservation

The condition of an artwork affects its appearance, which naturally influences our interpretation. It is therefore vital that we are able to recognise what is damage and what is ageing, and to be able to separate these aspects from the creative processes adopted by an artist. A drawing, constituting a sheet of paper and the materials drawn upon it, will change over time. Such changes are the result of factors both physical and chemical. The physical catalysts for change can range from handling and use, to storage

⁸⁶ One of the reasons for the remounting campaign was that Leonardo scholar and cataloguer of the Royal Collection's Leonardo drawings, Carlo Pedretti was keen that the shape and outer edges of the Leonardo's were not hidden or compromised by inlays or fillings for comparison purposes and for joining up sheets of drawings from different collections. This is not possible with this type of mount.

⁸⁷ For information relating to enclosed paper systems see Joanna Kosek and David Jacobs article 'What happens to enclosed paper?', *Art on Paper: Mounting and Housing*. Ed. Judith Rayner, Joanna M Kosek, Birthe Christensen. Archetype Books: London 2005. 29-35. See also, Royal archives, Windsor, correspondence, 1979, to British Museum Science department document discussion regarding encapsulation.

and display. Chemical reactions are resultant upon the materials themselves and how they respond to the environmental conditions in which the drawings are housed. Whilst perhaps obvious, it is important to understand that neither the paper nor the drawing materials of a 500-year-old drawing will look as they did when it was first created; this applies especially to friable chalk media. How Holbein's portrait drawings look now are a result not just of his style, chosen media and technique but also as a consequence of their condition – in other words, the results of use, handling, housing, display and conservation treatment. It is with these types of changes in mind that we must approach the drawings.⁸⁸ Information gleaned from historical comments on the appearance of the drawings as well as from treatment records and the physical signs on the drawings themselves will be included in this section as these factors have influenced how the drawings have been interpreted.

Some hundred years after they were drawn, Edward Norgate (1581-1650), miniaturist and author of *Miniatura; or the Art of Limning*, describes Holbein's portrait drawings as 'made worse by mending'.⁸⁹ However, despite some damage from general wear and tear, handling and housing changes, Holbein's portrait drawings have survived the past 500 years surprisingly well. In some cases, the condition of the drawings can tell us something about their handling and treatment history. Furthermore, historical descriptions of the drawings can also help us to either pin point when this damage may have occurred, or reveal that some of the drawing processes and signs of use were misread as damage. An example of how Holbein's drawings may have changed over the years is illustrated by apparent trimming of some of the drawings, indicated by the abrupt curtailing of an inscription, a shoulder, or the top of a hat or head. This is not surprising given the numerous re-binding and re-mountings the drawings have no doubt undergone. The drawings could have been trimmed so as to tidy up damaged edges incurred from handling or removal from old housing. Trimming and fold lines may also indicate alterations made to fit them in to frames.

⁸⁸ For a discussion of connoisseurship and condition of drawings see for example Catherine Monbeig Goguel, 'Taste and Trade: The Retouched Drawings in the Everard Jabach Collection at the Louvre'. [The Burlington Magazine](#).130.1028.821. November 1988.

⁸⁹ E. Norgate.1919. 74

Skinned areas, no doubt from numerous de-backings from old mount boards, can be seen on a number of drawings to varying degrees across the versos. In transmitted light, the portrait of Sir Richard Rich, c.1532-43, (320 x 262mm, Parker 80, RL12238), executed on pink prepared paper, shows it has a large repaired tear which crosses the entire width of the upper section of the drawing; this is the drawing with the most structural damage. According to conservation treatment records held at Windsor from 1977-78, various old repairs on a number of drawings were replaced with ones that were more aesthetically matched.⁹⁰ These condition reports mark the first comprehensive descriptions of the condition of the drawings both before and after removal from their old, acidic mounts.

When reading historic literature regarding the description of the drawings, one should bear in mind that the means of examination were not necessarily as sophisticated as the equipment we have access to now.⁹¹ However, mis-reading of the drawings is not just down to the lack of analytical equipment, but also a lack of understanding of drawing processes, failure to make comparisons, or just inadequate examination. Some aspects of the portrait drawings have been mistakenly thought to be damage: for instance, both Wornum in 1867 and Parker in 1945 mentioned damage to the face of the portrait drawing of John More the Younger, 1527, executed on unprepared paper (383 x 284mm, Parker 6, RL12226).⁹² Parker cites, in particular, More's right eye as being 'considerably damaged'.⁹³ However, this is not the case. Visual examination of this part of the drawing, both with the naked eye and microscope, together with a comparison of Holbein's smaller version as part of the More Family Group drawing in Basel, confirms that this is in fact a physical attribute of the sitter's face. The eye shape is the same for both drawings and there are no physical signs of damage to the larger portrait drawing of John More. It would seem that this 'damage' was in fact anatomical and More the Younger had a lazy eyelid, (Figures 86 and 86.1), and perhaps why he was portrayed looking downward. Similarly, the depiction of the tuberculosis scars on the neck and face of the drawing of Sir Richard Southwell have also been mis-read by Parker as

⁹⁰ See Royal Collection, Royal Library, Paper Conservation treatment records for the portrait drawing condition reports of Jane Seymour, Thomas More (Parker 3), for example.

⁹¹ Windsor, for example, got their first microscope in 1982 and this has enabled a closer examination of the drawings. Verbal communication with Alan Donnithorne.

⁹² Ralph Wornum.1867.407 and Parker.1945.36

⁹³ Parker.1945.36

‘three patched holes’ and are, in fact, also depicted in the painted portrait.⁹⁴ Such issues further demonstrate how important it is to ensure a thorough examination of an artwork.

In terms of condition and presentation of the paper of the drawings it is important to point out the differences in format of some of the drawings, as this tells us something about their ownership and history. Diagonal cropping of the corners occurs on one portrait drawing in the Windsor collection, as well as on a number of the portrait drawings attributed to Holbein outside of the Windsor collection:⁹⁵

1. Thomas, Lord Vaux. The Royal Collection, The Royal Library, Windsor. RL12245. Parker 24. c.1533. Pink prepared paper. 279 x 295mm. Top corners cropped.⁹⁶
2. Charles de Solier. 1534/35. Staaliche Kunstsammlungen, Dresden. C1977-156. Pink prepared paper. 330 x 249mm. All four corners cropped.
3. Portrait of a Lady, thought to be Anne Boleyn. c.1532-35. The British Museum, London. 1975,0621.22. Pink prepared paper. 321 x 235mm. All four corners cropped.⁹⁷
4. An Unidentified Man. c.1534-36. Staaliche Museen zu Berlin. 2392. Pink prepared paper. 321 x 239mm. All four corners cropped.

None of the drawings from Holbein’s first English visit on unprepared paper have their corners cropped. There are cut corners on drawings by other artists in the Royal Collection, which has been highlighted as peculiar to drawings in the Royal Collection of 17th century provenance.⁹⁸ We can only speculate why the corners may have been cropped. It may have been due to damage or a particular style of framing or, as Royal Collection Senior Curator of Prints & Drawings Martin Clayton has commented, a style

⁹⁴ Parker.1945.46. The painted portrait of Southwell is in the Uffizi Gallery, Florence

⁹⁵ John Fisher. School of Hans Holbein the Younger. British Museum, London Reg.No: Gg,1.416 Pink prepared paper. 329 x 255mm. All four corners cropped. Portrait of an Unknown Gentleman, V&A Museum, London. Museum no: Dyce 363. Pink prepared paper. 362 x 268mm, only top two corners cropped.

⁹⁶ this drawing is unusual in the cut corner group in that the corners are more acute and this drawing also has the addition of two pieces of paper either side of the main section. The cropping of the corners on this drawing happened after the inclusion of the inscription as this has been cropped, leaving only an ‘x’ of Vaux’s name. Wornum makes no mention of the shape of the substrate in his 1867 catalogue entry for this drawing. See Wornum. Life and Works of Holbein.1867.405.

⁹⁷ This drawing is very similar in style and technique to drawings in the Windsor collection.

⁹⁸ Alan Donnithorne.2005.4

specific to a collector or a general fashion.⁹⁹ It has also been noted that cropping of the corners on the drawing of Thomas, 2nd Baron Vaux must have occurred prior to George Vertue's tracing of this drawing since his traced copy (No.24 at Sudeley Castle) shows the drawing with the corners cut.¹⁰⁰

There are three drawings attributed to Holbein that have been cut around, with their resulting silhouettes re-adhered to pink prepared paper; only one of these is still part of the Windsor collection:

1. An Unidentified Woman. c.1532-43. The Royal Collection, The Royal Library, Windsor. RL12190. Parker 47. Pink prepared paper, silhouetted. 271 x 169mm.
2. Portrait of an English Woman. c.1532-35. The British Museum, London. 1910,212.105. Pink prepared paper, silhouetted. 276 x 191mm.
3. Thomas Wriothesley, Earl of Southampton. c.1536-40. Musée du Louvre, Paris. RF 4651. Pink prepared paper, silhouetted. 242 x 192mm.

It is not clear why these drawings were 'silhouetted' (cut around and stuck to a secondary backing). However, it could be linked to the fact that all three were once in the collection of Jonathan Richardson Snr (1667-1745) before being dispersed into various other collections prior to their final resting places. The portrait drawing, Portrait of an English Woman, now at the British Museum, was certainly silhouetted by 1867 because Wornum mentions this in his Holbein book.¹⁰¹ It should be noted that the oil on paper portrait of Holbein's wife and children, 1528/29 (Inv.325, Basel, Kunstmuseum, 770 x 640mm) was also cut around and stuck to the wooden panel.

One aspect that is interesting about these silhouetted drawings and painting, is that they are reminiscent of the three varnished 'face patterns' at the National Portrait Gallery, London. Painted in oil on paper, these silhouetted face patterns are of John Fisher (c.1527, after Hans Holbein the Younger, NPG 2821, 210 x 191mm)¹⁰², Unknown

⁹⁹ Martin Clayton.2004.46

¹⁰⁰ Jane Roberts, Drawings By Holbein from the Court of Henry VIII: 50 Drawings from the collection of H M Queen Elizabeth II, Windsor Castle. Boston: Museum of Fine Arts,1987.24

¹⁰¹ Wornum.1867.413

¹⁰² This face pattern of Fisher is the result of a pounced image of Fisher, made clear from the pouncing dots still visible under the painted surface. It is clearly based on the portrait of Fisher in the Royal Collection, of which there is also a copy in the British Museum. There is still some work to be done regarding the materials of these face patterns.

Devine (NPG 2824, 159 x 130mm)¹⁰³ and Sir Henry Sidney (NPG 2823, 305 x 279mm, late 16th century).¹⁰⁴ Whilst their rarity and therefore function is still not fully understood, these objects could reflect their repeated use as face patterns in a workshop and therefore wear and tear and loss; they were perhaps made as copies from the original drawings to avoid repeated use of the original. Such portrait patterns warrant further research.

Abrasion to the chalks and possible fading to pigments has no doubt diminished some of the drawings' original vibrancy. In his *Anecdotes of Painting* 1762, Horace Walpole seemed concerned that some of the drawings framed for Queen Caroline at Richmond were '...hanging against the light...'¹⁰⁵ In 1913, Holbein scholar, Arthur B. Chamberlain wrote that the drawings had been 'dimmed here and there by passing of the years'.¹⁰⁶ For those drawings executed on prepared papers, the ranges in tones of pink mean that it is hard to make comparisons in terms of colour change affecting the overall look and condition of the drawings. Raman analysis revealed that the red pigment of the preparation was vermilion, and it was mixed with calcium carbonate to produce a range of pinks. Whilst vermilion is not known to fade, it can discolour, and this appears to have happened on a number of drawings in the form of silver-grey speckles.¹⁰⁷ This is particularly pronounced on the drawing of William Reskimer, c.1533, (Parker 31, Figure 16), as illustrated by the detail. Michael Warne, the Royal Collection paper conservator in the 1970s, speculated that this effect was caused from the wetting of the paper when the drawings were pasted onto backboards in past mounting campaigns.¹⁰⁸ He clearly also considered darkening of what he thought was lead white (when in fact it is calcium carbonate) in the preparation, since he attempted a reversal of the lead oxidization using ethereal hydrogen peroxide on the portrait drawing of Edward, Prince of Wales, c.1540-43, (275 x 229mm, Parker 71, RL12201) with no success. This would seem to further support the possibility that it is darkening of vermilion that has

¹⁰³ This face pattern has been inlaid into a support sheet of black painted paper; no date has been assigned to it, research pending.

¹⁰⁴ Examination of the silhouette of Sidney revealed that it had been cut around after it had been painted, evidence from the clean edge and no paint residues on the cut edges.

¹⁰⁵ Horace Walpole. *Anecdotes of Painting*. Ed. Dalloway & Wornum 1862, Vol.1. 85, note 5.

¹⁰⁶ Arthur B Chamberlain. *Holbein*. 252.

¹⁰⁷ Vermilion, red mercuric sulphide, is known to darken to black with sun exposure as light promotes a conversion to the black lack with sun exposure, which promotes conversion to the black meta- cinnabar. Darkening occurs more with artificial pigment.

¹⁰⁸ See condition and treatment report for the portrait of Reskimer, Parker 31, March 1977, archive at Windsor.

caused the speckles.

Some staining on a number of the drawings are marks that have been associated with the tracing of Holbein portrait drawings by George Vertue with, allegedly, oiled paper:

It is such a pity that they have not been engraved....Vertue had undertaken this noble work, and after spending part of three years on it, broke off, I do not know why, after having traced off on oil-paper but about five and thirty. These I bought at his sale; they are so exactly taken as to be little inferior to the originals.¹⁰⁹

English engraver and antiquary George Vertue (1684-1756) made what were said to be direct copies of Holbein's drawings, with the intention of making engravings after the drawings. 34 drawings are listed as having been copied and hung in Walpole's Holbein Chamber at Strawberry Hill and a number of which are now to be found at Sudeley Castle, Gloucestershire.¹¹⁰ Whilst a number of the Holbein drawings appear to have some yellowish staining, the composition of the stains has not been ascertained. Not all the drawings listed as having been traced by Vertue have these stains and conversely, some drawings that were listed as being traced do not have stains. Having examined a number of the Vertue copies unframed, his technique has been made clearer.

Six tracings from Sudeley were examined for inclusion in the 2009 Walpole exhibition at the Victoria and Albert Museum.¹¹¹ It would appear from this visual analysis that the drawings are on an oiled paper, now discoloured and brittle, with a loss of transparency. This paper is laid down over a pink preparation, much like that used by Holbein, which, when first done would have been visible through the drawing paper. Whether this was done by Vertue so as to mimic Holbein's papers or not is still open to debate since it was not as clearly visible on all the other drawings examined. Further, as these tracings were supposedly done with engraving patterns in mind, it seems like a lot of trouble to go to for purely reproduction purposes. The tracings of the portrait drawings of Lady Heveningham and Lady Berkeley both clearly had this pink paper underneath, (Figures 85, 85.1 and 85.2). However, whilst Holbein's drawing of Lady

¹⁰⁹ Chamberlain.Vol.II.249, quoting Walpole, Anecdotes, ed. Wornum, vol.i, p84 note.

¹¹⁰ For a list of these drawings, see Wornum.1867.399-400 and Susan Foister's appendix of 1983 to the Parker Windsor catalogue. The drawings were acquired in 1842.

¹¹¹ 'Horace Walpole and Strawberry Hill' exhibition, 6 March - 4 July 2010, V&A Museum.

Heveningham, c1532-43 (303 x 211mm, Parker 26, RL12227) is executed on pink prepared paper, that of Lady Berkeley¹¹², 1527 (367 x 260mm Parker 4, RL12228) is not. The laid lines of the oiled paper are clearly visible. The wrinkles on the drawings were most likely formed during the laying down of the paper. Of the 31 traced drawings at Sudeley, eleven drawings at Windsor show signs of having been traced over in the form of indentations, to varying degrees, along the contours.¹¹³ Whilst we cannot say for sure that the indented lines on some of the Holbein drawings were not the result of having been traced by Vertue, indentations are less likely when tracing takes place through a sheet and further not all of the Holbein drawings that Vertue traced have indented lines. The issue of copying and tracing for transfer to a painting is taken up in Chapters Three and Four, with particular regard to the act of tracing and the interpretation of lines.

Just as the substrate of the drawings has been affected by handling and housing, so has the drawing media. The condition of an artwork has been known to affect decisions around attribution.¹¹⁴ The condition of the drawings, including the abrasion of the chinks, has been the catalyst for the debate over the purpose of the aqueous black lines that form the drawings' contours and whether they are autograph or reinforcements by later hands. Whilst the function of these aqueous lines will be discussed more fully in Chapter Four, their historic interpretation cannot be ignored in a discussion regarding the drawings' condition.

In 1903, art historian Gerald Davies, wrote that abraded chalk contours had '... been revived by the application of a bolder chalk line of the proper colours in parts where the outline seemed most to need it... But these same lines will be found to be hard and wiry, and somewhat unfeeling as compared to the subtly sympathetic outline of the master himself'.¹¹⁵ In 1913 Chamberlain attributed the damage to wear and tear whilst in the artist's studio.¹¹⁶ Parker thought that the Windsor drawings were far from being well preserved: partially as a result of their use as face patterns, but also because of the

¹¹² This sitter is Elizabeth Dauncey, second daughter of Thomas More, it was erroneously described, 'The Lady Barkley', but identified from the More Family Group drawing and Nostell Priory copy.

¹¹³ See Susan Foister's appendix to Parker Windsor catalogue, 1983.

¹¹⁴ William Suhr, Painting Conservator, notes in his condition report on Sir Thomas More portrait at the Frick, 1964: '...the conclusion must be that the state of preservation of the weak areas is accountable for doubts in attribution'. Frick Archive.

¹¹⁵ Gerald Davies, Holbein, George Bell & Sons: London, 1903.122.

¹¹⁶ Chamberlain.1913.252

friable and vulnerable nature of their media.¹¹⁷ Clearly then, Holbein scholar, Paul Ganz was not the only critic to think that the coloured chalks had 'fallen off' the pink preparation and that Holbein and others had had to retrace over some of the lines to 'refresh' them.¹¹⁸ Further, Ganz, in his 1937 catalogue of Holbein drawings, believed that:

No drawing from the second English visit is today still preserved in its original condition. The chalk lines are for the most part smudged or completely effaced and gone over. Late owners have let the drawings be worked over repeatedly, sometimes with pen and ink, sometimes with brush and colour...Everything that does not belong to the 'trois crayons' manner was added later.¹¹⁹

It will be argued in Chapters Three and Four that Ganz's views on what he perceives as reinforcements by another hand are, in the main, part of Holbein's drawing process.

An author who demonstrates a superior understanding of the drawings is Ralph Wornum. A 19th century art historian, Wornum abandoned an education in law and trained as a portrait painter, before becoming Keeper of the National Gallery, London (1855). The fact that he understood artistic practice may go some way to explain why his interpretation of Holbein's portrait drawings displays a better understanding than most of their construction, and the effect of their condition on their appearance:

Most, if not all, of the hard lines objected to are certainly by Holbein himself; few of the drawings were ever quite finished, and some parts have been drawn in with greater force and detail than others...it is clear that the lines in the faces are hard and inharmonious now simply from the circumstances of the finer details being worn off by the constant friction of centuries, and thus leaving disagreeably prominent what was once as certainly in perfect harmony with the surroundings...¹²⁰

In this statement, Wornum usefully highlights two important aspects: Holbein's method, (the drawings are not always fully worked up. Holbein tended to concentrate on the faces, leaving the costumes more abstract and suggested), and the fact that that

¹¹⁷ Parker.1945.28

¹¹⁸ Paul Ganz, 'Holbein', *The Burlington Magazine for Connoisseurs*. 47.272 November 1925. 230-245; Gerald Davies, *Holbein*, George Bell & Sons: London, 1903.122.

¹¹⁹ Paul Ganz, *Handzeichnungen Hans Holbein des Jungeren in Auswahl* 1937.17. With many thanks to Susan Foister for her translation of this text.

¹²⁰ Ralph Wornum.1867.399

abrasion of the chalks would make the black aqueous contours more prominent. This latter aspect has been somewhat lost in recent interpretations. There is speculation around when these black contours were added, as well as who may have added them. Walpole thought that 'some have been rubbed and others traced over with a pen on the outlines by some unskilful hand'.¹²¹ In making additions to Holbein's drawings, the printmakers Wenceslaus Hollar (1607-1677) and George Vertue (1684-1756), as well as collector Jonathan Richardson the Younger (1694-1771) have also been named as 'principal offenders' with 'varying degrees of probability'.¹²² In 1911, art historian and Keeper of the King's Pictures, Lionel Cust, thought that 'It was very probable that the drawings were refreshed by outlines very soon after Holbein's death, if not by the painter himself' and he too accuses Vertue of retouching the drawings.¹²³

Opinion was and continues to be divided over whether Holbein applied the media over the contours himself, or whether others reinforced them. However, the really important issue is the function of these contours. This research will show that the aqueous lines, and the emphasis on contour in general, was part of Holbein's style and often part of the sequencing of the drawing process. Further, whilst we must not neglect the fact that the wear and tear of more friable media and the use of the drawings meant that the contours have perhaps become the most dominant feature of some of them, the reinforcement of contours can be historically placed within his father's workshop, as will be shown in Chapters Three and Four.

By mapping some historical commentary on the appearance and condition of the drawings, we can ascertain that some damage has been present for a long time. For instance, in his description of the drawings in 1867, Wornum alludes to the basic condition of each drawing, such as 'rubbed', but occasionally remarks on more notable signs of damage such as the rectangular staining on the face of the portrait of Reskimer.¹²⁴ In 1945, Parker also commented on each drawing's condition in his

¹²¹ Horace Walpole, *Anecdotes of Painting*, eds. Dallaway, Wornum 1862, Vol I. 85 note 3.

¹²² Parker Windsor Catalogue.28. Ref to Hollar is in Gerald Davies *Hans Holbein the Younger*, 1903, p123. Ganz mentions Vertue in *Kritischer Katalog* 1937 pXX and Richardson is mentioned in F Lugt's *Les Marques de Collections*, 1921 pp403-404 no.2170. Since Hollar and Vertue were printmakers, by implication the authors could be suggesting that the linear quality of the drawings were needed in order to trace them for patterns for engraving.

¹²³ Lionel Cust, 'On a Portrait Drawing by Hans Holbein the Younger'. *The Burlington Magazine for Connoisseurs*. 18.95 February 1911. 270

¹²⁴ Wornum.1867.403

comprehensive Windsor catalogue. But it was not until the late 20th century that the condition of each Holbein drawing in the Windsor collection was documented more thoroughly, allowing comparison with some of the historical observations listed above. As the first specialist Restorer of Drawings to be appointed to the Royal Library in 1972, Warne undertook a remounting campaign of the Holbein portrait drawings between 1977-78.¹²⁵ The drawings were photographed and the overall condition of each drawing was recorded prior to treatment. The types of damage and subsequent treatments were fairly generic across the drawing group.

The general condition of the drawings in the 1970s is illustrated very well by the main corpus of drawings studied in depth for this research, in other words, those that relate to the paintings of the same sitter. Michael Warne recorded ingrained and surface dirt, as well as general abrasion of the chalks on all of the drawings. Accretions were sighted as being disfiguring on both Thomas More portraits, (Parker 2 and 3), as well as on that of Henry Guildford, Jane Seymour and Edward, Prince of Wales (Parker 46). Losses and old repairs were recorded on the drawings of Jane Seymour, both Thomas More drawings, Unknown Gentleman (Parker 33), Simon George, Lady Butts (Parker 67) and Edward, Prince of Wales (Parker 46). Nearly all of the right side of the drawing of Thomas More, (Parker 2), was missing, but with some repairs. The extensive damage may say something about the use of this drawing, whose appearance has been questioned in terms of its authorship and function.¹²⁶ However, it seems clear that this drawing was used in some way to transfer the image, either on to a panel or an intermediate sheet of paper, as it shows signs of having been used for transfer, with indented lines along most of the drawing's contours, (Figure 38.1). Oily stains are noted on the drawings of Henry Guildford and Lady Audley; something that connected them to the tracings made by Vertue, discussed above. Warne also reports some skinning already present on the versos, once removed from the backboards. For example, skinning is quite prevalent on the verso of the drawing of William Warham, clearly visible in transmitted light, (Figure 10.4).

In most cases, the drawings had been pasted down completely onto the backboards and so were removed mechanically, splitting the boards to a thinner layer, before applying a

¹²⁵ I am very grateful to Alan Donnithorne for sharing his immense knowledge of the Royal Collection and being granted access to files concerning its conservation history.

¹²⁶ See for example, Parker 36,1954.45, catalogue entry for Thomas More, Parker 2.

50:50 solution of alcohol (industrial methylated spirit), to aid removal of the final layer of paper and adhesive residues.¹²⁷ Warne also documents that a number of drawings had been inlaid into a blotting type paper (Henry Guildford, Jane Seymour and Lady Butts), which were also removed. Inlaying of these drawings had not been mentioned in previous documentation. As cited earlier with regards to the Leoni album, it was not unusual for double sided drawings in albums to be inlaid to enable viewing of both sides, but these three drawings don't have anything on their versos. Accretions were removed mechanically with a scalpel. The drawing of Jane Seymour is made up of two pieces of paper and these were documented as having been separated and re-joined during the treatment carried out by Warne. Warne records that the lower section had 'slightly expanded', concluding this was due to the previous inlaying or a result of dampening. Images of the drawing prior to removal from the old mount seem to confirm this somewhat puzzling expansion, (Figures 26.4 and 26.5).

All the drawings were alkalisated with a solution of barium hydroxide and methanol, applied with a spray. The documentation does not state the concentration of the solution.¹²⁸ Papers can be acidic for numerous reasons: acids present when the paper was produced; acids produced as part of the paper's ageing process; and acids absorbed by the paper in the form of pollutants. Barium hydroxide was commonly used non-aqueously with methanol for the alkalisation of documents and artwork where aqueous solutions could not be used.¹²⁹ Although the reasons for this treatment are not stated in the Windsor documentation, the acidity of the mounts from which the drawings were removed may have influenced Warne's decision.¹³⁰ Friable chalks, the pink preparation containing vermilion and potentially fugitive pigments would have excluded an aqueous treatment. Organic pigments are known to change colour on deacidification.¹³¹

¹²⁷ Warne referred to this mixture as a 'softener'.

¹²⁸ Warne had previously worked at the British Museum under Baynes-Cope, who pioneered this method of non-aqueous deacidification. The use of 1 % w/v solutions of barium hydroxide in methanol was common for the deacidification of documents in cases where aqueous solutions were not appropriate. However, its toxicity has meant that it is no longer used.

¹²⁹ For more information regarding de-acidification of paper, see Vincent Daniels, 'Aqueous Deacidification of Paper'. In G. Petherbridge (Ed.), International Conference on the Conservation of Library and Archive Materials and the Graphic Arts, Abstracts & Preprints. London: Society of Archivists and the Institute of Paper Conservation. 1980. 121-5. See also 'Paper Deacidification: A Bibliographic Survey Part I' by Danielle Mihram Restaurator 7:81-98 1986

¹³⁰ Alkalisation of papers was carried out routinely in the past but is not something that is done as a matter of course in paper conservation now. There are also toxicity issues with the use of barium hydroxide so alternatives for non-aqueous alkalisation should be sought.

¹³¹ Due to changes in their molecular and electronic structure, organic pigments, such as gamboge and

Although vermilion (red mercuric sulphide) is inorganic and not affected by the alkalinity of such a treatment, its easy re-dissolution makes washing or alkalisation with an aqueous alkaline solution problematic.

Whilst still damp from the alkaline spray, the drawings were pressed between silica paper to limit any off-setting of the chalks. Despite this pressing, as well as potentially many more during previous mounting processes, signs of use, such as indentations, are still perceptible on the drawings. Toned paper was used for infilling missing areas and tears were repaired with Japanese paper, adhered with wheat starch paste. Warne's treatment records show that repairs had been made in the past as he records removing old in-fills and repairs (from the drawings of Jane Seymour, Henry Guildford and the Parker 2 version of Thomas More) and replacing them with more aesthetically pleasing ones. The drawings were then mounted in Perspex and conservation grade board, as described above.

500 years of modifications to the drawings' storage, mounting and housing, together with various treatments and much handling have combined to influence the current appearance of the drawings. Therefore, any interpretation of the physical appearance of the drawings needs take into account all the changes they may have undergone before coming to any conclusion.

Chapter Two: Literature Review and Methodology

2.1 Literature Review

Hans Holbein the Younger was recognised as an immense talent in his day, with his work highly sought after in both Basel and England.¹ This accolade has continued throughout the centuries and consequently, commentary on his work has generated a vast amount of literature in both German and English.² In *Hans Holbein the Younger: A Guide to Research* the compiler, Erika Michael, lists over 2500 bibliographic references to Holbein, and there have been many more since its publication in 1997.³ The majority of these references are art historical books, catalogues, critiques or independent articles from magazines or journals, in the main focusing on the paintings. The fact that such a *Guide* exists is in itself a testament to the amount of literature relating to Holbein's work, and its influence, reception and scholarly interpretation. It also serves to give some idea as to the complexity of navigating through it.

Significantly for this research, Michael's *Guide* highlights the lack of specific technical information relating to Holbein's drawings. The chapter entitled *Technique, Technical studies and Technology*⁴ cites forty references, only twelve of which deal with the materials and techniques of Holbein's drawings. Furthermore, this is often in the context of the paintings' underdrawings and the drawings' relation to those.⁵

Complicating matters further is the fact that unlike contemporaries such as Leonardo da Vinci and Albrecht Dürer, Holbein left no practical or theoretical treatises, and primary sources relating to his working practice are scant. The paucity of original source material and inadequate descriptions of the drawings has in turn influenced the secondary source material on Holbein's drawings. This has resulted in the generation of myths and inaccuracies in the discussion of Holbein's work. Exacerbating the problem

¹ Nicholas Bourbon, [Paidagogeion](#). Dedicatory letter to Thomas Soulement, September 5 1536. Thomas More to Erasmus in Dec 18 1526: 'Your painter, dear Erasmus, is a wonderful artist'. Erika Michael [Hans Holbein the Younger: A Guide to Research](#). New York and London: Garland Publishing Inc. 1997. 7

² Holbein literature in German and French has been referred to or translated where necessary, but the majority of the literature reviewed has concentrated on that in the English language.

³ Erika Michael, [Hans Holbein the Younger: A Guide to Research](#). New York and London: Garland Publishing Inc. 1997

⁴ Erika Michael. 1997. 660-670.

⁵ For example, Maryan Ainsworth. "'Paternes for phiosioneames": Holbein's portraiture reconsidered'. [The Burlington Magazine](#). March 1990. 132.1044.173-186.

further is the tendency for Holbein scholars to take a traditional connoisseurial rather than a rigorous approach to studying the drawings, and to concern themselves with attribution. Building their expertise around evidence of signed, dated and documented works, the methodology of connoisseurship involves collecting information based on empirical evidence in order to attribute authorship and authenticate works of art. Such experts operate within an implied intuition whilst forming a judgment that is often unquestioned. Research interests naturally change over time and today we are concerned with how things are made and used, whereas that wasn't necessarily the case with previous connoisseurial approaches. Historical literature provides evidence of the fact that early scholars used connoisseurship as a methodology for attribution: although elements of traditional connoisseurship are still relevant today, it now tends to be paired with rigorous scientific analytical techniques, making it a more robust line of enquiry. These aspects are something this research has utilised in order to clarify misunderstandings and confusion that has resulted from a narrower, traditional connoisseurial approach to Holbein's portrait drawings.

Extant Holbein literature reveals distinct information regarding the critical approaches to Holbein's portrait drawings, in particular how they have been historically interpreted and subsequently described. Although Holbein literature is extensive, the emphasis of this thesis is on some key texts that span both historic and contemporary approaches to his drawings. These are relevant in their discussion of Holbein's portrait drawings, and have been selected to give a broad sweep of historical and current literature in order to examine the development of the study and, therefore, the interpretation and resulting description of the drawings.⁶ Historical literature is important in that it can reveal the drawings' provenance and their reception. Historic descriptions and cataloguing of the drawings can also shed light on how their appearance may have changed, which in turn can aid our understanding of the possible

⁶ Key texts have been selected that are specific to the drawings or that contain historic descriptions and information regarding the drawings. For example, Paul Ganz's Die Handzeichnungen Hans Holbeins d.J.: Kritischer Katalog. Julius Bard Verlag: Berlin: 1937; K T Parker's The Drawings of Holbein at Windsor Castle. Oxford & London, 1945 and Susan Foister's contribution to the Parker catalogue, adding new insights and revisions to the Windsor catalogue of drawings: Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.

use and condition of the drawings over time. More importantly historical literature is a reflection of the value system of its time. Such embedded value systems influence the way the drawings have been written about in the past, and how they are understood today.

In 1524 Basel humanist and classical scholar Beatus Rhenanus (1485-1547) referred to Holbein, Dürer, Baldung and Cranach as the four most celebrated German artists of the time, marking an early tribute to Holbein's reputation as an artist.⁷ It seems that from very early on critics struggled to describe Holbein's drawings and the techniques he employed. Rare amongst contemporaneous sources is Dutch painter and poet, Karel van Mander's *Schilder-boeck* of 1604, which included 'the life of Hans Holbein, outstanding painter' in the section on the lives of the Netherlandish and German painters.⁸ Van Mander speculates to some extent about biographical details, and praises Holbein's artistic skills and ability to paint life-like portraits. In the main, van Mander's interest does not lie in describing Holbein's technique or materials. However, he does make some observations on the former, which are discussed later in this chapter.

Early literature is concerned with describing and attempting to explain what authors perceived to be Holbein's ability to capture a realistic likeness of the sitter. For example, in 1867 the art historian and critic Ralph Wornum (1812-1877) published the first substantial scholarly monograph on Holbein in English, including in one of his two appendices a catalogue of Holbein portraits at Windsor Castle. In his appendix to the Windsor drawings Wornum separates the male and female sitters, and makes no attempt at arranging the drawings chronologically, which is a more current and art historically significant fashion.⁹ Further, Swiss Holbein scholar, Paul Ganz (1872-1954), also made a gender distinction, and contended that Holbein altered his technique depending on whether he was drawing a man or a woman. For example, a strong man would have 'vigorous lines' compared to a 'delicate woman with suitable technical

⁷ Published in Rhenanus's *Emendations to Pliny's Natural History*, Basel, Froben, 1526.

⁸ Karel van Mander. *Het Schilder-Boeck* 1604, trans. as *The Lives of the Illustrious Netherlandish and German Painters*, ed. H. Miedema, 6 vols, (Doornspijk 1994-99) 141-155.

⁹ Ralph Wornum, *Some Account of the Life and Works of Hans Holbein, Painter of Augsburg*. Chapman and Hall: London. 1867.401-413.

expression.¹⁰ However, even a cursory examination of Holbein's female sitters questions this theory: as I shall demonstrate in Chapter Four, Holbein's technique for capturing likeness was not discriminatory. This is in contrast to the chronological cataloguing by Parker at Windsor in 1945 and the adjustments to some dates made by Susan Foister in her appendix to his catalogue in 1983.¹¹ Chronology has been estimated from dates on paintings, age of sitters, costume and in Parker's case, the tone of the pink priming. However, Foister also convincingly argues that it is hard to be precise on the chronology of the second visit drawings just on stylistic grounds.¹²

Wornum represents one of many scholars concerned more with the identity of the sitters than with materials and techniques.¹³ Many texts concentrate on the drawings where the sitter is identified and, more significantly, with the drawings for which exists an associated painting. Whilst this is no doubt useful in terms of uncovering the relationship of a drawing to a painting, it has meant that the majority of the drawings remain somewhat under-investigated in terms of the information they can yield about Holbein's drawing processes. Furthermore, a purely academic approach to a fundamentally practical discipline has meant that the terminology employed for describing Holbein's technique can be confusing or, at worst, impenetrable.¹⁴ A consequence of this is that the drawings have often been interpreted, described, and ultimately understood in an erroneous context.

More recent literature, such as that by Holbein scholars Susan Foister and Christian Müller, and Royal Librarian Jane Roberts has included valuable information regarding materials and techniques and the function of the drawings.¹⁵ Foister's research has had a significant impact on Holbein studies. Her 1983 additional contribution to the

¹⁰ Paul Ganz., 'An Unknown Portrait by Holbein the Younger'. The Burlington Magazine for Connoisseurs. 47.270.113 September 1925.

¹¹ K T Parker, The Drawings of Hans Holbein in the Collection of Her Majesty the Queen at Windsor Castle, reprinted with and Appendix to the Catalogue by Susan Foister. Johnson Reprint Corp. 1983

¹² S Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.31

¹³ Indeed, there are many independent articles discussing the identity of sitters; see for example, John Rowlands and David Starkey, 'An Old Tradition Reasserted: Holbein's Portrait of Queen Anne Boleyn' The Burlington Magazine. February 1983. 125.959. 88+90-92.

¹⁴ Alan Derbyshire, personal communication, July 2010.

¹⁵ Dr Susan Foister is Deputy Director and Director of Collections and Curator of Early Netherlandish, German and British Paintings at the National Gallery London; Lady Jane Roberts has been the Curator of the Print Room at Windsor Castle since 1975 and the Royal Librarian since 2002. Dr Christian Müller is Head and Curator of the Kupferstichkabinett, Kunstmuseum Basel.

Windsor catalogue of Holbein drawings, written some 40 years after Parker's catalogue, provides a more comprehensive review of the portraits through a discussion of their history, purpose and technique.¹⁶ Her 2004 book, *Holbein and England*, discusses Holbein's work in the context of a foreign artist in England, and also examines how his work sits within the wider remit of British art.¹⁷ Foister's interpretation of the drawings through their appearance and their relationship to the painting is more developed and informative than previous Holbein scholars. Roberts' 1993 catalogue has a section on 'Technique and Function' as well as one on 'Paper' relating to the portrait drawings at Windsor, but not being part of the remit, these topics are not explored to their full potential.¹⁸ The catalogue from the Basel 2006 exhibition contains eleven essays addressing a range of issues that deal with Holbein's artistic development and career.¹⁹ Although Müller's essay on Holbein as a draughtsman does include aspects of his technique and materials, it does not fully explore or characterise them to the extent that the information moves the research forward significantly.

Hans Holbein the Younger, Portraitist of the Renaissance of 2003 and *Holbein in England*, 2006 are examples of catalogues published in conjunction with exhibitions that hung drawings and paintings together²⁰. Both are illustrated and discuss the drawings in relation to the paintings of the same sitter. However, the descriptions of the drawings are limited with little or no information relating to materials and techniques.²¹ *Hans Holbein: Paintings, Prints and Reception*, edited by John Hand and Mark Roskill, was a culmination of two Holbein symposia held in Basel and Washington in 1997.²² Whilst it undoubtedly added new insight into our understanding of Holbein's work, none of the eleven essays address his media and techniques in relation to the function of the drawing, or how his methods would facilitate the transfer or drawings, if need be.

¹⁶ Susan Foister, *Drawings by Holbein from the Royal Library, Windsor Castle*. London: Johnson Reprint, Harcourt Brace Jovanovich. Limited edition in two volumes.1983

¹⁷ Susan Foister, *Holbein and England*. Yale University Press 2004

¹⁸ Jane Roberts, *Holbein and the Court of Henry VIII: Drawings and Miniatures from the Royal Library, Windsor Castle*. Edinburgh: National Galleries of Scotland. 1993

¹⁹ Christian Müller et al. *Hans Holbein the Younger, The Basel Years 1515-1532*. Munich, Berlin, London, New York :Prestel, 2006.

²⁰ Stephanie Buck and Jochen Sander et al, *Hans Holbein the Younger 1497/8-1543, Portraitist of the Renaissance*. The Hague: Waander Publishers, Zwolle 2003. Susan Foister & Tim Bachelor, *Holbein in England*. Tate:London.2006

²¹ *Hans Holbein der Jungere: Die Jahre Basel 1515-1532*, Kunstmuseum, Basel, 1 April- 2 July 2006 and *Holbein in England*, Tate, London, 28 September 2006 to 7 January 2007.

²² '*Hans Holbein: Paintings, Prints and Reception*'. *Studies in the History of Art*. 60. 2001 edited by John Hand and Mark Roskill

Holbein's underdrawings have also been studied, and the technique of infrared reflectography has allowed for the relationship between drawings and underdrawings to be more thoroughly interpreted. Curator Maryan Ainsworth has written extensively on Holbein's underdrawing,²³ and her work has contributed significantly to our understanding of the function of Holbein's portrait drawings in relation to their use as possible face patterns.²⁴ But she has not fully clarified which marks were made in relation to the act of tracing the drawings, and those made as part of the drawing process: an important distinction. Curator Jochen Sander has also published essays and a book on Holbein's work in both English and German.²⁵ He has made particular reference to the role of the drawings of the Meyer family for the Darmstadt Madonna painting (1526-28) and discusses the puzzling changes evident in the underdrawing, some of which show significant differences to the finished painting.²⁶ The relationship of the underdrawing to drawing and final painting are discussed more fully in Chapter Four, but in summary here, Sander believes that the existing portrait drawings were executed not as primary preliminary drawings, but were instead drawn in the course of the painting process.²⁷ There is a tendency by most authors to over simplify the complex issue of a drawing's relationship to a painting, and how in turn the underdrawing may or may not reflect direct use of a drawing. Although correlations between underdrawing, preparatory drawing and painting have been greatly aided by advances in infra red reflectography, it remains a complex field open to conflicting interpretation, depending on the 'reading' of the underdrawing. This is discussed more fully in Chapter Four.

²³ Maryan Ainsworth has published a number of articles on Holbein's underdrawings in relation to the drawing in order to ascertain if the painting was by Holbein or his circle, for example, 'Methods of Copying in the Portraiture of Hans Holbein the Younger' in Le dessin sous-jacent dans la peinture. Dessin sous-jacent et copies. (Universite catholique de Louvain, Institut superieur d'archeologie et d'histoire de l'art, Document du travail No.26) 11-13. Colloquium VIII. Louvain-la-Neuve: College Erasme, Sept.8-10, 1989. Essay published 1991.

²⁴ Maryan Ainsworth, "'Paternes for phiosioneames": Holbein's portraiture reconsidered'. The Burlington Magazine. 132.1044. March 1990. 173-186.

²⁵ For example, S Buck, J Sander, et al. Hans Holbein Portraitist of the Renaissance. The Hague. 2003. J Sander, Hans Holbein. Tafelmaler in Basel 1515-32. Munich: Hirmer Verlag. 2005

²⁶ Jochen Sander, 'The Darmstadt Madonna, On the Genesis and development of Holbein's panel for Jakob Meyer zum Hasen', in Hans Holbein Portraitist of the Renaissance, 2003 Royal Cabinet of Paintings Mauritshuis, Waanders Publishers, Zwolle: The Hague. 2003.

²⁷ Sander.2003.41

There are certain key themes and issues that emerge from the historic and current literature – either because they are conspicuous by their absence or because they need further explanation or clarification – and these will be dealt with in turn. First, the approach of most authors seems to derive from that of the art historical connoisseur, and does not include an in-depth analysis of Holbein’s drawing materials and techniques; the subsequent emphasis on attribution has affected the way in which the drawings have been interpreted. Second, despite a huge Holbein bibliography, the extant literature overlooks certain physical aspects that relate to the appearance of the drawings. For example, whilst the drawings have been catalogued and described extensively, the materials from which they are made and the techniques Holbein employed have never been systematically investigated. Therefore, the link between materials and technique and the drawings’ function have not been fully exploited, and Holbein’s drawing processes have not been fully understood. As I shall argue, certain aspects regarding Holbein’s drawing technique such as his emphasis on contours and his use of black aqueous media have been misinterpreted; the impact of condition in relation to appearance is not always fully acknowledged for example. Third, distinguishing between marks that are made as part of a drawing process and those that are signs of transfer have also gone unnoticed or judged erroneously; discussed in Chapters Three and Four. Finally, many authors display little understanding of the actual drawing process itself.

2.2 Connoisseurship

The emphasis on the attribution of artworks on stylistic grounds can in part be explained by the existence of many painted copies of Holbein’s work, as well as the lack of an artist’s signature. Apart from the objects themselves, there is little surviving evidence of portrait drawing practice during the Tudor period. Very few drawings survive, making Holbein’s group of portrait drawings particularly special, and little is known about the techniques used to transfer drawings to panel paintings. It is probable that such paucity is one of the reasons that connoisseurship and questions of attribution have plagued Holbein research, along with the financial value of the artworks. The definition of artistic style is problematic, but underpins connoisseurship.²⁸ Artistic style

²⁸ See, for example Jean. C Rush and Darrell. L Sabers, ‘The Perception of Artistic Style’. Studies in Art Education, 23.1.24-32. 1981

takes into account the physical aspects of an artwork – line, colour, shape, proportion etc. But an artist's style can change over time; it can be a reflection of a workshop and is also dependent on the purpose of the work: factors not always taken into account in traditional connoisseurship.

Whilst modern technological innovation means that there is less reliance on speculative analysis, current literature still places an emphasis on attribution, supported by the important aspect of provenance. This can somewhat obscure another important question of how to account for the appearance of a drawing in order to help reveal its function. Holbein studies also naturally reflect different interests and the preoccupations of the time, with lines of enquiry depending on the historian's area of investigation or what was art historically *de rigueur* at the time. These factors obviously need to be remembered when critiquing historic literature in a time of different perspectives. Writing in 1867, Wornum thought that Holbein was 'unequaled in his faculty of drawing the human face', but he does not go in to a huge amount of detail or analysis regarding how Holbein may have gone about this feat.²⁹ Wornum, like others before and after him, is preoccupied by false attributions and new discoveries concerning attribution. He discusses how hard it is to separate out the 'genuine' from the 'spurious' works of Holbein.³⁰ Furthermore, he inadvertently pinpoints the problems regarding connoisseurship:

...the assertion of a fact is one thing, the assertion of an opinion is another....A critic has every right to say that he doubts the ascription of a certain work to a certain master, without being pronounced dogmatical...I do not intend to assert that Holbein never painted such and such a work, but simply that I do not perceive his hand in it.³¹

But what exactly is *Holbein's hand* and how is it defined? It is something a connoisseur is often reluctant to elucidate upon. In terms of the portrait drawings, 'Holbein's hand' is much debated in relation to the black aqueous lines forming the contours, discussed later in this chapter. However, looking at a drawing and being able to 'read' it in such a way that it deepens our understanding of how it may have functioned, is a more informative and perhaps more culturally valuable approach. Much of the extant

²⁹ Ralph Wornum. 1867. 4.

³⁰ Ralph Wornum, 1867. 37.

³¹ Ralph Wornum, 1867.37-38.

Holbein literature is the result of a traditional connoisseurial approach to interpreting the drawings.³² It is an approach that was still widely used in the late 20th century and to a certain extent in current research. Indeed, aspects of connoisseurship such as the collection of empirical evidence, has been much used for this thesis. Art historian John Rowlands' catalogue raisonné of 1985 is a study of Holbein's painted oeuvre but in the main is concerned with questions of attribution and chronology but he does not give objective or adequate reasons for such attributions or re-attributions.³³ Similarly, in his discussion of the three versions of Thomas Cromwell, Roy Strong wrote that, 'None of the versions is acceptable as directly from the hand of Holbein himself' but does not go on to clarify any of the reasons for this statement.³⁴ Traditional connoisseurship can lack a quantifiable methodology, making findings hard to define.

Writing in 1941, when the Burlington Magazine was still titled as one 'for Connoisseurs', German art historian, Max J Friedlander (1867-1958) said that proving authorship comes down to quality.³⁵ Quality is a concept that is not readily defined and discussed within Holbein literature; this could be because it is seemingly entangled in the language of connoisseurship and is not always easy to explain. Quality could be judged as a matter of taste, for example and therefore not always an objective judgment. Friedlander tied the concept of defining quality to that of the connoisseur, stating that the best way to define quality is in the comparison of original and copy.³⁶ This is never more apparent than during the great debate over which of the Darmstadt Madonna paintings was the original by Holbein as discussed in Friedlander's article.³⁷ In the disagreements that ensued, it seemed to come down to a matter of taste rather than any possible technical study at this time (1870s).³⁸ What is clear is that some drawings and paintings are of 'better quality' than others, not just in terms of condition but in terms of

³² Max Friedlander, 'On Art and Connoisseurship', London 1942; David Ebitz: 'Connoisseurship as Practice', *Artibus et Historiae*.9.18 207-212 1988; Gary Schwartz. 'The Penalty of Ahistoricism'. *Artibus et Historiae*. 9.18. 1988. 201-206.

³³ John Rowlands, *Holbein: The Paintings of Hans Holbein the Younger*. Oxford: Phaidon Press. 1985

³⁴ Roy Strong, 'Holbein in England I and II'. *The Burlington Magazine* May 1967 .109.770.277.

³⁵ Max J Friedlander, 'Artistic Quality: Original and Copy'. *The Burlington Magazine for Connoisseurs*. May1941. 78.458.143

³⁶ Max J Friedlander.1941.143-144.

³⁷ see also: Jochen Sander, 'The Darmstadt Madonna', *Hans Holbein the Younger, Portraitist of the Renaissance*, eds. Stephanie Buck and Jochen Sander. The Hague:Zwolle.2004.37-45 and Susan Foister, 'Hans Holbein. The Hague', review, *The Burlington Magazine* January 2004.146.1210.52

³⁸ Max J Friedlander.1941.144

technical skill and, although challenging, it would be useful to be able to define why this is the case.

Although there is a difference between an art historian and a connoisseur, the method of attribution - that is, equating works of art with the individual hand and style of the master - appears to have been the same historically. There are certain weaknesses in the reasoning behind some attribution decisions in terms of the subjectivity of traditional connoisseurship. There is an artificial importance attached to the authorship of pictures in general, which, as curator John Murdoch pointed out, is "...generally held to be a function of the respect for individualism in the Renaissance..."³⁹ Financial value in the art market must also play a part in the drive for attribution. Since connoisseurship is founded on the experience of the expert in looking at an artist's oeuvre, the connoisseur will pinpoint an individual's style and a measure of quality for attribution purposes. Yet such a closed empirical approach fails to account for aspects or nuances that do not fall within their subjective prerequisites regarding a particular artist's techniques and are often ignored. It is also often intimidating to question the authority of the 'expert'. Interpretations of Holbein's drawings are limited by the inability of traditional connoisseurship to explain fully opinions and conclusions, to examine usage, and to explore issues such as condition or choice of materials.

Although intuition may be the first means of identification for a connoisseur, there still remains a need to try and explain this process. For example, it is far more informative, as art historian Gary Schwartz has proffered, to ascertain 'authorship of an object through establishing the history of its production' and not necessarily through the object itself.⁴⁰ The way forward therefore, is not through the unproven Morellian theory that every artist leaves a 'fingerprint' in every work they produce:⁴¹ the very aspect that every connoisseur says they can interpret. It is the methodology of establishing the artistic process of object production that can develop modern connoisseurship and where art technological research emerges as the ideal candidate to

³⁹ John Murdoch, 'Attribution and the Claim to Objectivity'. International Journal of Cultural Property, July 1993. 2.2 324.

⁴⁰ Gary Schwartz. 'The Penalty of Ahistoricism'. Artibus et Historiae. 1988. 9.18.204

⁴¹ Giovanni Morelli (1816-1891) Italian art critic, developed a method of connoisseurship from scrutinising characteristics he thought particular to that artist, concluding that 'every important painter has, so to speak, a type of hand and ear peculiar to himself'. Morelli, Italian Painters: Studies of their Works, trans. from German by C J Ffoulkes with an introduction by A H Layard. J Murray: London. 1892-3.vol.1.22

help with this. Art technological research comprises an holistic approach to objects, incorporating scientific analysis, source research and reconstruction and is discussed as a methodology in detail below. Studying works in groups to establish a sense of working practice and the context in which they were made is a useful method in making steps to a better understanding of works.

One has little idea of the size of the portrait drawings when viewed in reproduction: an aspect that is important in relation to the drawings' function. Size is also important because it influences the choice and use of materials. Further, viewing the drawings in reproduction makes relational comparison almost impossible. Although the imbalance has been somewhat redressed in more recent texts it is apparent that the signs of use and function of Holbein's portrait drawings are still not being comprehensively investigated or acknowledged. Generally, early texts only touched on the theme of the function of the drawings as being preparatory for a painting. For example, whilst Ganz acknowledged the fundamental importance and foundation of the drawing as a springboard to painting he, like others, did not expand on the drawings' potential to fulfill multiple functions.⁴²

2.3 Capturing Likeness

Few art historians attempt to understand the drawing process and how this affects the final drawing. Foister is an exception among Holbein scholars in attempting to understand how a likeness is captured.⁴³ She discusses practicalities such as the distance of the sitter from the artist, and the length of time for which a sitter might have to sit for the drawing.⁴⁴ Whilst Foister observes that 'their primary purpose as working drawings is apparent from their unfinished appearance' there are more physical signs that indicate their function.⁴⁵ The signs of transfer on the drawing, such as indentations along contours, and occasional notations regarding colours are also further indications of their function as preparatory drawings. These drawings were not merely patterns for tracing. Extant literature underestimates the information held in the

⁴² Holbein: The Paintings. Complete Edition. London: Phaidon. 1950.5

⁴³ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Johnson Reprint, Harcourt Brace Jovanovich. Limited edition in two volumes..1983.13

⁴⁴ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Johnson Reprint, Harcourt Brace Jovanovich, limited edition in two volumes.1983.13-14

⁴⁵ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Johnson Reprint, Harcourt Brace Jovanovich, limited edition in two volumes..1983.13

drawings that was useful and used to translate into the final painting, thereby omitting the drawings' complex relationship with the painting of the same sitter. In 1604 van Mander mentioned Holbein's left-handedness and what he perceives to be Holbein's consistency in conception and painting of his works and that the sequential way that he produced his work distinguished him from his contemporaries:

...as for example where a beard or hair had to be shown overlying: he first painted the whole as it should be carefully taking the shadows into account, and when it had dried he painted the beard or hair very flowingly and naturally over the top of it.⁴⁶

This observation is astute with regards to Holbein's painting technique, and such sequencing is seen in the rendering of hair on many of his preparatory portrait drawings; this aspect is discussed further in Chapter Three. It is this very aspect: the layering of materials, which has been overlooked in Holbein's drawing technique, but which, when established has revealed much about his drawing processes whilst capturing the likeness of a sitter. Whilst there may be the possibility that Holbein spent more time with some sitters than others, the fact that some of the drawings are more detailed or seemingly 'finished' than others might indicate that he worked on the drawings after the sitter had gone or that they reflect intermediate stages of a drawing.⁴⁷

In contrast Ganz contended that assistants finished Holbein's working drawings but this is unlikely to be the case for portraiture drawn from life where accuracy and immediacy is so important whilst in front of the sitter. Likewise, the idea that Holbein drew the head of the sitter and an assistant added the body, as was suggested for a non-attributed drawing in the 2006 Tate Holbein in England exhibition is also contentious.⁴⁸ This amalgamation of parts, executed by different artists, is more likely in a workshop production of painting than for a portrait drawing. Chamberlain asserted Holbein's occasional making of notes on the drawing regarding colour was all that he needed, not that he was also able to indicate through colour the tone of the flesh for example -

⁴⁶ Karel van Mander, trans. Miedema. 153

⁴⁷ Significantly, Foister suggests that such evidence as the note on a Jean Clouet drawing which refers to the work taking 6-7 hours could be the time taken to complete the drawing not necessarily in front of the sitter.

⁴⁸ S Foister, *Holbein in England*, 2006. Tate Publications. 115. This was the V&A portrait drawing discussed in the Introduction to this thesis.

instead he believed that Holbein's habit was to 'rely upon memory and these curt notes when he came to paint the actual portrait.'⁴⁹ Ganz also suggested that the second visit drawings - 'reduced to minimum detail' - meant that Holbein painted from memory.⁵⁰ Indeed, Holbein may have had a great memory, but painting from memory was clearly not Holbein's *modus operandi* given the amount of detail in some of his drawings.

This research has found that there are strong links between Holbein's drawing and painting technique. This was recognised by Ganz with regards to his observations on Holbein's painterly use of chalks being in contrast to his use of the more monotone silverpoint.⁵¹ In more recent literature, Foister also makes the link between his practices in drawing and painting.⁵² Whilst some authors, may relate the appearance of the drawings to one aspect of their function - that of a face pattern - the use of the drawing in terms of matching likeness and colour whilst painting is often omitted.⁵³ Maryan Ainsworth states that, unlike paintings' underdrawings, '... drawings are not physically and functionally linked to the subsequent laying on of paint layers...'⁵⁴ However, research for this thesis will show that Holbein's drawings *are* physically linked to the paintings in more than just a shape for transfer.

Studying the portrait drawings in terms of what information is transferred, not just directly in the act of tracing, is rarely discussed and the potential role of the drawings is thus underestimated. Highlighted by Foister in 1983 by a comparison of measurement of drawing to painting, Ainsworth further demonstrated, in 1990, that the drawings functioned as '*paternes*' for the paintings through the study of the underdrawings of the same sitter.⁵⁵ Ainsworth's article is important in that it reflected the result of research into Holbein's underdrawings and what part the portrait drawings themselves played in this process. However, because it was not the research's primary interest, Ainsworth's study does not fully consider the relationship of Holbein's technique to the

⁴⁹ Chamberlain, Hans Holbein the Younger. 1913.55

⁵⁰ Paul Ganz. The Paintings of Hans Holbein. 1950.11

⁵¹ Paul Ganz, Handzeichnungen Hans Holbein des Jungeren in Auswahl.1943.16. With thanks to Susan Foister for her translation of this section of the Handzeichnungen.

⁵² Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Johnson Reprint, Harcourt Brace Jovanovich. Limited edition in two volumes..1983.25

⁵³ M Ainsworth.1990.179

⁵⁴ Maryan Ainsworth, 'Northern Renaissance Drawings and Underdrawings: A Proposed Method of Study'. Master Drawings. Spring 1989. 27.1. 6

⁵⁵ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983 14; Maryan Ainsworth. "'Paternes for physioneaymes': Holbein's portraiture reconsidered' Burlington Magazine, 132.173-186. March 1990.

function of the drawing. Nor does the article explore how the drawing materials and techniques may link to those of the painting and what, other than salient lines, was transferred to produce the associated painting.

2.4 Optical Devices

An aspect of Holbein's drawings that has aroused considerable debate is the presence and appearance of the contours of the sitters' features. A characteristic of Holbein's portrait drawings that has been commented on by numerous authors is their 2-dimensional or 'flat' appearance and the presence of the strong contouring.⁵⁶ This has been interpreted in various ways, and debated for centuries.⁵⁷ For example, explanations for the emphasis on contour have included Holbein's possible use of a drawing apparatus, or optics in the form of lenses and mirrors that would project a traceable outline. In 1919, curator and art historian Joseph Meder⁵⁸ was the first person to suggest that Holbein used a tracing machine similar to that described and illustrated by Dürer.⁵⁹ In 1945, Parker also suggested that Holbein used tracing apparatus to aid his drawing process, proffering that this optical device would explain what he saw as a lack of 'plasticity' in his later drawings.⁶⁰ The artist David Hockney also believes that Holbein used a drawing aid.⁶¹ He bases his argument for Holbein's use of optics on the painting of The Ambassadors, 1533, (The National Gallery, London, NG1314), arguing that the anamorphic skull is a 'clue that Holbein used optical tools' because the skull appears distorted and almost unrecognizable, unless viewed from an oblique angle.⁶² In relation to Holbein's portrait drawings, Hockney writes that 'you cannot trace a living head...only key points need be noted - primarily around the eyes, nose and the corners of the mouth. The rest is eyeballing.'⁶³ Whilst Hockney's arguments are less speculative

⁵⁶ For example, K. Parker 1945.28; J. Meder, The Mastery of Drawing, translated and revised by Winslow Ames, New York. 1978 Vol.I.. 339; Ainsworth.1990.180, Jane Roberts, Holbein and the Court of Henry VIII. National Galleries .1993.17.

⁵⁷ See: <http://echo.mpiwg-berlin.mpg.de/content/optics> a useful website on the history of the use of optics by European Cultural Heritage Online.

⁵⁸ Joseph Meder, The Mastery of Drawing.1978. 339.

⁵⁹ For a full description of the drawing machine, see: Albrecht Dürer Unterweisung der Messung. 1525, Trans. By Walter L. Strauss. New York: Abaris Books, 1977.

⁶⁰ Parker.1945.31

⁶¹ David Hockney. Secret Knowledge: Rediscovering the lost techniques of the Old Masters. London: Thames and Hudson, 2001.15

⁶² David Hockney.2001.57. The presence of an anamorphic skull has involved debates about Holbein's use of optics and knowledge of Italian Renaissance perspectival techniques. When viewed from an oblique angle, the skull appears undistorted.

⁶³ David Hockney.2001.216

because he has experience through practice, he still does not adequately explain the appearance of Holbein's drawings in terms of a possible use of optics whilst drawing from life.

However, it is unlikely that Holbein used any optical device, and several authors have argued convincingly against it on both a practical and aesthetic basis. For example, both Foister⁶⁴ and Jim Murrell have asserted that the distance needed between the sitter and pane of glass would have resulted in an image smaller than most of Holbein's portrait drawings as well as an unnerving proximity to the sitter:

In order to trace an image the size of Holbein's, the glass has to be an uncomfortable 7 or 8 cm from the sitter's nose and the perspective becomes so steeply exaggerated that it gives an odd appearance to the drawing. The use of the device would also create problems both in completing the drawing and in studio practice.⁶⁵

Foister further maintained that the pink primed paper would be an illogical choice for tracing directly from the glass because it would not be possible to trace the image straight from the glass on which it was drawn.⁶⁶

A more reasonable explanation of the emphasis on contour and what Parker described as 'simplification'⁶⁷ and Maryan Ainsworth as the 'decidedly flat, 2-D effect of the drawings'⁶⁸ is proffered by Foister, who links them to drawing style and the condition of the drawings rather than the use of optical devices.⁶⁹ Furthermore, when really scrutinized, Holbein's portrait drawings show him searching for the contour during the sitting, resulting in multiple lines that seem to contradict the linear and mechanical descriptions of previous authors; this is examined in detail in Chapter Four.⁷⁰

⁶⁴ Susan Foister, *Drawings by Holbein from the Royal Library, Windsor Castle*. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.15

⁶⁵ Jim Murrell, 'Observations on Holbein's Portrait Drawings'. *The Paper Conservator* 1996. 20. 5

⁶⁶ S Foister. *Drawings by Holbein from the Royal Library, Windsor Castle*. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.15

⁶⁷ Parker.1945.28

⁶⁸ Ainsworth.1990.173.

⁶⁹ Susan Foister, *Drawings by Holbein from the Royal Library, Windsor Castle*. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.15

⁷⁰ See Appendix 3 for a discussion of the reconstruction and use of a Dürer-style drawing apparatus.

2.5 Materials and techniques

One of the major themes to emerge from this study is the shortcoming of existing literature to thoroughly investigate Holbein's drawing materials and techniques. There are many more sources on the materials of painters with a concentration of literature on Italian Renaissance over Northern Renaissance artists. Documentary sources concerning artistic practice in 16th England are extremely limited. Some information is available from limited surviving records such as those of the Painter Stainers Company in London, in records of court payments and in wills of Tudor citizens. Evidence concerning drawing materials and practice, and the transfer of designs to full scale painted images is scarce for English artists in this period. Holbein's work is also discussed in treatises but again the information is rather limited regarding his materials and techniques.⁷¹ The English calligrapher and miniature painter, Edward Norgate (1581-1650) writes on Holbein's technique in c.1646 and he also mentions some materials.⁷² Whilst Christian Müller's Holbein exhibition catalogue of 2006 included a chapter on Holbein's draughtmanship, it was not essentially about the materials and techniques of Holbein's portrait drawings.⁷³

In contrast to that of painting, which has been studied exhaustively, the investigation and subsequent publications concerning drawings was only taken up with any enthusiasm in the early 20th century. Albertina Museum curator and later director, Joseph Meder undertook one of the first systematic cataloguing projects involving a major European drawing collection in 1922. During that time, when there were few publications on drawings, Meder also began research for *The Mastery of Drawing* (1919). Meder was keen to stress how important it was to identify the media correctly stating that, 'One is obliged to ask why, if a technical description is given at all, it has any right to be incorrect'.⁷⁴ But what he did not point out is that it is really quite difficult to identify drawing media correctly – especially after years of wear and tear, storage and display changes and much handling: all of which can alter the appearance of more

⁷¹ Nicholas Hilliard. A Treatise Concerning the Arte of Limning. Together with A More Compendious Discourse Concerning Ye Art of Limning. by Edward Norgate with a parallel modernized text edited by R.K.R Thornton and T.G.S Cain. London: Mid Northumberland Arts Group in association with Carcanet New Press, 1981

⁷² Edward Norgate, Miniatura or the Art of Limning, ed. Jeffery M.Muller & Jim Murrell. New Haven & London: Yale University Press 1997. 101

⁷³ Christian Müller.2006. 20-33.

⁷⁴ Meder.1978.7

friable media. Such factors have been discussed in Chapter One. Whilst still a very useful reference, Meder's book is very much bedded in the tradition of connoisseurship.

The complexity of Holbein's drawings has been underestimated, which in part has arisen from previous authors' lack of interrogation of the materials chosen by Holbein, and the techniques he used to apply them. Holbein's drawings are quite multifarious in their execution and physical structure: an aspect not often considered by earlier authors, and an aim of this research has been to determine the sequencing of materials in order to better understand the drawings' function and use. An artist's choice of materials is dictated largely by what is available at any particular time, but within those restrictions, materials are chosen to best fulfill a purpose; this issue has not been fully explored by Holbein scholars. As I shall demonstrate in Chapters Three and Four, Holbein chose specific materials to fulfill a particular role in the drawing: the choice of watercolour specifically for the irises of his sitters is one such example. The specific purpose of the pink preparation on many of the portrait drawings also raises conflicting views. Traditionally, paper is prepared in order to have enough 'tooth' that metalpoint leaves a mark. If coloured, it can also provide a mid-tone. Ganz thought that Holbein's pink priming 'simplified the artist's work and limited the use of coloured chalks to a minimum' and that this technique was developed during Holbein's second visit to England because the demands on his time necessitated a quicker method of working.⁷⁵

The shade of pink has also raised discussion: this was mentioned by Wornum occasionally⁷⁶, but Parker goes further in making some distinction between the tones of the pink-prepared paper that Holbein used during his second visit to England.⁷⁷ Parker maintained that the later drawings are more salmon pink in colour, and he uses this tonal difference as a possible way of dating the drawings.⁷⁸ There are many anomalies with this form of classification and although some of the pinks are darker, they do not necessarily indicate a later working nor does Parker always follow his own rules regarding this. But more recent scholars have largely overlooked the significance of the preparation or discussions around how that fits in with Holbein's processes. A detailed

⁷⁵ Paul Ganz, 'Holbein', *The Burlington Magazine for Connoisseurs*. November 1925. 47.272.240.

⁷⁶ See Wornum, *Holbein. 1867*, Appendix II, a catalogue of Holbein's drawings.

⁷⁷ Parker.1945, where he makes a note of the tones of pink of the prepared paper: 'pale pink'; 'pink'; 'opaque, dull-pinkish priming' in catalogue entries

⁷⁸ Parker.1945. 28

discussion of Holbein's pink preparations is given in Chapter Four, where I will demonstrate that the pink preparation may indeed have speeded up Holbein's drawing process, and was not just used in the traditional manner in order to facilitate metalpoint drawing. The relationship between the pink preparation on the drawings, the pink priming layer on some of the panel portraits, and his use of a pink carnation for miniature portraits is also discussed.

There is a similar lack of clarification surrounding Holbein's use of chalk. The question as to whether he used natural or fabricated chalk has been discussed, but never fully addressed, despite the artist's copious use of the media.⁷⁹ This is in part due to the difficulty of ascertaining this without sampling. In her comprehensive and valuable addition to the Windsor drawing catalogue, Foister says that Holbein probably manufactured chalks himself but this has never been substantiated.⁸⁰ This is a question that remains unanswered, as current analytical techniques appropriate for the drawings have proved inconclusive. Holbein's choice and use of chalks is discussed in more detail in Chapter Three. Jane Roberts asserts that Holbein used his chalks in a wet medium to create a similar effect to watercolour, and that watercolour was rarely used.⁸¹ However, the author does not draw any conclusions as to when and why Holbein used the wetted chalk technique. Despite the fact that watercolour and wetted dry medium are quite similar in appearance, it is apparent that Holbein chose each technique to fulfill a particular role and, as discussed in Chapter Four, there are in fact clear links between these two techniques and their location on a drawing.

Another area where there is considerable confusion is the media and methods Holbein used for the prominent contours on the portrait drawings, which include black aqueous media and metalpoint.

⁷⁹ For more discussion regarding natural v fabricated chalks see Joyce Townsend, 'Analysis of pastel and chalk materials', *The Paper Conservator* 1998. Vol.22.21-28; Marjorie Shelley, 'An Aesthetic Overview of the Pastel Palette: 1500-1900.' *The Broad Spectrum: Studies in the Materials, Techniques, and Conservation of colour on Paper*. Ed Harriet K Stratis and Britt Salvesen. London: Archetype Publications Ltd. 2002.3 and Thea Burns: Chalk or Pastel?: The use of coloured media in early drawings. *The Paper Conservator* Vol. 18. 1994. 49-56

⁸⁰ Susan Foister, *Drawings by Holbein from the Royal Library, Windsor Castle*. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes..29

⁸¹ Jane Roberts.1993.16

2.6 Contours

The appearance and function of the contours has been misinterpreted, and their presence misunderstood. This in turn has influenced the discussion of how the contours relate to the function of the drawings, whether Holbein used the drawings for transfer, and how he achieved this. The black aqueous media on the contours has aroused considerable debate and the lines have been construed in different ways: alongside being proffered as evidence of Holbein's use of an optical device, the contour lines have been variously described as extensive re-working by the artist, later retouchings by another hand, or restorations.⁸² In 1911, the art historian Lionel Cust was debating the authorship of the heavy black lines on the portrait drawings, believing that they had been injured by 'unskillful retouching'.⁸³ In 1925 Ganz asserted that Holbein had to retrace faded or abraded contours because the chalks 'fell off' the primed paper, and also declared that these black lines were, more often than not, added by other artists.⁸⁴ More recently, Maryan Ainsworth also misinterpreted them, stating that they were 'employed to revitalize contours' that had been worn away from a repeated transfer process using metalpoint'.⁸⁵

Many of these authors also make a distinction between those lines made by Holbein as 'sensitive and precise', and those by another hand as 'coarser', attributing the latter to a workshop or later hands'.⁸⁶ Cust's statement: 'It requires an expert eye to determine what retouches' were in Holbein's hand, illustrates how his theories sit very neatly into those of traditional connoisseurs.⁸⁷ Ganz even made a distinction between two different hands on what he considered to be re-working on two portrait drawings.⁸⁸

This is an example of connoisseurial speculation around what constitutes the hand of

⁸² See Chamberlain. 1913.252-53 and Parker.1945.28-30; Foister Limited Edition in Two Volumes, Windsor Drawing catalogue. 1983.30; Müller, 1988 cat Hans Holbein d.F. Zeichnungen aus dem Kupferstichkabinett der Öffentlichen Kunstsammlung.1998 Basel where he calls for each case of reinforcement should be taken individually & Jim Murrell, 'Observations on Holbein's portrait Drawings'. The Paper Conservator. 1996. 20.6

⁸³ Lionel Cust. 'On a Portrait Drawing by Hans Holbein the Younger'. The Burlington Magazine for Connoisseurs. February 1911. 18.95.270 Lionel Cust was Director of the National Portrait Gallery, London from 1895-1909 with a special interest in artistic schools of Northern Europe. He co-edited the Burlington Magazine from 1909-1919.

⁸⁴ Paul Ganz.1925. 23-245.

⁸⁵ Ainsworth.1990.180

⁸⁶ Ainsworth.1990.180

⁸⁷ Lionel Cust.1911.270

⁸⁸ Parker.1945.42, catalogue entry for Parker 23, RL12263, where Parker cites Ganz's observation on the different hands for this drawing as well as Parker 22, Sir John Godsalve.

the artist and really does very little to improve our understanding of the drawings. Ainsworth has also called into question the authorship of both metalpoint and the black aqueous lines on a quality basis.⁸⁹

However, more recently, Foister dismissed the view that these black inked contours are later additions because of corresponding inked notations in Holbein's hand on some of the drawings and further that these opinions do not take in to account the 'outstanding quality' of some of this contouring.⁹⁰ As I shall demonstrate in Chapters Three and Four, it is unlikely that these lines were later reinforcements. Holbein's use of line had multiple purposes: it covered and fixed the more hesitant working lines of friable media, it was stylistically part of his drawing process and, although this is open to debate, it would also facilitate a more obvious line for tracing if need be. In working out the sequence of the media in some of his drawings it is evident that initial lines in friable media are reworked or fixed with a darker more permanent line executed in black aqueous media, and that it is used in specific areas, such as lip lines, eye lashes and brow as well as hair in general. Significantly, such contouring can be seen to be part of what seems a fairly common workshop practice in the 16th century: reinforcement of contours is not just exclusive to Holbein.⁹¹ For example, there is the precedence of the use of touches of aqueous black on sections along the contours of faces in drawings by Hans Holbein the Elder and his workshop.⁹²

However, whilst one could argue that Holbein's drawings did develop a heavier emphasis on contour over the years, it was not just to aid the transfer process, nor was its main purpose to restore lost or rubbed lines. These aspects are evidenced by signs of tracing on drawings which do not have an emphasis on contour, such as the portrait drawing of William Warham of 1527, and by the fact that such contouring has an artistic heritage.

⁸⁹ Ainsworth.1990.173

⁹⁰ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.30

⁹¹ See for example catalogue entry in Stephanie Buck's *Die niederländischen Zeichnungen des 15. Jahrhunderts im Berliner Kupferstichkabinett: Kritischer Katalog*, Turnhout, 2001.298: Entry for Hans Burgkmair ? IV.11 Brustbildnis eines Mannes in venezianischer Tracht 1490, in which she describes the materials and the contours, saying that the head contours may have been reinforced by a later hand in black: 'Konturen am Kopf wahrscheinlich von späterer Hand mit Feder in Schwarz und Pinsel in Graubraun übergangen'

⁹² See drawing Portrait of Sigmund Holbein at British Museum inv.no: 1895.0915.987 of 1512, Figure 59.

In reading the drawings we need to understand what constitutes a mark made as part of the drawing process and what is a mark made as part of the process of transfer, as this is where the confusion over Holbein's technique and use of the drawings has entered the literature. Defining signs of use – specifically elements relating to transfer – will be discussed further and illustrated in Chapters 3 and 4.

2.7 Signs of transfer

Debate around what is a drawn line and what is a line indicating the act of transfer is very confused and convoluted within Holbein literature; since physical signs such as indentations may be related to the act of transfer, it is important to try and unravel these issues. It was only really with the development of modern analytical technology such as infra-red reflectography later in the 20th century that we start to see obvious correlations between underdrawing, preparatory drawing and painting, explored on a technical basis.⁹³ Ainsworth noted that the drawings have signs of having been traced over and links this with the underdrawing shape on paintings of the same sitter. Further, she surmises that linking these two proves whether the drawing was used for transfer of the salient parts of the face on to the panel. Foister and Ainsworth have looked at the transfer of Holbein's portrait drawings in some detail, and although these texts do prove that some of Holbein's drawings were used for transfer they do not fully explore the use of the drawings and do not differentiate between a drawn line and a line made as a result of the transfer process. Further, the findings are not usually illustrated by examples of the discussed mark or lines.

Ainsworth cites the 'frequent use of metalpoint to reinforce the contours' as being indicative of their use as face patterns.⁹⁴ The tracing of a drawing on prepared paper with a tool that could potentially leave a mark seems unlikely, and scientific and visual examination of the portrait drawings has not always been able to clarify the presence of metalpoint definitively. Such a description leaves the reader wondering whether it is reinforcement of a worn line or reinforcement as a result of the act of tracing. This aspect will be clarified and differentiated in Chapters Three and Four.

⁹³ Ainsworth. 1989. 5-38 and 1990. 173-186; see also Foister Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.21-25

⁹⁴ Ainsworth. 1990 173 & 179-180

In terms of being used as a face pattern for transfer to panel, Foister was amongst the first to suggest this and to investigate through taking measurements.⁹⁵ She also listed possible methods of transfer having read the drawings' physical attributes. For example, she noted indentations over some contours, which lead her to conclude the most likely method was the carbon paper method, explained in Chapter Three;⁹⁶ this method was first suggested by Parker in 1945 for a number of Windsor drawings.⁹⁷ Foister also asserts that metalpoint may have been used as the tracing instrument, although she rightly points out that other tools may have been used that left no visible marks.⁹⁸ However, some confusion still remains in the literature as to whether the term 'metalpoint', refers to the drawing medium designed to leave a mark, or a stylus for tracing.

Jim Murrell appears to make the connection between the emphasis on contour and the use of that contour for the transfer to panel to create the underdrawing.⁹⁹ But he speculates that due to a lack of indentation, the drawings must have been traced with oiled paper, and concludes that this was Holbein's rationale for such dark contours. But this does not appear to be the case. Thorough examination of the drawings during this research has revealed more indentation – on both the first visit drawings and on the later pink grounded drawings – than previously found, not only on drawings with known/extant paintings but also on drawings where a painting no longer exists, as illustrated in Table 4 (in Appendix Four).

Ainsworth's research into the relationship of Holbein's drawings to the underdrawings provided new and significant evidence on their connection. But there is still some confusion as to how the drawings were used, and therefore what constitutes a sign of transfer or a line drawn as part of the composition. Ainsworth believes that whilst the authorship of some of those lines may be called into question, the function of them is not: she asserts that they are tied to the transfer process, stating that a metalpoint tool

⁹⁵ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.21

⁹⁶ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes.24

⁹⁷ see Parker.1945.43 & 54 in relation to the drawings of Lady Vaux, Parker 25 and William Fitzwilliam, Earl of Southampton, Parker 66: 'metal-point lines as if for transfer'.

⁹⁸ Susan Foister, Drawings by Holbein from the Royal Library, Windsor Castle. London: Harcourt Brace Jovanovich. 1983, limited edition in two volumes 25

⁹⁹ Murrell 'Observations on Holbein's portrait drawings'. The Paper Conservator. 1996. 20.7

was used to trace the outlines.¹⁰⁰ However, her supposition that: 'Perhaps the metalpoint was used not only to effect the transfer of the drawing but also to make corrections of the chalk drawing during the transfer process', does not make artistic sense:¹⁰¹ it is not clear why an artist would want to make another, potentially disfiguring, mark on a drawing that obviously held some value. These portraits, some highly finished, were kept within Holbein's possession, and were part of a group of drawings that would be of use for reference whilst painting, as well as demonstrating his skills to future clients. Furthermore, they do not show signs of having been repeatedly traced.

The relationship between signs of transfer on the drawing to the lines of the underdrawing are important in establishing the function of Holbein's portrait drawings. The contours of drawing and underdrawing have been found to follow each other exactly or closely and this relationship provides compelling evidence that the drawings were used as face patterns. However, what part the portrait drawing played in relation to the painting of the same sitter is not always certain, nor is it always explored to its full potential. Methods of tracing, the accuracy of that process, as well as discrepancies of signs of transfer within the same drawing are discussed in Chapters Three and Four.

2.8 More recent research

It is evident that drawing has been a poor relation to painting and sculpture in terms of its interrogation, and although the importance of drawings as a primary source is reflected in the growing numbers of technical studies and projects regarding artists' processes, drawings are often only examined in terms of their supporting role in

¹⁰⁰ Parker alludes to metalpoint as a tool for transfer in numerous entries in the Windsor drawing catalogue of 1945. Maryan Ainsworth first introduced her discussion on the use of metalpoint as a transfer tool for tracing in 'Northern Renaissance Drawings and Underdrawings: A Proposed Method of Study', *Master Drawings* Vol 27 Spring 1989. 5-38

¹⁰¹ Maryan Ainsworth, written communication to Jane Roberts 1986. [Drawings by Holbein from the court of Henry VIII: Fifty Drawings from the Collection of Her Majesty Queen Elizabeth II, Windsor Castle.](#) The Museum of Fine Arts Houston Harcourt Brace Jovanovich, Publishers. 1987.110

relation to a painting.¹⁰² For example, *Hans Holbein: Portraitist of the Renaissance*, 2003, is a good example of a publication in which a discussion of the drawings is undertaken alongside the painted portraits, although it does not fully explore the function of the drawings in relation to materials and techniques.¹⁰³

However, there is much recent and current research that has started to address the function of drawings through an investigation of their materials and techniques. A more rigorous examination has been aided by the development of new analytical techniques; these are discussed more fully in the section on methodology below. An increased interest into artists' materials has started to address the complexity of drawings. Whilst this information is more often than not represented by a supporting role for catalogue entries, there have been more recent examples of research for exhibition of drawings being issued as separate technical publications, such as the recent British Museum catalogue on Italian Renaissance drawings.¹⁰⁴ Although its remit was Italian Renaissance drawings, the methodology employed, combining science, conservation and curatorial skills, comprises extensive visual and scientific analysis, including technical imaging, has served as a good model for further research and will be employed in the examination and analysis of the British Museum's Northern Renaissance drawing collection.

There are some excellent published examples of technical art history, although these mostly relate to paintings. For example, Gunnar Heydenreich's 2007 publication 'Lucas Cranach the Elder: painting materials, technique and workshop practice', is a valuable contribution to, as well as an excellent model for, the field of art technological research.¹⁰⁵ This doctoral research is the result of a very comprehensive study of Cranach's work, and proves what examination of the primary source in conjunction with contemporaneous documentation can achieve.

¹⁰² Specific Holbein drawing catalogues are limited in their technical and visual analysis of the portraits. added to this is the fact that the remit of Holbein painting catalogues do not necessarily involve an indepth analysis of his portrait drawings.

¹⁰³ Stephanie Buck, Jochen Sander, et al., *Hans Holbein Portraitist of the Renaissance*. The Hague. 2003

¹⁰⁴ Janet Ambers, Catherine Higgitt and David Saunders, eds. *Italian Renaissance Drawings: Technical Examination and Analysis*. Archetype Publications in associate with The British Museum: London. 2010

¹⁰⁵ G Heydenreich, *Lucas Cranach the Elder: painting materials, technique and workshop practice*. Amsterdam 2007

Other current research into drawing media includes that by the Berlin Kupferstichkabinett.¹⁰⁶ This is an interdisciplinary project with the Louvre and will add information to a study that is reassessing German 15th century drawing at the Kupferstichkabinett. Its findings will inform comprehensive cataloguing of their drawings; something that has already been carried out on their 15th century Italian and Dutch drawings. Despite an upturn in drawing-related research, there is a continued emphasis on analysis of paintings. For example, Making Art in Tudor Britain is a 5 year funded research project, established at the National Portrait Gallery, London, in 2007, involving detailed scientific examination of their Tudor and Jacobean painted portraits. Concerned with researching their 120 portraits from 1500-1620, it has also incorporated some portraits from outside of their collection. Eight paintings after Holbein have been interrogated, which has included some investigation into the extant Holbein drawings' and paintings' possible use as face patterns. Dendrochronology of the eight panels proved the paintings were executed 30 to 60 years after Holbein's death.¹⁰⁷ Whether Holbein's portrait drawings were in circulation for direct use during and after his death is open to debate. Patterns could have been made from them to be used more readily without fear of damaging the originals; and may account for some of the indented lines that signify transfer. Although copies are of varying quality, the Making Art in Tudor Britain team have concluded that the copies were 'made by artists who had access to the original Holbein painting (or direct patterns from the original) as the features and proportions of the figures are often matched with considerable exactitude'.¹⁰⁸

The Andrew W. Mellon Foundation has funded this and a number of other research projects in order to foster international collaboration amongst institutions with the aim of sharing expertise and information.¹⁰⁹ Pilot projects such as the Raphael, Rembrandt and Cranach Digital Documentation Projects are creating digital archives and transmission of conservation documentation that brings together art-historical,

¹⁰⁶ For more information on this project, see:

<http://www.smb.museum/smb/forschung/index.php?lang=en&p=2&objID=3503&n=2>

¹⁰⁷ <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/matb-case-study-7.php>

¹⁰⁸ <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/matb-case-study-7.php>

¹⁰⁹ See : <http://mac.mellon.org/issues-in-conservation-documentation/pilot-projects>

conservation and technical based information.¹¹⁰ This information has or will become readily available to scholars and the public, and demonstrates a much-improved methodology. Such archives provide a visual tool for comparison of materials and techniques that is invaluable; it also encourages the methodology of connoisseurship to be more defined and less tacit. There is a strong argument for including findings from Holbein research in both painting and drawings in such a project. This would bring together disparate projects that have gathered visual, technical and historical information regarding Holbein's materials and techniques. The benefit of such an undertaking is such that comparisons can be made within as well as across genres, which would potentially help to establish a better sense of workshop practice.

Whilst there is no doubt that the function of a drawing can be more fully explored if a painting of the same sitter exists, in Holbein's case, as in many others, the drawings that do not relate to sitters are somewhat ignored in comparison. Establishing a method for looking for signs of use, when a drawing relates to a painting of the same sitter can be applied to those drawings for which no painting or miniature survive.

2.9 Methodology

In 1929, art historian Bernard Berenson (1865-1959) said, under oath:

....when I see a picture, in most cases I recognise it at once as being or not being by the master it is ascribed to; the rest is merely a question of how to try to fish out the evidence that will make the conviction as plain to others as it is to me.¹¹¹

This statement underlines one of the problems associated with conventional connoisseurship as a methodology; it is often used for attribution purposes, as a means of explaining the appearance of an artwork, and a way of making the evidence fit pre-conceived ideas. Further, in its tacitness, traditional connoisseurship is neither a methodology that is measurable, nor is it a transferable tool for use by anyone other than the connoisseur. Prior to the development of and access to instrumental analysis and innovations in examination technology, Bernard Berenson's opinion played a key role in the attribution of major artworks in the early 20th century, including advising

¹¹⁰ Raphael: <http://cima.ng-london.org.uk/documentation/index.php>; Cranach: <http://www.lucascranach.org> and Rembrandt: <http://www.rembrandtdatabase.org/>

¹¹¹ Gary Schwartz, 'The Penalty of Ahistoricism'. *Artibus et Historiae*. 1988. 9.18.202

Isabella Stewart Gardner in the acquisition of two Holbein portrait paintings now hanging in the Isabella Stewart Gardner Museum in Boston.¹¹² This unquestioned opinion of the connoisseur has permeated art historical methodology for centuries, but can be an unquantifiable solution to many questions relating to an artist's production. Such an approach has sometimes limited potential new approaches to Holbein's portrait drawings for fear of questioning authorities on Holbein.

At a recent conference in London regarding Leonardo da Vinci's technical practice, the value of traditional connoisseurship within current art historical practice was questioned as a methodology.¹¹³ The position of old-fashioned connoisseurship's ability to understand an object's production was questioned in relation to the now much valued collaboration between scientists, conservators and art historians. Leonardo expert and art historian Martin Kemp responded that connoisseurship was still valid. However, since there was too much information still open to interpretation, art historians needed to work out their methodology in order to better integrate it with science. Further, emphasizing this lack of definition, Kemp answered by responding that the way we deal with connoisseurship now is 'arbitrary, chaotic and opportunistic'.¹¹⁴

It is increasingly acknowledged that, other than the benefits of the eye of the experienced individual, a combination of methodologies is necessary to create a fuller picture of a drawing's composition, history and function.¹¹⁵ Given advances in technology and increasing numbers of materials-based research projects, it is important to re-examine and perhaps question some cataloguing information regarding materials and techniques for drawings. It is also important to point out and acknowledge anomalies, and to admit when we are not sure what it is we are looking at. There is nothing wrong with speculation; it can be enlightening, as long as it is informed and not

¹¹² These were the portraits of Lady and Sir William Butts, Isabella Stewart Gardner Museum, Boston.

¹¹³ 'Leonardo da Vinci's Technical Practice: Paintings, Drawings and Influence'. CHARISMA Conference, organised jointly by the National Gallery, London, Centre de Recherche et de Restauration des Musée de France (C2RMF) and the British Museum 13-14 January 2012

¹¹⁴ 14 January, closing remarks of Leonardo Charisma conference. Perhaps Kemp should also have pointed out the lack of discussion regarding Leonardo's drawing techniques: only two hours were devoted to this during a two day conference..

¹¹⁵ See for instance, Janet Ambers, Catherine Higgitt and David Saunders, eds. Italian Renaissance Drawings: Technical Examination and Analysis. Archetype Publications in associate with The British Museum: London. 2010I as well as the Making Art in Tudor Britain project whose approach as re-evaluated artistic processes.

offered up as a fact.. Focussing on the object itself and asking questions around its manufacture is arguably a more useful exercise than trying to shape evidence for attribution. A separation of the disciplines of art history, conservation and science when discussing Holbein's drawings has meant that information has not been extracted to its full extent possible. What is needed is an interdisciplinary approach. It is in each discipline's interest to understand the working processes of an artist when viewing, examining, describing and treating their work.

This research places the portrait drawings at the centre of the project, and uses a range of methodologies to build a fuller picture and establish a more developed dialogue. A broader spectrum of methods has helped to place Holbein's work not only art historically, but technically, culturally and socially within the context of its time.

The exploration of materials and techniques for this project should be seen in the context of what has become known as Art Technological Research.¹¹⁶ Set up in 2001 by the Institut Collectie Nederland (ICN), the Art Technological Source Research study group states that the 'three pillars of art technology' are scientific analysis, source research and reconstruction.¹¹⁷ Within this methodology, an art 'technological source': be it the object itself; the tools or materials used in its making; contemporaneous, primary information; art history; conservation; secondary literature and so on, never stands alone as there is always a context that reveals differences and similarities. Scientific analysis and visual examination is important to conservation and informs the reconstruction process, which in turn may inform conservation practices.¹¹⁸ As a conservator, it is important to distinguish between damage, restoration and if possible, original appearance.

Visual examination of the drawings has been the backbone of this research. The importance of consulting the primary source in making comment on an artwork is key. However, the interpretation of visual evidence is more complicated and the findings

¹¹⁶ Art technology is defined as "knowledge concerning the production methods of works of art or craft ie. Machines, materials, studios, techniques, tools etc." The Art Technological Source Research working group, March 2002, from Art of the Past: Sources and Reconstructions, proceedings of the first symposium of the Art Technological Source Research study group, 2005, Archetype Publications.

¹¹⁷ Foreword, pp v. Art of the Past: Sources and Reconstructions, proceedings of the first symposium of the Art Technological Source Research study group, 2005, Archetype Publications.

¹¹⁸ See A. Stijnman. 'Style and technique are inseparable: art technological sources and reconstructions' from proceedings Art of the Past: Sources and Reconstructions ed. Clarke, Townsend & Stijnman, UK & Amsterdam: 2005

were not always definable nor conclusions definitive. Over a period of five years, I have examined over 200 hundred drawings, half of which were Holbein's portrait drawings.¹¹⁹ Other genres of drawings by Holbein, such as his designs for goldsmiths, were also examined in order to establish if there is a relationship between choice of materials and techniques, and to understand the possible function of the drawing. Drawings by Hans Holbein the Elder and Holbein's contemporaries were also examined so as to gain a better understanding of workshop style and the individual artist's materials and techniques.

Such comparison helps not only to gain an overview of Holbein's materials and techniques, but it establishes what working practices were particular to him and what was part of workshop practice, as well. For example, comparison of Holbein's drawing of the poet Thomas Wyatt, c1535-37, Parker 64, and what is catalogued by Parker to be a contemporaneous copy, Parker 65, both at Windsor, was an illuminating exercise, which suggested that the copyist did not fully understand the layering of media involved in Holbein's drawing processes. This is discussed in Chapter Three. Whilst Holbein's training in a workshop is not in doubt, the existence of a Holbein workshop in England has, to date, never been confirmed and we do not know who may have had access to his drawings during his lifetime.¹²⁰

Although a large number of drawings have been examined, the main focus of this research has been the eighteen drawings that relate to currently attributed paintings, and one miniature, (see Table 1, Appendix Four). Studying the drawings as a group has highlighted similarities, differences and potentially established patterns of production and use. Concentrating on the eighteen drawings with associated paintings, and underdrawings, of the same sitter has been most useful in terms of understanding their

¹¹⁹ With the exception of three, all of Holbein's currently attributed portrait drawings were examined. Portrait of Man, c1532-5. Inv no: 84.GG.93, the J Paul Getty Museum, Los Angeles; An Unidentified Man, c1534-6, Inv. No: 2392, Staatliche Museen zu Berlin (Kupferstichkabinett); George Neville, 3rd Baron Bergavenny, c.1532-5, The Earl of Pembroke, Wilton House, Wilton, Salisbury.

¹²⁰ See Susan Foister, Holbein and England. 2004. 65 Affiliation to a court by an artist would ordinarily mean some information being on record in official court papers. However, this is not the case for Holbein as the Royal accounts of the 1530s, the decade that Holbein was Painter to the King, are incomplete. There is proof, however, that Holbein worked with large groups of fellow artists and craftsmen. For example, he was employed to create the Greenwich Festivities of 1527, where he worked with 19 other painters (see Susan Foister, 'Holbein's Paintings on Canvas: The Greenwich Festivities of 1527.' In: Hans Holbein: Paintings, Prints and Reception. Studies in the History of Art 60. New Haven and London: Yale University Press. 2001. 112.

relationship to the painting or miniature. Information gleaned has helped to establish how the drawings may have been referred to during the painting process, in terms of what information was translated from one to the other. A smaller selection was chosen for discussion when it came to comparison of underdrawing to drawing and painting. This selection was made according to quality of underdrawing image, and access to the painting and drawing.

Comparing the eighteen drawings as a group is revealing. The immediate differences may appear somewhat obvious: for instance, in their size; the tones of the paper resulting from the use of a coloured preparation; the introduction of a more descriptive use of coloured media in chalks; or the emphasis on the contour. Closer scrutiny in terms of visual analysis reveals the more elusive differences and similarities.

Examination with the naked eye and by microscope, using different light sources and directions of light, such as natural, raking and transmitted has revealed more information. Microscope images of details were useful in terms of making comparisons whilst visiting other collections.

In terms of instrumental analysis, Raman spectroscopy has been carried out on a number of Holbein portrait drawings and miniatures at Windsor only. Infra red reflectography of a number of the Windsor drawings was also carried out to aid the location of any silverpoint media that may have been used, either as a drawing or tracing tool. Although the forensic paper historian, Peter Bower, has pointed out that there is no formulaic approach to investigating individual papers, there is a way of looking that is consistent, and asking the same question of each drawing helps to clarify differences and similarities.¹²¹ Empirical observations were recorded by means of a pro forma table that asked the same question of each drawing such as substrate type, size, media, placement of media, etc.

During a lecture in 1996, British Museum curator Antony Griffiths spoke about the 'archaeology of the print'.¹²² This concept and the possibilities of applying it to

¹²¹ Peter Bower, 'The White Art: The Importance of Interpretation in the Analysis of Paper. Looking at Paper: Evidence & Interpretation.' Symposium proceedings published by Canadian Conservation Institute 2001.5

¹²² Conference paper presented at 'The Collecting of Prints and Drawings in Europe c.1539-1750', London, National Gallery 20-21 June 1997. Conference organised by The Burlington magazine with the support of The Provenance Index, The Getty Information Institute.

Holbein's drawings were instrumental not only in the approach to systematically investigating the drawings, but also key to the clarification of their description and the findings framing this research. This archaeological approach has been interpreted in terms of layers – applied from the paper up. It also takes into account the drawing's use, its history of storage and display, its wear and tear, and its conservation - all factors that may affect appearance. Such an approach considers the size of paper, its tone, texture, weight and watermarks; the media and the sequence it is laid down; and the method of application. This archaeological analogy helps to establish and explain the complexity or combination of factors that unite to make up the drawings. Moreover, studying the physical properties of the drawings enables certain distinctions to be made between materials. When coupled with visual examination and instrumental analysis, the archaeological concept enables a thorough investigation of the drawings, something the subjective nature of connoisseurship does not necessarily do.

By using the archaeological approach, it has been possible to clarify some of the confusion around the complex discussions pertaining to the physical attributes of Holbein's portrait drawings. This is particularly so with regards to the role of the drawings' contours, their media and their much-discussed connection with transfer. The sequence of application of media for each drawing, whilst often hard to decipher, has revealed certain consistencies in his working methods, especially in relation to the execution of certain features of the drawing: in particular the eyes, ears, mouth and nose, for example. The function of such drawings can be revealed or enhanced through the exploration of materials and techniques, and an understanding of how they are combined to produce a portrait drawing. This links to the salient points that are needed for transfer or give that likeness of that sitter, and why thinking in terms of layers and sequencing is the best approach to reveal Holbein's working methods.

This research was developed over a period of five years and was dependent upon the invaluable co-operation of the institutions that house Holbein drawings, as well as the curators and conservators involved with their care and display. When not on display or out on loan, I have had constant access to all the Holbein portrait drawings, which includes the main body of this project's selected corpus, in the Royal Collection, Windsor. I have been able to get all 85 Parker catalogued portrait drawings out at the same time and display them around the Royal Library Print Room; and this has enabled

me to engage with them as a group, and to compare directly this body of work. The paper conservation studio at Windsor was made available to me for the examination of the drawings using various light sources, and a microscope from which I was also able to capture microscopic details if necessary. It was also a venue for undertaking instrumental analysis, such as Raman and infra-red reflectography.¹²³ It was harder to interpret some aspects of the drawings' physical nature because of the Perspex sandwich mounting method employed at Windsor, as described in Chapter One. Texture, weight and tone of papers are harder, if not impossible, to gauge beneath Perspex. Encapsulation of this type can be a frustrating barrier to examination, especially in raking light, and Perspex's reflective properties also make photography difficult. The difference in viewing was made more apparent when I was fortunate enough to be present when three of the drawings were taken out of their Perspex mounts for re-mounting, and in two instances during Raman analysis to see if we could get a better reading without the interference from the Perspex.

For Holbein collections outside of Windsor, I was able to carry out detailed examination of other Holbein portrait drawings in the conservation studios of the British Museum in London; the Staatliche Kunstsammlungen in Dresden and the Louvre in Paris. Access to the corpus of drawings at Basel was more limited, not just because it was geographically less convenient for constant access. For example, it was only possible to examine the drawings in the Print Room, which restricted the type of lighting for viewing. A microscope was provided for one of the visits and to this I was able to attach an eyepiece camera in order to take more detailed images. In this way, I was able to be consistent with the recording of the microscopic visual examination of each drawing.

Access to the painted versions of the sitters as well underdrawing images was made possible through the cooperation of curators and conservators at The Frick and Metropolitan Museum in New York; the Staatliche Kunstsammlungen in Dresden; the Städel Museum, Frankfurt; the Isabella Stewart Gardner Museum, Boston; the Kunstmuseum, Basel; The Royal Collection, Windsor and Hampton Court and the Louvre, Paris. Not all portrait paintings were available for thorough examination. For example, only the portraits of Simon George, Sir Thomas More, Charles de Solier, Sir

¹²³ Examination carried out by the author, Raman analysis and interpretation of the result carried out by Professor Robert Withnall and PhD student, Alexander Reip, Brunel University.

Henry Guildford, William Reskimer and Unidentified Gentleman were removed from the gallery walls to allow a detailed examination under laboratory conditions. Other paintings were viewable on the gallery walls only with varying degrees of visibility. For example, The Darmstadt Madonna portraits of the Meyer family were viewed outside of the Städel Museum's opening hours, up a ladder with a torch and viewed through glass. Despite viewing through glass and setting off the alarm twice, being in close proximity to study the beautiful detail and fine quality of the painting in situ was still enlightening.

A summary of the methodologies employed are listed below:

Library and Archival Research

Extensive library and archival research has informed all aspects of this project, in particular art historical investigation. It has involved an extensive reading process that encompasses art history; aspects of artists' materials including their components and availability during the 16th century; the status of drawing and portraiture and the social and political context of art production during this time. All of these aspects help to set the objects within the context of their time. Comparison with Holbein's contemporaries has also been investigated through books and archives. Technical data from other research institutions has been sought:¹²⁴ results of analysis of paintings for under-drawings; any drawing analysis carried out by institutions; and previous conservation records: all of which informed the visual and technical analysis in terms of changes the objects may have undergone, and provided a better knowledge of available 16th century portrait drawing and transfer techniques. Reading historical Holbein literature has been particularly revealing and enabled a mapping of the way the drawings have been discussed, interpreted and written about.

Visual Examination

¹²⁴ Only one of Holbein's portrait drawings in the Kunstmuseum, Basel, has undergone scientific analysis. Portrait of a man with a red beret inv. no: 1662.6. See Marcus Jacob, 'Bildnis eines Mannes mit rotem Barett von Hans Holbein dem Jüngeren'. Technologische Untersuchung und Konservierung. Restauro April/May 2005. 176-186. In 2004, four portrait drawings from Windsor underwent Raman analysis alongside the V&A drawing (Dyce 363), whose attribution continues to be questioned. Given that this is relatively few in relation to the number of drawings existing, it seemed appropriate and timely to introduce further instrumental analysis.

Limited resources have influenced the interpretation of the examination of the drawings, and Holbein literature reflects the era and constraints under which the drawings were examined. For example, in his *Foreword* to the Windsor catalogue of Holbein drawings written in 1945 during wartime, art historian and museum curator, Karl Theodore Parker (1895-1992) sets out his limited means saying he did not examine them under infra red, nor ultra violet light and that the versos of the drawings were not visible.¹²⁵

Visual examination was always central to this research because the act of looking and questioning what one is looking at can help to reveal media, drawing processes and signs of use. In this way we can ask what information is held in the drawing that informs the transfer to panel, as well as ascertain whether there are signs on the drawing that indicate it has been transferred. A systematic visual examination and comparison of the portrait drawings has taken place, which has helped to extrapolate similarities and differences between them, and their relationship to the extant related painting or miniature. Visual examination in various light sources and with a microscope has enabled a better understanding of the condition of the drawings, the types of media used, the techniques employed and how the drawings may have functioned to aid the painting process. The sequence of construction of the drawing, although not always apparent, can sometimes be made clearer from visual examination. Examination in different lights proved to be incredibly revealing and is discussed further below.

a) Ambient light: Whether in a museum's print room or conservation studio, the drawings and paintings (when possible) were examined in ambient light, and a general synopsis of observations recorded – in note form and on the pro forma survey sheets, mentioned above. Size, substrate, media, signs of use, damage, restoration etc, were recorded and amended and added as each examination procedure was undertaken. Taking detailed photographs of both drawing and painting (where possible) followed this visual examination with the naked eye.

¹²⁵ K. T. Parker. *The Drawings of Hans Holbein in the Collection of His Majesty the King at Windsor Castle*. Oxford and London: Phaidon Press, 1945. Foreword. At the time of compiling his catalogue, the drawings were still backed and it was not possible for Parker to study the papers properly, nor see the verso. He does not go into the question of watermarks as this was done by Ganz in his *Kritischer Katalog* 1937 and subsequently by Jane Roberts.

b) Raking light: Raking light was used to reveal incised lines on the drawings that may have been the result of transfer. Raking light proved a successful light source in revealing indentations, some with blind tooling, and other incised lines drawn over media. It also helps with surface typography of the paper and damage mapping. Further, it can reveal sequencing of the media as well as how the media may have been applied – brushstrokes become more apparent, for example.

c) Transmitted light: Depending on the mounting technique, transmitted light provides much information regarding the internal structure of the papers, revealing watermarks, if present, chain and laid lines as well as repairs, damage and any joins in the paper. It also revealed information regarding the application of the pink preparation and comparisons could be made between papers in this way. The Windsor drawings are not backed and because of the Perspex ‘sandwich’ method, they were easily viewable in transmitted light. Other portrait drawings in other collections were either mounted, and therefore could not be placed on a light box, or were backed with secondary papers or thin card and it was not possible to get any transmitted light readings at all. For drawings that were mounted, a torch was shone through the lifted drawing to locate watermarks.

d) Ultra violet light: Some materials, such as organics like paper, show luminescent properties under UV radiation. This light source is a useful first step in pigment identification and can be used to detect retouching. Most UV examination lights, or black lights, emit wavelengths in the 350-360nm region (UVA). This light source was available for use on the Windsor drawings, however many of these are housed in UV-filtering Perspex, therefore making this type of examination redundant for many of the drawings. There was, however, some opportunity to examine four drawings out of their Perspex: John Godsalve, Cecily Heron, William Warham and William Reskimer.

e) Infra red imaging: The use of IR reflectography records the infra-red radiation reflected off a surface. It was useful for establishing the presence of carbon in the black aqueous media, thereby dismissing the use of iron gall inks in the drawings examined; carbon-based pigments are opaque in IR radiation, whilst iron gall ink appears transparent to IR radiation above 1000nm. But more importantly, it was used to explore the presence of silver point as a drawing or tracing tool. Silver point is rendered

invisible (partially or entirely) to IR radiation in the 800-1700nm range and therefore helps to establish if it was present on the drawings with pink preparation; lead point remains visible under IR. This light source proved successful for some drawings, giving clear indications of the use of silverpoint on one drawing, but because of the mix of media in terms of lines traced and the presence of carbon, the readings were not always conclusive.

f) Examination with a microscope: Examination with a microscope with low and high magnification has sometimes revealed the layering of media. It has also helped in assessing media, distinguishing between media, and in some cases aided the identification of certain pigments. It has also helped to differentiate between damage to fibres from general wear and tear, and damage from use of a stylus. A Leica binocular microscope and camera attachment were available at Windsor, and recording certain areas with microscopic photographic details - from low to high magnification - meant that comparisons with similar details taken from other drawings and paintings could be made. A portable eyepiece camera that fitted into most microscopes, and a portable digital microscope proved very useful whilst travelling to collections outside of Windsor. This meant a consistent recording was achievable for comparison purposes.

Instrumental analysis

Instrumental analysis of Holbein's preparatory drawings has much to offer in terms of informing knowledge of the working practices of a 16th century artist. Securing the necessary scientific and analytical support required for the identification of Holbein's drawing materials was only possible for the drawings examined at Windsor.¹²⁶ Some Holbein miniatures and a miniature by Jean Clouet were also included in this analysis.¹²⁷ Some types of analysis were excluded owing to the mounting style. For example, the barrier of the Perspex mounting system meant that possible identification of metal points using EDXRF (Energy Dispersive X-ray Fluorescence Microspectrometry) was not possible.

¹²⁶ I am indebted to Alan Donnithorne and the Royal Collection for allowing the analysis and to Dr Rob Withnall and PhD student, Alexander Reip, of Brunel University for supplying the instrumentation and carrying out the analysis. I am also grateful to Lucia Borgio of the V&A Museum Science Section for clarifying or interpreting the spectra for me.

¹²⁷ Jean Clouet, Francis, Dauphin of France, c.1526. RCIN.420070; Holbein: Unknown Lady, perhaps Katherine Howard?, c.1540, RCIN. 422293; Lady Audley, c.1538. RCIN.422292

The use of Raman spectroscopy as a non-invasive, non-destructive method of pigment analysis is well known within the field of conservation.¹²⁸ Raman microscopy is now established as the technique that is most specific, sensitive, spatially refined and immune to interference. It is portable and provides *in situ* analysis of materials. By determining the compounds present in materials, its application to works of art on paper is particularly useful where the pigment layer is too thin to allow pigment sampling to be ethically or technically possible.

Raman can be used through a microscope, which means that the incident beam can be focused on individual pigment particles. Pigment mixtures can also be distinguished and analysed separately through the microscope, and it can be focused through Perspex; this is imperative as the majority of the drawings at Windsor are mounted between two Perspex sheets. However, the spectra did show interference from the Perspex which sometimes prevented getting results. Readings were often difficult to ascertain because the thin application or abrasion of various chalks meant very little material was present to analyse, and the ubiquitous presence of vermilion on the drawings with prepared paper showed up overwhelmingly on the spectra. The data from Raman analysis was interpreted in conjunction with visual analysis, and the investigation of contemporaneous materials available at the time. Raman is not able to detect binders for chalks and so the question as to whether Holbein used natural or fabricated chalks was not entirely clarified.

Reconstruction

Reconstruction has increasingly played a part in the field of conservation in order to add insight into artistic practices and better inform treatments. The results of an examination of materials and techniques, both visually and scientifically, can have a profound impact on our understanding of the final piece and the results of which can be used to inform the reconstruction process. Reconstruction, if defined and used to test out certain questions, can prove a useful methodology in gaining some insight into an artist's use of materials, which in turn can inform conservation treatments. In a lecture in 2009, paintings conservator and pioneer of technical art history, David Bomford said that:

¹²⁸ see S.P Best, R. J.H Clark, R. Withnall. 'Nondestructive pigment analysis of artefacts by Raman microscopy'. *Endeavour*.1992. 16.2.66-73.

Technical art history concerns itself with all the processes for making art, and the technical and documentary means by which we throw light on those processes. It is principally concerned with the physical materials and structures of works of art and how they are prepared, used, combined and manipulated...it also interests itself in how an artist arrived at the finished – or, indeed unfinished work. It charts the stages of invention, development, realisation, elaboration and revision: in short, it is a route into – it is our access to – the heart of the artist’s intentions and changing ambitions.¹²⁹

Whilst much of what Bomford says has directed the field of technical art history, how much we can ever realise artistic intention is debatable. Just as a connoisseur cannot always explain why it is they think that a certain artwork may not be authentic, so an artist may not be able to explain their technique nor a conservator interpret it accurately enough to profess knowledge of artistic intention. Likewise, some caution has to be taken with reconstruction with regards to following historic recipes in technical sources.

¹³⁰ Recent research has found that not all recipes were transcribed exactly: there might be an element of interpretation, and approximations made, or even perhaps deliberately misleading so as to preserve artistic ‘secrets’ and stop others replicating their work.¹³¹ Much like cooking, there is an element of *laissez faire* and individuality during the creative process that cannot be taken account of in making up mixtures for artistic use.

It was hoped that the use of reconstruction as a methodology would contribute to a more specific and accurate terminology surrounding Holbein’s materials and techniques, as well as a greater insight into his working methods. The historic debate with regards to Holbein’s use of a drawing apparatus as described by Dürer, and the preparation of Holbein’s pink papers were selected as areas to focus on for reconstruction purposes. These are discussed in more detail in Chapter Three and in Appendix Two. The drawing machine was selected as a purely practical exercise, an

¹²⁹ David Bomford, Forbes Prize Lecture, International Institute of Conservation, London, 2009.

¹³⁰ Arie Wallert, ‘Reading Technical Sources’, *Art of the Past: Sources and Reconstructions*. London: Archetype Publications 2005. 39-43

¹³¹ see Thea Burns, ‘Cennino Cennini’s *Il Libro dell’Arte*: A Historiographical Review’. *Studies in Conservation* 2011.56.1-13. And see, Timea Tallian: *Reconstruction of Nicholas Hilliard’s Materials and Techniques*, a thesis submitted in partial fulfillment of the requirements of the Royal College of Art for the degree of Master of Philosophy, May 2007, The Royal College of Art/Victoria & Albert Museum, London, where she has carried out a study on the issues surrounding historic recipes for miniatures.

aspect often omitted despite deliberations on such apparatus, and its use involving practicing artists proved very enlightening.

Holbein literature suggests his media and method of application, for example, watercolour or ink with brush or pen; the use of a stylus and coloured chalks etc, but research has found that there is insufficient understanding of the formulation of his drawings and therefore descriptions are not fully realised. Reconstruction of the pink preparation of his papers was informed by the results of Raman analysis and resulted in a better understanding of their manufacture and their function. Whilst there was an element of experimentation in making up the pink preparation, reconstruction helped to provide a better understanding of the way certain materials behaved both during the process of making the preparation and on application to the paper. Further, drawing in chalks and aqueous media on the preparation, provided an insight into the skill and precision involved in order to build up layers of drawing.

A combination of methodologies provided an holistic approach to the study of the drawings. The most rewarding and productive methodology proved to be the comprehensive visual examination of the drawings, enhanced by being able to make comparisons across a large but selected corpus of drawings, both by Holbein and by his contemporaries. Incorporating reconstruction added a practical element that afforded further insight into artistic processes.

Chapter Three: The Materials and Techniques of Holbein's Portrait Drawings

3.1 Introduction

In 1689, writer and diarist John Evelyn wrote to Samuel Pepys, remarking that Holbein '...really painted to the life beyond any man this day living'.¹ Made some 150 years after his death, this comment not only reiterated the high regard given to Holbein's work but also highlighted what viewers' perceived to be Holbein's ability to capture the likeness of his sitters.² However, whilst a painting may represent the final result of Holbein's labours, it is to the artist's portrait drawings, the prequels to the paintings that captured the sitter's likeness in the first instance, that we must turn to in order to better understand the drawings' appearance, function, and relationship to the painting. Accurate 'reading' of these complex drawings means we can begin to understand what part, if any, they may have played in facilitating the execution of the paintings and miniatures of the same sitter.³ Holbein's portrait drawings, as preparatory work for paintings, determined the materials selected and the specific technique of drawing. They were fit for purpose and reflect Holbein's style of drawing.

This chapter will discuss Holbein's drawing materials and demonstrate that the portrait drawings of Holbein's German, Basel and English periods comprise very similar materials. It was not the materials Holbein used but how he used them that is significant. The layering and placement of media that make up his portrait drawings will be discussed in order of the apparent sequencing, including paper, coloured preparations, chalks, and aqueous media such as ink and watercolour. Holbein's use of metalpoint for drawing, and its potential use for an instrument of transfer will also be discussed. This chapter will stress how important it is to examine the drawings thoroughly in order to extrapolate the materials and the sequencing, so that we can

¹ Cited in David Piper's *The English Face*, London: Thames and Hudson, 1957.36-55 in which he quotes letter from John Evelyn to Samuel Pepys. Evelyn also thought that Holbein might have used a 'mechanical contrivance' for his initial portrait studies.

² Evelyn's statement reflects his view on the artist's painting, inadvertently demonstrating the more public nature of that genre in comparison to drawings at this time

³ The role of the drawing in relation to the miniature is more complicated, as it is not a 1:1 ratio of transference of information.

better understand Holbein's drawing processes. Just as paintings have complex layer structures, so too do drawings, although these may be harder to discern with the friable, thin, indistinct layers common of drawing materials.

3.2 Holbein's drawing materials

Evidence from contemporaneous literature⁴, accounts⁵, documents and treatises⁶, and the results from more current scientific technical analyses of a broad range of 16th century artworks has revealed that there was a common usage of artists' materials across Europe.⁷ This underlines Susan Foister's comment that the materials Holbein used whilst in England would have been perfectly familiar to him, and that 'painting in England in the period should be regarded as part of the European tradition'.⁸ The same can also be said for the use of paper, metalpoints, chalks and aqueous media by European artists. The drawings that survive and their materials are evidence of this: the drawings comprise similar materials, regardless of when and where they were executed. Although the source of these materials is not always clear, Holbein was able to use the same materials whether working in England, Germany and Basel either because they were available locally, or because an import trade in artists' materials was already established.⁹

⁴ Contemporary written information on artists' studios is very rare, although there does exist one narrative poem written for Margaret of Austria in 1504-5: *La Couronne Margaritique*, which lists artists' materials and tools such as silverpoint, 'crayons' and charcoal. See Methods and materials of Northern European painting in the National Gallery, 1400-1550. Vol.18.13. Eds. Lorne Campbell, Susan Foister, Ashok Roy.

⁵ Some information regarding artists' materials in England during the first half of the 16th century can be gathered from the accounts relating to the 'Festivities of 1527'. The Greenwich Festivities in 1527 were held for the entertainment of the French embassy. These festivities involved temporary structures and decorations by artists both inside and outside of the Court, incorporating a foreign and native workforce. See <http://www.british-history.ac.uk/> (British History Online), for transcripts of Letters and Papers, Foreign and Domestic, Henry VIII Vol.4 1524-1530 and accounts of the Revels etc, which list various materials. See also Susan Foister, 'Holbein's Paintings on Canvas: The Greenwich Festivities of 1527 in *Hans Holbein: Paintings, Prints and Reception*. Eds. Mark W Roskill and John Hand. Studies in the History of Art. Vol.60. 109-123. New Haven: Yale University Press. 2001.

⁶ See Viola & Rosamund Borradaile. The Strasburg Manuscript, A Medieval Painters' Handbook. Translated from the Old German. London: Alec Tiranti, 1966.

⁷ Jo Kirby, 'Trade in painters' materials in sixteenth century London.' Trade in Artists' Materials: Markets and Commerce in Europe to 1700. Eds: Jo Kirby, Susie Nash and Joanna Cannon. Archetype Publications: London 2010.341

⁸ Susan Foister, 'Holbein's Paintings on Canvas: The Greenwich Festivities of 1527'. Hans Holbein: Paintings, Prints and Reception. Eds. Mark W Roskill and John Hand. Studies in the History of Art. Vol.60.115 New Haven: Yale University Press. 2001. 115.

⁹ A detailed discussion of the trade in artists' materials in sixteenth century Europe is outside the scope of this thesis, but a very useful, recent text is: Trade in Artists' Materials: Markets and Commerce in Europe to 1700. Eds: Jo Kirby, Susie Nash and Joanna Cannon. Archetype Publications: London 2010.

The availability of paper from country to country, and region to region, was dictated by the availability of raw materials, the establishment of a papermaking industry and by cost and manufacturing practicalities.¹⁰ By the second half of the 14th Century, the use of paper for all literary purposes had become established in all of Western Europe: the first mills were established in France in the late 12th century, in Germany in the late 14th century, and in Britain in the late 15th century. Therefore, both Germany and England relied upon French imports of paper until their industries were established: a practice that continued for many years. Papers varied considerably in quality, with the best, whitest papers reportedly coming from France.¹¹ Examination of the watermarks revealed that the majority of Holbein's portrait drawings were executed on imported French papers, with just a few on Swiss, German and Italian papers: these are discussed in more detail below. The drawing materials used by Holbein were either available locally in the regions he worked, or were imported.

It is not clear whether the 16th century drawing materials used by Holbein were bought ready-made, or were made-up in the workshop. Many raw materials listed in importation documents at this time could have been made up in to artists' materials. For example, in her discussion of the trade routes of painters' materials, Wendy R. Childs cites archival evidence of deliveries by boat to London in the mid 15th century of black and 'blue' chalk (*chalk nigr'*, *blew chalk*); Childs also mentions ink-making materials, such as copperas and galls.¹² The chalk would have come in a raw state, not necessarily immediately ready for drawing. Many other materials were imported in their raw state, including gallnuts, green vitriol, and gum Arabic: all of which were used in the manufacture of inks. Watercolours could be made from gum Arabic and raw pigment, whilst brushes could either be made-up, or bought ready-made.¹³ Goldsmiths could supply, silver, gold, and lead or their alloys for metalpoints. Chalks for drawing could be shaped for use from natural chalk minerals, or made into sticks from powdered chalks and a binder. Chalks were available locally in all the regions that

¹⁰ For the history of papermaking see Dard Hunter Papermaking: The History and Technique of an Ancient Craft. Dover Publications Inc.: New York. 1943

¹¹ John Krill, English Artists' Papers. Trefoil Publications. 1987. 41

¹² Wendy R Childs, 'Painters' Materials and the Northern International Trade Routes of Late Medieval Europe'. Trade in Artists' Materials: Markets and Commerce in Europe to 1700. Eds: Jo Kirby, Susie Nash and Joanna Cannon. Archetype Publications: London 2010 . 36

¹³ Albrecht Dürer, Memoirs of Journeys to Venice and the Low Countries. Trans. Rudolf Tombo. Dodo Press.1913.50

Holbein worked, so may not have been imported. It could be that, as with pigments, the portable nature of some drawing materials meant they could be carried in small quantities and were not always documented in import documents. In England, commodities of small amounts or those imported on behalf of the crown could also get through untaxed and therefore unrecorded.¹⁴ These aspects may go some way to explain the lack of literature, documentation or anecdote regarding drawing materials.

3.3 Holbein's papers

This section will concentrate on paper as a substrate in the context of its manufacture and availability in the places Holbein worked. Although there is much information regarding papermaking and its history, it is useful here to also present a short synopsis of its manufacture. This will help us to understand the resulting tone, size and textures of the sheets. These factors can impact on the media and therefore the artworks themselves, and they can also offer clues as to how the paper was used.

In summary, typical 16th century European paper was handmade from cotton and linen rags and/or hemp. The quality of the paper depended on the quality of the rags, with high-grade white rags producing the higher quality whiter papers, which were consequently more expensive: the quality of paper was often referred to as *fine*, *second* and *ordinary*.¹⁵ Different qualities of papers were also imported depending on what they were needed for, with prices reflecting this aspect.¹⁶ Hemp produced a rougher, darker quality paper. The rags were processed and the resulting pulp, scooped up from a vat into a mould, formed sheets of paper. The mould comprised a wire screen with a wooden frame. The screen was formed of horizontal laid wires and vertical chain wires, and usually included a watermark. Sixteenth century watermarks were made from sewing wires to the surface of the laid and chain wires. Sewing wires appear as small dots in transmitted light, and their positioning is unique for each mould; they can therefore be useful when making comparisons between papers bearing the same mark.

¹⁴ Kirby. 'Trade in painters' materials in sixteenth century London.' Trade in Artists' Materials: Markets and Commerce in Europe to 1700. 2010.349

¹⁵ See Philip Gaskell, A New Introduction to Bibliography. Clarendon Press: London 1972. 66.

¹⁶ For example, in 1506, whilst in Venice, Dürer wrote to his friend Wilibald Pirckheimer asking him 'what sort of paper you want me to buy, for I know of no finer quality than we get at home'. Albrecht Dürer. Roger Fry, trans. Rudolf Tombo. Memoirs of Journeys to Venice and the Low Countries. London:Dodo Press.1913.13

The physical size of handmade paper is dictated by the maximum size of mould that can be handled by the papermaker; paper sizes are discussed in greater detail in Chapter Four. Paper made by this method is often referred to as 'laid' paper. Each side of the paper has a different texture: the wire side tends to have a more pronounced, ridged texture, whilst the felt side takes on the surface texture of the felt. This research indicates that Holbein had no particular preference for the wire or felt side of the paper for drawing.

Moulds were made in pairs, so that two individuals - the vat man and the coucher - could produce sheets quickly. The vat man scooped the paper pulp from the vat, passed the mould to the coucher, who turned the paper out onto a felt sheet, and passed the other twin mould back to the vat man. The stack of felt and paper was pressed to remove excess water, and the sheets hung on ropes to dry. The twin moulds shared the same watermark, which was positioned symmetrically on each mould. The unique nature of each watermark makes it useful for identifying and dating papers, although it is important to remember that the watermark becomes worn with prolonged use, and might be subject to sudden damage such as breakage of the wire. The average lifespan of a mould would vary depending on the impact of wear and tear, but it could be as little as a year.¹⁷ The final step in the process for most papers was sizing in vats of gelatine size made from animal skin, bones and hooves. A size would provide a less absorbent surface, and impart greater strength and smoothness to the surface.

3.3.1 Watermarks in Holbein's papers

Watermarks were first used as a form of personal mark of the maker or the paper mill, and from the seventeenth century indicated paper size also.¹⁸ Their presence could also signify quality, since poorer quality papers tended not to have them.¹⁹ A watermark did not always occupy the same position in a mould and up until the 15th century it appears that the positioning was somewhat arbitrary.²⁰ However, the position of a watermark on a sheet can sometimes offer information about the original size of the paper, or what proportion of the original sheet an artist has used.

¹⁷ R Carter Hailey, 'The Shakespearian Pavier Quartos Revisited'. *Studies in Bibliography*. 2005-2006. 57.151-195 <http://muse.jhu.edu/journals/sib/summary/v057/57.hailey.html> (accessed 2012)

¹⁸ Philip Gaskell, *A New Introduction to Bibliography*. London: Clarendon Press 1972.62

¹⁹ Philip Gaskell. 1972. 61

²⁰ Philip Gaskell. 1972. 61

Although using watermarks to accurately date drawings or trace location of the mill can be problematic,²¹ useful information can be gathered, and a comparative study of watermarks found on Holbein's papers was made to help to establish if there was a pattern of use of certain papers and how far the function of the drawing would dictate the choice of paper. Jane Roberts and Christian Müller have recorded data relating to the watermarks of Holbein's Windsor and Basel drawings, respectively, but this research is the first to compare watermark types in order to establish patterns of use.²²

Fifty-six Holbein portrait drawings have full or partial watermarks.²³ Although Roberts lists 12 watermark types on the portrait drawings, this research has revealed there are 18, with variations within these types: the watermarks are listed by type in Table 3a and by drawing date in Table 3b (found in Appendix Four), and a more detailed analysis of them can be found in Appendix One. The watermark types are labelled A to Q, with an extra category for miscellaneous and indecipherable watermarks. A transmitted light image of an example of each type can be found in Figures 88 to 103. Briefly, it is possible to conclude that most of Holbein's papers are French in origin, especially those of the English periods although there are a few watermarks bearing the Arms of Austria (Type N) and the Arms of Zurich (Type M).

The position of watermarks on Holbein's portrait drawings has established that most were executed on half, quarter and occasionally sixth sheets of what would have been several different sheet sizes.²⁴ Since many 16th century watermarks were generally centred in one half of the sheet, cutting these sheets in half would account for many of the other half or quarter sheets not having watermarks at all. Some drawings were

²¹ For example, there are many variations on individual watermarks; watermarks become worn through prolonged mould use; and there is no way of knowing how long paper was stored before it was sold, or stored by an artist before it was used. see Dard Hunter.1943.265 and Paul Needham, 'Concepts of Paper Study', Puzzles in Paper: Concepts in Historical Watermarks. Eds. Daniel Mosser, Michael Saffle & Ernest W Sullivan. Oak Knoll Press. 2000. 1-36).

²² Jane Roberts, Drawings by Holbein in the Court of Henry VIII, Art Gallery of Ontario, Toronto. 1988. 141-4. Jane Roberts assigned types alphabetically also, but the type sequence here is differs to Roberts' version as it includes more types. See Christian Müller, Katalog der Zeichnungen des 15 und 16 Jarhundrets, part 2A 'Die Zeichnungen von Hans Holbein dem Jüngerem und Ambrosius Holbein'. Öffentliche Kunstsammlung Basel Kupferstichkabinett, Basel:Schwabe. 1996, which lists watermarks found on Holbein's drawings of all genres in the Basel collection page 287-30.

²³ Parker 82, not attributed to Holbein but part of the Great Booke, has a deer head watermark. Parker 84, also not attributed to Holbein but part of the Great Booke, has the watermark of the rampant lion with orb and shield, close to Briquet 878. These are included in the table of watermark findings and within this survey.

²⁴ Dürer, Antwerp April 11-17 May 1521, writes that "I drew three 'Bearing of the Cross' and two 'Mounts of Olives' on five half sheets.'

executed on whole sheets of paper.²⁵The unique nature of the watermark means it is possible to ascertain that some drawings were executed on papers from the same mould: for example, the drawings of Lady Guildford, (Figure 14) Sir Henry Guildford, (Figure 12), Nicholas Carew, (Figure 40) and Sir Thomas More (Parker 3, Figure 8), all 1527, and executed during Holbein's first visit to England (1526-28), comprise identical forms of Watermark Type A.

What we can conclude from all this information is not unusual. Holbein used whatever papers were available in the countries that he worked. He selected papers of good quality on which to draw the portraits, which could accommodate both dry and aqueous media. Prepared and unprepared papers were also of the same type, and similar papers were used for different genres of drawings. As his workload increased he adapted his techniques, preparing the paper with a mid tone pink colour. Depending on the size of the portrait commission, he could divide a sheet into as many as six papers.

Finally, information gathered from the watermarks may help to date some of the drawings. Currently, some drawings are more firmly dated than others, and many are assigned the broad date range of 1527-43. Although the order in which the paper stock was used by Holbein cannot be ascertained, the similar watermark types of groups of drawings could point to a closer sequence in date range of a particular drawing campaign, and might help in dating some of the drawings more accurately; for example those drawings with paper with watermark Type N.

3.3.2 Holbein's unprepared papers

Information regarding the history of paper and its manufacture is widely available, but an artist's choice and use of this substrate is rarely included in art historical literature. However, paper type and preparation is important to acknowledge since it is the carrier of the image and influences the subsequent layers of media. Joseph Meder is rare amongst scholars to acknowledge and discuss the importance of a substrate's surface on which to draw.²⁶ Holbein's portrait drawings on prepared papers out number those on

²⁵ For example, the portrait drawing of Lady Guildford, Nicholas Carew, James Butler, 9th Earl of Ormond (Parker 23)

²⁶ Joseph Meder. The Mastery of Drawing. trans. and revised by Winslow Ames. Abaris Books, Inc. 1978.135

unprepared papers. This may reflect a preference for drawing on prepared papers or the loss of more portrait drawings on unprepared papers. Those on unprepared papers number twenty in total: twelve are in the Royal Collection at Windsor, with the remaining eight in the Kunstmuseum, Basel.²⁷ All but four are products of Holbein's first English visit, and out of these twenty, only six drawings relate to four extant portrait or group portrait paintings.

Surface and ingrained dirt, years of abrasion, and discolouration all affect paper's tone and texture. Whilst it is impossible to establish exactly the original tone or texture of a paper over 500 years old, Holbein's papers for portraits can be summarised as being creamy white in tone, and of medium to fine quality. The original texture of the paper is harder to gauge given their age, and mounting and conservation history. There is not a great variety in terms of paper tone and texture in Holbein's papers for portrait drawing, but there are differences in the preparations applied to the surface. Two of the c.1526 portrait drawings of the Meyer family for the Darmstadt Madonna painting are not exactly prepared, but do have a green tint painted around the sitters Jacob Meyer, c.1526, (Figure 4), (Basel Kunstmuseum, Kupferstichkabinett, Inv. 1823.140) and Anna Meyer, c.1526, (Figure 6), (Basel Kunstmuseum, Kupferstichkabinett, Inv.1823.142). These drawings are described in Müller's catalogue as having a ground, but there is no indication of this when viewed under magnification.²⁸ The paper fibres are clearly visible and there appears to be no particles that that would imply an addition to the paper's surface. The green wash is subtle, and was painted around the sitter after the drawing was made. Therefore, this type of colouring had no impact on the drawing itself, in that it did not act as mid-tone.

The wire and felt sides, both of which help to give paper a particular texture, are not always easily discernible on many of the papers. However, sometimes the texture of these sides is emphasised by the application of media, and is certainly made more visible in raking light, (Figures 56 & 57). Artists make specific choices about their materials, which could include what side of the paper to use. Having examined

²⁷ The drawings of the Duke and Duchess of Berry are portraits taken from sculptures and are not part of this discussion in this section.

²⁸ Christian Müller, Hans Holbein the Younger: The Basel Years, 1515-1532. Prestel:Munich; Berlin; London; New York. 2006. 333&334

thousands of documents, paper historian E.G Loeber concluded that scribes had a preference for the felt-side for writing on, whereas the wire or mould-side was the choice of printers and engravers, as this surface accepted printing ink better.²⁹ However, the age of Holbein's papers and their history of mounting and conservation treatments makes identifying the wire and felt sides complicated. As discussed in Chapter One, some of the Windsor drawings are mounted between sheets of Perspex, which makes the paper topography difficult to determine, as does the application of a preparation layer. Paper historian Peter Bower suggested that from the limited number of Holbein drawings he had examined, Holbein had a preference for the wire side of the paper. But the author's examination of the main body of Holbein's portrait papers suggests that Holbein used both sides, especially if the papers were to be prepared. For example, watermark Type X, Gothic P, appears on two different drawings: one can be read the right way round, indicating the felt side, the other is back to front, indicating the wire side.³⁰ Although preparation of Holbein's papers with the pink priming has, to a certain extent, meant that the difference between the wire and felt-side surfaces has less effect on the image than if the sheet was not prepared, drawings executed on the felt side, perhaps coincidentally, seemingly take advantage of its flesh-like texture. This is illustrated to perfection on the drawing of Charles de Solier, 1534/35, executed on pink prepared paper (330 x 249mm, Staatliche Kunstsammlungen, Kupferstichkabinett, Dresden, Inv.no: C1977-156).

3.4 A general overview of prepared papers

This section will place the preparation of papers in an historical context. It will discuss how Holbein may have prepared the pink coating for his drawing papers, which he used for the majority of the extant portrait drawings. In summary, a 'prepared paper' is a paper that has an additional layer of a coloured 'wash' or a more substantial 'ground'. Both of these additions alter the aesthetics and nature of that paper. In terms of function, a surface with a ground is a necessary requirement for making a mark with metal point since it provides a more abrasive 'tooth' by which a metal such as

²⁹ E G Loeber, Paper, Mould and Mould Makers. The Paper Publication Society: Amsterdam 1982 as cited by Marie Christine Enshaian Old Master Prints and Drawings: A Guide to Preservation and Conservation. Trans and ed. by Marjorie B Cohn. Amsterdam University Press: Amsterdam 1997. 37 footnote 5.

³⁰ Parker 50 and Parker 62 are both drawn on paper with the Gothic P watermark. The latter is only a partial watermark.

silverpoint can leave a deposit. Preparations can vary in composition, but often contain pigments and in the case of a ground, binding agents such as gum Arabic or rabbit skin glue, along with fillers such as bone ashes or chalk. Poorly sized papers would have been rendered less porous by a preparation layer, and would therefore offer a better surface for aqueous media such as ink. Further, when paper quality was a little less reliable, a preparation layer could also render an uneven, rough surface smoother, making it less problematic to draw on. Adding colour to the wash or the ground also provides a middle-tone for the drawing.

The terminology around paper coatings is diverse and can lead to confusion if not fully defined. For example, a distinction needs to be made between papers that have an addition of colour by way of a coating and those papers that are coloured as part of the manufacturing process, where the colour is inherent in their make-up. There are many interchangeable terms within this category. For example, prepared papers are often referred to by terms more associated with oil painting such as 'primed' paper, with the coating referred to as a 'ground'. This painterly association perhaps links back to Cennini's supposition that prepared papers were the 'gateway to painting'.³¹ Using the term 'prepared' encompasses both tinted and grounded papers: both of which were used by Holbein.

Prior to the availability of Western paper, medieval artists and their apprentices drew on tablets of boxwood or, more commonly, parchment covered in a chalky ground. The boxwood grounded tablets were re-grounded and re-used which accounts for the scarcity of drawings from this period. Cennini recounts how to prepare the boxwood tablets for the purpose of practicing drawing.³² Both tablets and parchments for drawing were often made up into 'model books' that contained patterns and designs as well as small head studies.³³ These tablets were still in use in the early 16th century in Germany, an example of which is Niklaus Manuel Deutsch's drawings of c1517, (Basel Kunstmuseum Kupferstichkabinett, inv. 1662.75.6). The silver point images are drawn

³¹ Cennino d'Andrea Cennini, *The Craftsman's Handbook*, 'Il Libro dell' Arte'. Trans by Daniel V Thompson, Jr. Dover Publications Inc:New York.1960.9

³² Cennini.1960.4

³³ See Robert W Scheller, *Exemplum: Model-Book Drawings and the Practice of Artistic Transmission in the Middle Ages ca.900-1450*. Amsterdam University Press 2000. For example of model-book on boxwood see Jacques Daliwe's sketchbook, Berlin, Staatsbibliothek – Preussischer Kulturbestiz, Liber Picturatus A74. 12 panels of boxwood grounded with chalk or bonemeal, 22 drawings in silverpoint, some colour brush work, 88 x 130mm.

on both sides of boxwood leaves, covered in a thin white ground. The size of such a tablet, in this case 120 x 85mm, would have been prohibitively small for any large-scale designs or studies.³⁴ Parchment would also have been used for drawing and much of the techniques of manuscript illumination influenced subsequent drawing and miniature techniques.

The origins of prepared papers, therefore, lay in the preparation of these tablets and the parchment for illuminated manuscripts, whose surfaces were covered with pumice, chalk or a ground to provide a more compatible surface on which to write or draw. During the late 14th century, parchments with tinted or coloured preparations became more commonplace and aesthetics, not just practicalities, seemingly played more of a part. The earliest known examples of papers coated with colour are found in Florence in the first half of the 14th century, and from the 15th century this technique had spread to the north side of the Alps into Germany and the Netherlands.³⁵ Apart from facilitating the use of metalpoint drawing tools such as silver point, the addition of a coloured preparation to the paper's surface provided a useful mid-tone for the artist to start their work. Sometimes transparent, but often opaque, the middle tone provided a basis on which the artist could shade and highlight, creating volume more readily than on white or cream paper. By the 16th century this prepared paper technique would therefore have been well established in terms of Northern Renaissance workshop practice.

Papers were not always prepared in readiness for metalpoint use. Darker preparations called for a different approach in terms of drawing media, as the metalpoint lines would not be so visible on the darker tones. Known as *chiaroscuro* or *grisaille* drawings, this graphic technique made use of coloured preparations with the application of aqueous media in black and highlights in white, to dramatic effect.³⁶ Coloured preparations on paper are not only rooted in the tradition of preparing parchment for illumination, but further, the coloured grounds of panel paintings and sculpture. For example, the green of the earth pigment *terra verde* was used both in under-painting

³⁴ See Francis Ames-Lewis, 'Drapery "Pattern"'. Drawings in Ghirlandaio's Workshop and Ghirlandaio's Early Apprenticeship'. *The Art Bulletin*. March 1981. 63.1.50, where he further distinguishes between a model book and pattern book – the latter being made up of loose drawings for motifs whilst the former is considered more formal and deliberate

³⁵ See Bettina Bünte, 'Papers with Coloured Coatings from the Period of the 14th to 16th Century Used as Supports for Drawings', *Staatliche Akademie der Bildenden Künste Stuttgart*, 1996.

³⁶ *Chiaroscuro* was a term adopted from Vasari's description of the light on dark drawing techniques.

panels in the 14th century, and also on prepared papers. Whilst there is limited evidence for the use of reddish priming layers on panel paintings before 1500, a reddish under-painting of flesh tones and pink coloured intermediate layers has been found applied to the whole surface of some 14th and 15th century sculpture.³⁷

3.4.1 Holbein's early prepared papers

Holbein's portrait drawings on prepared papers from the early 1500s illustrate what could be considered to be the conventional use of a prepared paper, with the drawings predominantly executed in metalpoint on a white or grey preparation. Holbein's 1516 portrait drawings of Jacob Meyer, (Figure 1), (Basel, Kunstmuseum Kupferstichkabinett, Inv. 1823.137, 281 x 190mm) and his wife Dorothea Kannengiesser, (Figure 2), (Basel, Kunstmuseum Kupferstichkabinett, Inv. 1823.137a 286 rising to 293 x 201mm) are two such examples of this type of drawing. An important feature of Holbein's drawings from this period is that they reflect the training Holbein gained whilst in his father's Augsburg workshop. It is important to reiterate here that much of the foundation for Holbein's style and method of drawing was already established in these drawings. They also had a one to one proportional relationship to the double portrait painting of the same sitters, (Figure 3), perhaps indicating that they were used as face patterns. The media and techniques that Holbein utilises in these early drawings are typical of his father, Hans Holbein the Elder's workshop. These drawings were also made prior to the common availability of, or fashion for, more friable drawing media, including the coloured chalks that Holbein utilised later.

The portraits of the Meyers have similarities with Hans Holbein the Elder's work in terms of style, materials and techniques. Where they differ is in size. They are larger than the Holbein the Elder's sketchbook sized drawings. Hans Holbein the Elder's drawing, Portrait of a Man in a Hat, 1518, (Figure 58), (210 x 150mm, off white preparation on bluey-grey paper, silverpoint with black and red chalk and touches of aqueous black media, Basel Kunstmuseum, Kupferstichkabinett, Inv.1662.186), is an example of how the striated texture of the preparation affects the appearance of the

³⁷ Gunnar Heydenreich. Lucas Cranach The Elder: Painting materials, techniques and workshop practice. Amsterdam University Press. 2007.103

media, illustrated in Figure 58.1. This surface texture affects the appearance, accentuating the strokes further as the chalk is dragged across the surface. Hans Holbein the Elder's Portrait of Sigmund Holbein dated 1512, (Figure 59), (British Museum, London, 1895,0915.987, 129 x 96mm, silverpoint, on an off white prepared paper, with black and red chalk and black aqueous media) is a further example of the technical necessity of a preparation in order to use metalpoint. The preparation of the paper on which Sigmund is drawn is applied thickly and the brushwork is directional. The striations from the brush strokes are clearly visible, giving the surface a prominent texture, (Figure 59.1). Both these drawings by Holbein's father exhibit characteristic additions of red chalk and touches of aqueous black: materials and a style of drawing that Holbein also adopted.

The thickness and application of these early, white preparations varied considerably. In contrast to the Meyer drawings of 1516, the preparation used for Hans Holbein the Elder's Bildnis des Zimprecht Schwarz, c.1508, (Figure 60) (Basel Kunstmuseum, Kupferstichkabinett, Inv. 162.190, 141 x 106mm, silverpoint on white prepared paper, with red and black chalk and black aqueous media) is like thick icing. When viewed in raking light, it is evident that the stylus was carved into the surface, giving it an almost three-dimensional quality, (Figure 60.1). Furthermore, areas around the nose appear to have been scraped off, perhaps in an attempt to remove erroneous silverpoint marks. Hans Holbein the Elder's Portrait of a Young Man, Looking Down, c.1508, (Figure 61), (Basel Kunstmuseum, Kupferstichkabinett, Inv. 162.192, 136 x 101mm, silverpoint on white prepared bluey/grey paper, with red and black chalk and black aqueous media), further illustrates how thickly a preparation could be applied. As mentioned earlier in the chapter, poor quality papers tended to be darker in colour. Along with Portrait of a Man in a Hat, above, this drawing's support of a bluey-grey paper would seem to indicate a poorer quality paper, and perhaps the need to apply a ground that would cover up their irregularities. Such preparations are in contrast to the pink preparations of Holbein's portrait drawings that are not as thickly applied and on good quality papers.

The use of this pale preparation would make the limited tones and nuances of the metalpoint more legible. Holbein's 1516 portrait drawings of Jacob Meyer, (Figure 1), and his wife Dorothea Kannengiesser, (Figure 2), are two such examples of this type of

drawing.³⁸ Executed on a greyish white preparation, Holbein used what visually appears to be silverpoint, with the addition of a crimson red chalk in specific areas such as the mouth, nose and cheeks.³⁹ He also used an aqueous black media (ink or watercolour) and black chalk, but only in touches along the contours of certain features. The silver point on the portrait drawing of Dorothea Meyer, 1516, has a typical, slightly brown hue as a result of oxidation of the silver over a period of time.⁴⁰ The paper texture is discernible and despite its condition, the preparation was clearly not applied thickly.

This off white preparation is typical of 16th century Renaissance drawings, both north and south of the Alps. The principal dry ingredients, or 'fillers', for these preparations were lead white, calcium carbonate and/or bone dust.⁴¹ Bones were burned until white and crumbly. They were ground down with water to as fine a dust as possible. Sea shells and egg shells could also be used.⁴² Prior to calcination (a thermal treatment reducing substances to ashes) they would be soaked in vinegar to remove any membranes. These fillers are similar substances, being either calcium phosphate or calcium carbonate. They have more or less the desired effect of providing a surface for metalpoints such as silver and gold. In an unpublished research paper, Harvard intern Penley Knipe noted that the preparations of the metalpoint drawings she analysed all contained bone, whereas non-metalpoint grounds comprised chalk or lead.⁴³ She concluded that artists were aware that bone was a necessary abrasive for metalpoint. However, the reconstruction of the pink preparation of Holbein's drawings showed papers prepared without bone readily accepted silverpoint. Furthermore, microscopic examination revealed that no bone fragments were visible on the pink preparations of Holbein's portrait drawings. The reconstruction of the pink preparation is discussed

³⁸ Whilst I was allowed to view these drawings in close proximity, I was not allowed to view them unframed, which naturally limits in depth investigations, access to the verso and what can be deduced about a drawing's surface through glass.

³⁹ No instrumental analysis was carried out on this drawing, but silverpoint is indicated from the typical warm brown appearance of the metalpoint lines, which can be indicative of silver.

⁴⁰ See Alain Duval et al, 'Particle induced X-ray emission: a valuable tool for the analysis of metalpoint'. Nuclear Instruments and Methods in Physics Research B 226 (2004), 60-74.

⁴¹ Cennino Cennini.1960.5

⁴² James Watrous, The Craft of Old-Master Drawings. The University of Wisconsin Press: Wisconsin.1957.13

⁴³ Penley Knipe, unpublished research paper as a conservation intern at the Strauss Center, Harvard, 1998: 'Grounds on Paper: An Examination of Eight Early Drawings'. A technical investigation into grounds for 15th and 16th century drawings of Italian, French and German origin.

later in this chapter. Raman analysis confirmed the presence of calcium carbonate filler in the pink preparation. Although no instrumental analysis has been carried out on the 1516 portraits of Jacob and Dorothea Meyer, the grey colour of the preparation may indicate that bone was a component since it is known to present a grey tinge to a ground, or that a lead white ingredient has darkened over time.⁴⁴ A pronounced colour difference on the margins of the drawing of Jacob Meyer may further indicate the colour of the original ground, which appears whiter and may perhaps point toward the use of lead white.

3.4.2 Holbein's pink prepared papers

Holbein's use of pink prepared papers, whilst not exclusive to him as an artist, has become one of the stylistically distinctive aspects of his portrait drawings. Examination of these papers by the author, both visually and instrumentally, has revealed a wide range of different hues, resulting from differing proportions of ingredients for the preparation. Reconstruction of the pink priming has offered an insight into Holbein's possible practice. The focus of this section is therefore the composition of the pink preparation, and the method of its application. A fuller discussion of the function of such pink preparation is taken up in Chapter Four.

3.4.3 Composition and reconstruction of Holbein's pink preparation

Holbein used pink preparations of varying thickness and shades to create a uniform flesh colour on which to draw. Information on pink preparations can be gleaned from old recipes in historic literature, such as Cennini's handbook, and the more regionally relevant Northern European Strasbourg Manuscript, although the latter has an emphasis on painting.⁴⁵ These, together with the Raman results and observations from visual analysis were used by the author as a basis to recreate Holbein's pink preparation, in the hope of gaining a better understanding of how the preparations were made. As mentioned in Chapter Two, recordings of contemporary recipes are not always reliable, being either couched in secrecy or recorded as interpretations from observations. For example, Cennini's terms of reference for quantities are hard to

⁴⁴ James Watrous.1957.14,

⁴⁵ Cennini.1960. And The Strasbourg Manuscript: A Medieval Painter's Handbook, trans.Viola and Rosamund Borraidaile. Tiranti: London, 1966.65

quantify, which makes reconstruction problematic. For example, what measurement of weight a 'bean' amount was is hard to determine exactly.

The reconstructed pink preparation comprised calcium carbonate, vermilion and yellow ochre, with a rabbit skin glue binder. The process followed was that outlined by Cennini and informed by Raman results and visual analysis. The support comprised handmade laid paper. Art historian Francis Ames-Lewis argued that the preparation of paper was laborious and expensive and reserved for 'careful drawing'.⁴⁶ However, the experience of reconstructing pink preparations similar to those of Holbein, countered this supposition. There are very few ingredients involved and once the basics have been mastered the whole process is relatively quick. For example, having established that calcium phosphate did not make up the white component, it meant no burning and grinding of bones was involved, which would indeed have been a time-consuming process. Although a fuller account can be found in Appendix Two, the following main points were observed: unless tethered to a solid support, the paper cockled upon application of the preparation, indicating that this would have been a necessity, (Figure 62.1); the consistency of the preparation is essential: too thin and it had the appearance of a wash, too thick and it cracked upon drying; two coats were sufficient to coat the paper and facilitate the use of metalpoint; and finally, the colour shift that occurred from wet to dry was substantial.

Reconstruction of the pink priming revealed not only how the materials behaved, but also how difficult it would be to predict the final colour. This is because the pink dried to a much lighter shade, making it quite hard to gauge the final tone of the paper, (Figure 62). Recreating the pink preparations demonstrated that it is not easy to repeat the same shade each time, which perhaps accounts for the range of pinks in Holbein's portrait drawings, and may have nothing to do with catering for different skin tones. However, Edward Norgate noted that the miniaturists Nicholas Hilliard (1547-1619) and Isaac Oliver (c.1565-1617) had a store of cards prepared with various pink tones from which they would select the most appropriate for their sitter.⁴⁷ Murrell also suggested that Holbein tried to vary the tone of the pink preparation of the drawings

⁴⁶ Francis Ames-Lewis, *Drawing in Early Renaissance Italy*. Yale University Press: Yale, 2000.35.

⁴⁷ Jim Murrell 84, Norgate, II, 20.

according to the sitter's complexion.⁴⁸ The relationship of colour in terms of translation from drawing to painting is taken up in more detail in the next chapter. However, creating a variety of pinks on this scale, as opposed to miniatures is significant. The variety of colours in Holbein's pink preparations may go some way to explain this and suggest a production of smaller numbers. Producing different shades of the pink preparation would take up a lot of space as well as require large quantities of the preparation, neither of which may have been practical. Furthermore, it proved very hard to repeatedly recreate the same colour, unless each ingredient was weighed very accurately.⁴⁹

3.4.4 Holbein's portrait drawings on pink prepared paper

Art historian Paul Ganz believed that Holbein's use of a pink preparation was a 'new invention' and was something that Holbein acquired during his trip back to Basel in 1528-32.⁵⁰ Miniature conservator Jim Murrell linked Holbein's adoption of the pink preparation to his contact with, and influence of, Tudor miniaturist and King's Painter, Lucas Horenbout (1490/95-1544), a Flemish artist resident in England from the 1520s until his death.⁵¹ Murrell's reasoning for this was the link to the miniature technique of laying on of an opaque, flesh coloured ground, known as the 'carnation' prior to filling in the features. However, this does not appear to be the case. It can be argued that Holbein had drawn on a pink preparation prior to these dates as evidenced by Portrait of a Young Woman of 1520/22, (Figure 63), (Musée du Louvre, Cabinet des Dessins, Paris, Inv.20.737, 195 x 155mm, metalpoint, probably silver, red chalk, black aqueous media and brown aqueous media). This drawing has been dated to 1520/22 on stylistic grounds⁵², but certain other features point to this being an early drawing. The small size and the materials present on this drawing are characteristic of the drawings from the workshop of Hans Holbein the Elder, which would indicate this typical of

⁴⁸ Jim Murrell, The Way Howe to Lyme. 1983.11

⁴⁹ After experimenting with the pigment proportions in terms of tone, a larger batch of preparation was made up. 65g whiting, 0.4g vermilion and 0.6g yellow ochre was mixed with 20ml of size, diluted with 50ml water. This was enough mixture to cover two large sheets of hand made paper measuring 620 x 500mm.

⁵⁰ Paul Ganz, 'Holbein', The Burlington Magazine for Connoisseurs, 1925. 47.272.240

⁵¹ Jim Murrell, The Way How to Lyme: Tudor Miniatures Observed. V&A Museum: London. 1923.20. Karel van Mander, some 50 years after Holbein's death had stated that Holbein learned the art of miniature painting from Horenbout.

⁵² See Christian Müller. 2006. 281.

Holbein's work of the early 1500s.⁵³ This suggests that Holbein's use of pink prepared paper was therefore not a new technique for him as it was something he had used prior to his first visit and therefore before his return to England in 1532. The materials and techniques and the conventional use of metalpoint on prepared paper, as well as the small format reminiscent of the Hans Holbein the Elder workshop, all point to this Portrait of a Young Woman being an early drawing by Holbein.

This portrait is executed on an opaque pale pink preparation, applied on what appears to be the felt side of the paper. Vermilion, evident in distinct orangey particles, is apparent in the preparation under magnification. This is in keeping with the findings of pink preparations on Holbein's later papers. The presence of vermilion as the red colourant was confirmed through stereo microscopic examination of a number of portrait drawings, and with Raman analysis. Recent research in to mid 16th century portrait miniatures has suggested that the presence of certain pigments in the flesh tone (the carnation) may signpost a potential signature to a particular artist for attribution purposes.⁵⁴ However, the common use of vermilion in flesh tones of the 16th century and earlier is too broad a remit to be used to ascertain authorship in this instance.

With the exception of one drawing, the preparation was applied to one side of the paper only.⁵⁵ It is rare to find any drawings on the verso of Holbein's portrait drawings, prepared or unprepared.⁵⁶ Preparation of both sides would have been more time consuming and preferable for a sketchbook format than a larger, single sheet format. Pink preparation for portrait drawings is found less frequently amongst the work of Holbein's contemporaries. However, there are two 16th century Netherlandish portrait drawings on pink prepared paper in The Royal Collection at Windsor that are of interest for a number of reasons, not least because they were once considered part of the Great Booke, but also because the papers are prepared on both sides. Mentioned by Vertue amongst the Closet findings of Queen Caroline and originally attributed to

⁵³ See Christian Müller.2006.280 & 283; There are physiognomic similarities between this drawing and the painting by Holbein of the Solothurn Madonna, 1522, Solothurn, Kunstmuseum, Inv.A134, suggesting the same model.

⁵⁴ Lucia Borgio, Anna Cesaratto & Alan Derbyshire, 'Comparison of English portrait miniatures by Raman microscopy and other techniques.' Abstract, 6th International Conference on the application of Raman spectroscopy in Art and Archaeology 5-8 September 2011. Published online: September 2012. Wileyonlinelibrary.com D0110.1002/jrs.4133

⁵⁵ Portrait of a Young Woman c1520/22, Louvre, has a preparation and drawing of a man on the verso.

⁵⁶ Apart from the Louvre drawing, above, Parker 63, A Lady: Unknown RL12189, on unprepared paper, also has a drawing on the verso: a black chalk sketch of heraldic emblems.

Holbein, they were later re-attributed to Jacob Binck (c.1490/1504-1569/69) and then Cornelius van Cleef (1520-1567).⁵⁷ Executed on 16th century French paper, these drawings are drawn in lead point, red chalk and opaque white highlights.⁵⁸ Head of a Man, (RL12955, 203 x 152mm, salmon pink preparation on both sides, with a drawing of a bearded man on the verso) and Head of a Woman, (Figure 64), (RL12956, 219 x 157mm) are dated according to their costume as c.1540.

The portrait drawing of Lady Audley, c.1538, (Figure 28), (Parker 58, 292 x 207mm, RL 12191, The Royal Collection, Windsor,) executed on pink prepared paper relates to a miniature of the same sitter; although they differ in scale, they are strikingly similar in pose. The flesh tone of miniature painting is known as a 'carnation'.⁵⁹ Whilst Jim Murrell makes a link with the carnation of miniature painting and Holbein's portraits on pink preparation, there are differences in application as well as substrate. The technique of Tudor miniature painting involved painting on to the flesh side of vellum that had been stuck to, commonly, a piece of playing card.⁶⁰ However, although Murrell made a link between Holbein's pink preparation and the carnation of a miniature, they do differ: whereas the carnation of a portrait miniature is applied to the face area only, by contrast the preparation on Holbein's portrait drawings covers the whole sheet.

A portrait drawing in the British Museum by Lucas Cranach the Elder (1472-1553) makes a better comparison in terms of limited paper coverage of the flesh tone. Cranach's beautiful portrait of a man wearing a hat of 1510/15, (Figure 65), (1895,0511.1,268 x 187mm, on rough, light brown paper) is executed in washes of watercolour and an opaque white body colour. The flesh tone of this very painterly drawing has been applied to approximate the face and neck area only and marks the first part of the drawing process. It spills out under the contours applied subsequently,

⁵⁷ Parker lists them at the very end of his catalogue of the Holbein drawings, page 58, as '(86)' and '(87)', running consecutively after the final catalogue entry, 85. See Christopher White and Charlotte Crawley, Dutch and Flemish Drawings at Windsor Castle, Cambridge University Press.1994.129, which lists the attribution literature on these two drawings.

⁵⁸ The watermark of a five-petalled flower surmounted by a crown, variant of Briquet 6407 points to a 16th century French paper.

⁵⁹ A word of 16th century origin, from the Latin, *carne*, flesh, from Italian, *carnagione*, complexion.

⁶⁰ The flesh side, as opposed to the follicle side, was smoother to paint on. For more information regarding the materials and techniques of 16th century miniatures, see Jim Murrell. The Technique of English Miniatures. London, 1971 and The Way Howe to Lyme: Tudor Miniatures Observed. V&A Museum Publication to accompany the exhibition Artists of the Tudor Court: The Portrait Miniature Rediscovered 1520-1620. 1983.

which define the features and general outlines. Further individualization of the flesh tone is added in layers of more intense pink, white, yellow and grey opaque aqueous media. Vermilion particles are apparent in the flesh tone under magnification.

Vermilion was a common red pigment for oil and watercolour in the 16th century, and is found in applied paper preparations, miniature carnations and in pink priming, ground and imprimatura layers for panel paintings. Although it does not hold true for every portrait, a number of Holbein's portrait paintings that have a drawing of the same sitter, executed on pink prepared paper also have a pink imprimatura layer, or a pink ground. Furthermore, the portrait painting of Henry Guildford, (Figure 12), executed on a cream ground relates to a portrait drawing executed on an unprepared, cream paper. The relationship of priming layers for paintings and the preparation of pink papers and the differences in the way they function is discussed in Chapter Four.

Pink preparation covering the entire paper surface may be in part what has caused the drawings to be viewed generically and what prompted Ganz to comment that this repeated method meant the drawings '...lost their individual character and their great variety'.⁶¹ This opinion was countered when a comparison was made of all the Windsor drawings: viewing them together showed what variety there was. Of the 85 drawings listed in Parker's Windsor catalogue, 12 are on unprepared and 73 are on pink prepared paper. All of these drawings were arranged around the Royal Library according to catalogue entry and therefore Parker's more or less chronological order, (Figure 66).⁶² Parker had concluded that because there was '...a tendency as time goes on for stronger shades of pink to come to prominence....we have yet a further aid to chronological classification.'⁶³ As mentioned above, whilst dating of the drawings is by no means arbitrary, most of the drawings of the unknown sitters have been allocated the broad date range of 1532-43.⁶⁴ Setting all the drawings out like this enabled a broad visual

⁶¹ Paul Ganz, 'Holbein', *The Burlington Magazine for Connoisseurs*, 47.272.240. Nov.1925

⁶² Parker catalogued the drawings in what he believed to be the chronological order of Holbein's work. His evidence of such dating would have been partly based on biographies of the sitters of the drawings. Many of the sitters are unknown and the names added were not done in Holbein's lifetime, as discussed in Chapter One. 5 of these drawings are thought not to be by Holbein but were part of the layout since they are part of the catalogue. Drawings examined outside of the collection were judged individually and slotted in to appropriate pink category.

⁶³ K.Parker. 1945.28

⁶⁴ See The Royal Collection online catalogue: <http://www.royalcollection.org.uk>

comparison. Such a layout had never been done before and proved to be a revealing exercise.⁶⁵ It was not just the quantity that was striking. The immediate impact of this exercise was the variety of sizes, variations in the pinks of the prepared papers and the contrast of this with the unprepared papers, as illustrated by two drawing types in Figure 82. It also highlighted the differences in media in terms of quantity applied and attention to detail, levels of finish, as well as difference in condition of the drawings. All these elements combined to accentuate the individuality of each drawing.

The aim of this exercise, apart from viewing them as a body of work, was to see if batches of similar pinks could be grouped together in order to ascertain if this can offer any information about drawings made from the same or similar preparation campaigns. However, this was complicated by the variety of pinks as well as the limitations of comparison resulting from the mounting method. The 'Perspex sandwich' mounting method, as described in Chapter One, prohibits laying the drawings directly side by side. Furthermore, there were so many variations in the pink, that making matches was impossible.

Instead, the drawings were grouped into four shades: deep pink, medium pink, pale pink and very pale pink. Although there were many variations within each group, the deep pinks and pale pinks were somewhat easier to define than the medium pinks, of which there were many variations. Making these decisions on shade is a fairly subjective exercise, and this was illustrated by the differences of opinion between Parker's and myself at times. It also became apparent that Parker did not always stick to his rule about linking shades to chronology. For example, the number of drawings he considers to be 'salmon pink' are spread across the collection, ranging from Parker 41, A Lady: Princess Mary to Parker 81, Sir Thomas Parry, with many nuances in between. Transmitted light also reveals differences in the preparations; some were of better quality than others in terms of application, and therefore had a better appearance. For example, the brownish pink preparation applied to the paper on which Cardinal Fisher, Bishop of Rochester is drawn is striated and coarse, indicating a hard brush. Given Parker's assumption about the depth of pink being date-related, its early Parker

⁶⁵ I was given permission to arrange all the drawings listed in Parker's Holbein catalogue of Windsor drawings over a period of 3 days in the Royal Library, Windsor, February 2011. With thanks to Alan Donnithorne and colleagues, The Royal Collection, Windsor.

number, 13, contradicts Parker's thought that this drawing is of a later date.⁶⁶ The date of this drawing was assumed to be around 1528, towards the end of Holbein's first English period, when Holbein supposedly did not prepare his papers.⁶⁷ The fact that it had a pink preparation led Ganz to conclude that the preparation was added later, which is clearly not the case, given that the drawing media is on top of this preparation.⁶⁸

Differences in the pink preparation are usefully illustrated amongst the drawings that form the corpus of this dissertation. Holbein's preparations vary not just in colour, but in opacity and thickness also. None of the preparations reached the thickness of some of the earlier, grey/white preparations discussed above. The texture of the paper can still be discerned on many of the papers, not just because of wear and tear, but because it was applied thinly. The drawings of Richard Southwell 1536, (Figure 24) (Parker 38, RL12242, 370 x 281mm) and Jane Seymour, 1536-37, (Figure 26), Parker 39, RL12267 503 x 285mm) illustrate the difference in the formulation of the batches of the preparation, depending on the ratios of materials used to make up the preparation.

Seymour's paler, more opaque preparation suggests the addition of more chalk than that of Southwell's more wash-like preparation.⁶⁹ Under magnification there is only a thin and even scattering of vermillion and a more prominent presence of the opaque ingredient, calcium carbonate.⁷⁰ This is in contrast to the increase in quantity of vermillion dispersed in the darker pink of the preparation on paper of the portraits of Edward, Prince of Wales; Lady Butts; and Simon George, the latter of whose priming also shows some blue pigment particles under magnification.⁷¹ The preparations on Seymour and Southwell also differ in terms of the application of the preparation. In the case of Southwell, the priming has obvious brush stroke streaks, and is more of a wash or stain than a ground layer. Under magnification, the presence of burst bubbles within the priming further suggests that this was more of a watery solution. The pink preparation of the drawing of Jane Seymour is more opaque, dense and evenly applied.

⁶⁶ Karl Parker.1945.40

⁶⁷ Karl Parker.1945.40

⁶⁸ Karl Parker.1945.40,

⁶⁹ Seymour's portrait is one of the six drawings in the pale preparation category, none of which are executed on the same paper type.

⁷⁰ Karl Parker. 1945.47

⁷¹ Raman analysis was carried out on the drawings of More and Reskimer in 2004, showing presence of vermillion and calcium carbonate.

In terms of tones, the deeper the pink, the more evidence there is of a higher quantity of vermilion in the mixes. As a substrate for drawing on, these pink preparations were able to accommodate the range of media employed by Holbein.

Holbein used similar media on both prepared and unprepared papers, with the only obvious difference being a more frequent use of aqueous media for those executed on pink prepared paper. This is discussed later in the chapter. Whether prepared or unprepared, the function of the drawings was the same and both types show evidence of having been traced for transfer. This is discussed at greater length in Chapter Four.

3.5 Holbein's use of paper and parchment as a painting support

Although only a few examples survive, Holbein also used paper and parchment as a substrate for painting in oil. These were, in the main, adhered to wooden panels. Paper and parchment, both typical primary support materials for drawing upon, would not have functioned in quite the same way as when used for a painting. Parchment as a substrate for oil was not uncommon and appears to have been part of workshop tradition. Although there is some evidence for workshop models on paper and parchment having been pasted down onto wood, the use of parchment as a painting surface is complicated and an area that warrants further research.⁷² Panel painters had used leather and parchment supports since the 12th century and so it is not uncommon to find German portraits painted on parchment that was already attached to panel.⁷³ The south German Benedictine monk, Theophilus (c.1100), described panel making for altars, suggesting that they should be covered with the hide of a horse, ass or cow.⁷⁴ Joins of the panel, or the entire panel itself, were covered in this way prior to an application of a size or ground. Parchment could have acted as a preparatory surface equivalent to a ground for painting – rather than a way of smoothing a panel surface or

⁷² See: Maryan Ainsworth, 'Some theories about paper and parchment as supports for early Netherlandish paintings'. *Colloque X les Dessins sous jacent etc*1997. 255 (& 254-260), and French PhD thesis, in progress: Aurelie Nicolaus. 'Les oeuvres germaniques de la premiere moitie du xvi siecle peintes sur papier et sur parchemin; recherches sur les differents aspects d'une production artistique reconnue.' Université de Paris 1, Sorbonne.

⁷³ Christopher Wood, *Albrecht Altdorfer and the Origins of Landscape*. The University of Chicago Press. 1993.145

⁷⁴ Jorgen Wadum, *Historical Overview of Panel-Making Techniques in the Northern Countries*. Getty Publication.157

hiding the joins.⁷⁵ In purely practical terms, it would have been rather problematic to apply so much paint without the paper or parchment support being tethered in some way in order to prevent distortion. Saving time and materials by omitting the ground layer, a rarely mentioned economic aspect to the decision making process, should also be taken in to account when discussing the use of such substitute substrates to the more typical ground found on panel paintings during this period. For example, a late 16th century portrait after Holbein of Sir Nicholas Poyntz in the National Portrait Gallery London (NPG5583, 415 x 292mm) is executed in oil on paper. It has no apparent chalk ground but it does have a dark grey priming layer.⁷⁶

There are four surviving examples of oil paintings on paper and one on parchment attributed to Holbein.⁷⁷ Holbein's use of paper or parchment as a painting substrate is rare but not unique in terms of 16th century workshop practice, so although there are only a few extant examples by Holbein, it is not surprising to see these substrates used during this period.⁷⁸ The exact function of these paintings on paper or parchment is unclear. Maryan Ainsworth has posited that paper as a support for painting may suggest a repeated design because paper provided an easy method for transfer.⁷⁹ It could be that we have not fully understood their original purpose and that they were subsequently revered as panel paintings when they may not have started life as such. This is partly because the sequencing of the processes of the manufacture for these objects is not always obvious and therefore it is not clear if the panel played a part during the execution of the painting, or if the paper/parchment was laid down subsequently. There is evidence that such supports were rolled and transported before being laid down on a more permanent support. For example, in 1493 Dürer sent his

⁷⁵ B. Heimberg, footnoted in Gunnar Heydenreich, Lucas Cranach the Elder: Painting materials, techniques and workshop practice. Amsterdam University Press.2007. 255 footnote 13: (B. Heimberg, 'Zur Maltechnik Albrecht Dürers', in G. Goldberg, B. Heimberg, M.Schawe,, Albrecht Dürer. Die Gemälde der Alten Pinakothek', catalogue, Bayerische Staatsgemäldesammlungen, Munich, 1998, 32-53).

⁷⁶ With thanks to curatorial and conservation colleagues for access to NPG archives and Making Art in Tudor Britain databases.

⁷⁷ Portrait of Erasmus, 1523 Basel Kunstmuseum, Adam and Eve 1517, Basel Kunstmuseum, The Artist's Family,1528/29, Basel Kunstmuseum and Benedict von Hertenstein,1517, Metropolitan Museum of Art, Anne of Cleves, Louvre, Parison, painted on parchment. The drawing of Dorothea Kannengiesser, Basel Kunstmuseum, of 1516 is also stuck to a piece of wood.

⁷⁸ Peter Berkes, Conservator of Paintings at the Öffentliche Kunstsammlung, Basel, is currently investigating Holbein's use of drawings as a painting support. Verbal communication with Christian Müller.

⁷⁹ Maryan W Ainsworth, 'Some theories about paper and parchment as supports for early Netherlandish paintings'. Colloque X Les Dessins sous jacent 1997.256

self-portrait home to his betrothed rolled up like a scroll, and only mounted it on panel later.⁸⁰

Gunnar Heydenreich comments that surviving paintings on parchment within Cranach's workshop make up 'a disparate collection of portraits as well as various coats of arms'.⁸¹ Cranach's Portrait of a Man, Perhaps a Mayor of Weissenfels 1515, (420 x 280mm, Staatliche Museen, Berlin), is painted directly onto a different drawing on parchment of the Translation of St Mary Magdelene, which is of interest as it provides evidence of substrates being re-used. Parchment was a good preparatory surface on which to paint; this is evidenced by Heydenreich's research, which found little or no preparation of the surface of Cranach's painted parchments.⁸² Heydenreich points out that portraits on parchment fall neither into the category of the usual and numerous portrait studies in oil on paper, nor the highly official portraits Cranach executed as court painter.⁸³ From this perhaps it is possible to conclude that parchment was indeed used to speed up processes and economise on time and effort spent on preparing a panel.

Holbein's use of parchment and paper as alternative supports for painting was not unusual, but is similarly rare. Hans Burgkmair (1473-1531), Albrecht Altdorfer (1480-1538) Albrecht Dürer (1475-1528), Jan Gossaert (active 1503-1532) and Giovanni Bellini (c1430-1516) also painted on parchment, the majority of this type of work being portraiture, with all of Dürer's painted parchments being portraits.⁸⁴ Of particular interest, then, is a fact noted by Wood: that most of the surviving 15th century panels with parchment as supports are portraits.⁸⁵ Parchment's opacity and texture were good characteristics for rendering flesh tones, and also acted as a smooth ground for oil paints, once the pores had been filled with powdered chalk, for example.⁸⁶ It seems quite surprising, therefore, given the qualities conducive to portraiture it is not found

⁸⁰ Christopher Wood, Albrecht Altdorfer and the Origins of Landscape. The University of Chicago Press. 1993.145

⁸¹ Gunnar Heydenreich, Lucas Cranach the Elder, Painting, Materials, technique and workshop practice. Amsterdam University Press. 2007. 255

⁸² Gunnar Heydenreich, Lucas Cranach the Elder, Painting, Materials, technique and workshop practice. Amsterdam University Press. 2007.257

⁸³ Gunnar Heydenreich.2007.255

⁸⁴ Gunnar Heydenreich. 2007.255

⁸⁵ Christopher Wood, Albrecht Altdorfer and the Origins of Landscape. The University of Chicago Press. 1993.145

⁸⁶ Gunnar Heydenreich. 2007.257

more often. The fact that it is not always possible to ascertain when they were attached to their wooden panels has also been commented upon, which makes it harder to pinpoint their manufacture and function.⁸⁷ Paper and parchment, both with the ability to be rolled, were infinitely more portable than panels, and therefore useful for so-called 'diplomatic portraits', such as those undertaken by Holbein for Henry VIII, mentioned above. It could be that using paper and parchment was a step in the painting process with the expectation that they would be eventually glued to a solid support. But there is still the problem of painting on to those surfaces that are so responsive to moisture without a solid support.

Using parchment as a painting support occurs in one of Holbein's surviving works; that of Anne of Cleves, 1539 (oil on parchment mounted on canvas, 650 x 480mm, Paris, Musée du Louvre), which is significant for several reasons.⁸⁸ Not only does 1538 mark the first surviving record of salary payments to Holbein, but it also marks the beginnings of commissions for portraits of potential wives for Henry VIII.⁸⁹ Holbein embarked on a number of trips in 1538 and in 1539, to Cleves to capture the likeness of Anne and her sister.⁹⁰ Therefore, the use of more portable materials would certainly be convenient. Curator Elisabeth Foucart-Walter's research into this painting suggests that a parchment support would make this image easy to transport to Anne's family, as a replica.⁹¹ This painting on parchment has an underdrawing that shows evidence of transfer by pouncing, meaning that it is not a drawing from a live sitting that has been painted over but instead a result of a transfer of a pattern.⁹² In relation to size, using parchment would also have allowed for a larger format than paper would have provided as a single sheet. The portrait of Benedict von Hertenstein, 1517, (Figure 52), (524 x 381mm, oil on paper, glued to wood, New York, Metropolitan Museum of Art) is

⁸⁷ Christopher Wood.1993.145

⁸⁸ Elisabeth Foucart-Walter Les Peintures de Hans Holbein de Jeune au Louvre, Les Dossiers du Département des Peintures 29, Éditions de la Réunion des Musées Nationaux, Paris. 1985.

⁸⁹ Susan Foister, Holbein and England. Yale University Press, New Haven and London. 2004.13

⁹⁰ The portrait of Christine of Denmark and two of Anne of Cleves survive, but the recorded portraits of numerous others, do not (see Foister Holbein and England.13)

⁹¹ Elisabeth Foucart-Walter.1985.54

⁹² "The Anne of Cleves shows evidence of pouncing in the bodice of the dress, proving that this drawing/painting was not made after the model, but from some intermediary, now lost design."

Maryan Ainsworth, "'Paternes for phiosioneames": Holbein's portraiture reconsidered.' The Burlington Magazine. March 1990. 132.1044.175

an early example of one of Holbein's oil paintings on paper.⁹³ It is laid down on to a wooden panel.⁹⁴ According to examination records, the underdrawing reveals simple contours, drawn with a chunky dry medium, possibly charcoal or black chalk.⁹⁵ The painting shows some changes to the underdrawing lines, seen in the nose for example. Perhaps unsurprisingly, the report suggests that there does not appear to be a preparatory ground layer as one would expect if a panel was the painted support in question, given that the paper provides a smooth surface on which to paint and is the carrier of the underdrawing. It is also interesting to note that 'whilst most of the portrait appears to have been painted directly onto the sized paper, an initial thin white layer appears to have been selectively applied beneath the flesh passages and the red lake clothing' which would suggest that this was applied in lieu of a ground in specific areas only.⁹⁶ In contrast to the painting of Anne of Cleves on parchment it could be that the painting of Hertenstein was painted directly on to a cursory drawing from a live sitting.

In terms of function, Ainsworth concludes that since these Holbein paintings are on paper, the preparatory drawing functioned as the underdrawing and that transferral from a primary portrait captured from life was therefore not necessary.⁹⁷ However, unless we can really see the extent and detail of the underdrawing it is hard to say how that drawing on paper looked and therefore how it functioned. It is questionable how much detail, if any, was involved and fundamentally if it really was a 'preparatory drawing' in the true sense of what we have come to understand as Holbein's mode of capturing likeness from a live sitting. It seems much more plausible that the drawing that was stuck to the panel was actually an intermediary drawing – the outline traced from a preparatory drawing. If it was just an outline of the salient features, as with most

⁹³ Holbein's Adam and Eve was also painted in this year, which may again indicate a more economical approach during his early career.

⁹⁴ According to documentation held at the Metropolitan Museum of Art, the painted primary support paper was thought to have been originally stretched on to canvas. Since only the support of panel paintings are explicitly indicated in auction catalogues, the paper's attachment to canvas was inferred when sold by Christies, November 25th 1905. Colnaghi bought the painting in 1906 who then sold it to the MMA. It was prior to this sale that the painting was laid down on to its existing wooden panel. Also: diplomatic portraits were executed on paper stuck to canvas for portability.

⁹⁵ It should be noted, that IRR does not detect any underdrawing executed in red chalk, and therefore it is hard to know exactly what form such a drawing on paper then painted in oil would take.

⁹⁶ Karen Thomas, Paintings Conservator, Metropolitan Museum of Art, New York, examination and condition report October 5th 2007

⁹⁷ Maryann Ainsworth. 1990.175; Müller.2006. 178

of the underdrawings directly on the panels, then this may be the result of a tracing from a fully worked-up preparatory drawing. It seems unlikely that Holbein would have painted over something of any great detail, especially given the number of preparatory drawings that survive intact as drawings. Besides which, these drawings appear to have been needed for reference whilst painting.

3.6 Holbein's drawing methods and materials

3.6.1 Introduction

The view of art historian James Watrous that the terminology regarding chalks and pastels is 'indiscriminatory' has changed little since his book, *The Craft of Old-Master Drawings*, was published in 1957.⁹⁸ To these we could add drawing media in general; the confusion around the description of which still exists. Catalogue entries are brief and generic, partly because of the problems inherent in identifying drawing media. Whether we are absolutely certain or not, it is beneficial and informative to be more descriptive about drawings in general. This section on Holbein's media for his portrait drawings will therefore concentrate on the media that he used, in order of the apparent sequence in which they were applied. From visual and instrumental analysis, some questions surrounding the composition of Holbein's media and how he used it have been made clearer, and these findings will be included in a discussion on Holbein's use of metalpoint, chalks and aqueous media that comprise the portrait drawings. Capturing likeness will be included, as will the transfer techniques available to Holbein during the period within which he worked.

3.6.2 Capturing likeness

The painting of Steelyard merchant Derich Born, 1533, for which no portrait drawing survives (605 x 450mm, oil on oak panel, The Royal Collection, RCIN 405681), bears the following inscription on the stone ledge, which leaves no doubt as to Holbein's skill, as well as indicating the true likeness of the sitter:

⁹⁸ James Watrous, *The Craft of Old-Master Drawings*. The University of Wisconsin Press: Wisconsin.1957.91

*DERICHVS SI VOCEM ADDAS IPSISSIMVS HIC SIT / HVNC DVBITES PICTOR
FECERIT AN GENITOR / DER BORN ETATIS SV AE 23 ANNO 1533.* [If you added a
voice, this would be Derich his very self. You would be in doubt whether the painter or
his father made him. Der Born aged 23, the year 1533]

Since a key function of a portrait drawing is to capture the likeness of the sitter, it is important to include what contemporaneous information there is on such a procedure. The physical act of sitting for a portrait implies it was done from life and raises questions about the practicalities of the procedure, including how long it may have taken, and what materials were suited to such a function. This is a matter of importance, not least because it can give some indication of what can be captured during a live sitting, and what might be added later. References to the length of a sitting in historic literature are sparse and not usually recorded by the artist themselves. Susan Foister has noted that a sitting of two hours was recorded in Northern Italy in 1491.⁹⁹ Miniaturist Edward Norgate suggests three sittings, of between two to four hours each in order to execute a portrait miniature of the sitter, but taking note of how long a sitter could bear to sit.¹⁰⁰

The only account of Holbein's procedure of capturing a likeness of a sitter is from letters recounting his visit to Brussels in March 1538.¹⁰¹ Sent to take a portrait of Christina of Denmark, potential fourth wife to Henry VIII, the English ambassador Philip Hoby (1505-1558) mentions a sitting of 'but three hours space' in which time Holbein produced a resulting likeness that Hoby thought 'very perfect'.¹⁰²

Frustratingly, no drawing of Christina survives so we are unable to gauge what such a three hour sitting would have produced. However, it is a good guide for the rest of the extant drawings – some more detailed than others, despite condition, which clearly indicates that some had more time spent on them than others. Whilst there is no

⁹⁹ Susan Foister, *Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister*. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.14

¹⁰⁰ Edward Norgate, *Miniatura or the Art of Limning*. Eds. Jeffrey M Muller and Jim Murrell. Yale University Press: New Haven and London. 1997.73

¹⁰¹ Drawing a portrait from the life as a preliminary route to the final painting was common practice. Letters written by artist Jean Perréal (c1455-c1530) provide documentary evidence of such a sitting:

“...your honourable mother in law and honourable wife did me the honour of their goodness and yours, the proof being that I have done crayons, in two colours, of the face of the distinguished mistress your wife”. Letter from Jean Perréal to Louis Berangier, October 8th 1511, footnoted in Etienne Jollet's *Jean and Francois Clouet*. Trans. Deke Dusingberre. Paris : Editions De La Lagune, 1997.22.

¹⁰² A.B Chamberlain, *Hans Holbein the Younger*. George Allen: & Co: London. 1913. Vol.2.294-5

mention of the method of taking the portrait, the practicality of the job in hand assumes a drawing was the method of choice. Holbein was clearly able to portray what he saw in front of him.

The majority of Holbein's portrait drawings are in three quarter profile, looking predominantly to the (true) left. Other poses include profiles and the more confrontational gaze of full-face portraits. The pose of a sitter certainly warrants further study. Historian Mark Roskill has written on the analysis of poses, citing treatises on the conduct of men and women that reference self-presentation and social behaviour.¹⁰³ Taking this aspect into account when viewing a portrait adds further insight into the chosen composition, illustrating certain rules and social conventions. For example, for pendant portraits, the woman was invariably placed to the man's (true) left. Miniaturist, Nicholas Hilliard (c.1547-1619) recommended certain lighting for the sitting, and a distance from the artist to the sitter of at least two yards, increasing to six yards for a full-length portrait. He further suggested that the sitter and the artist be on the same level and also alerted the portraitist to the problem of movement of the sitter, claiming it to be 'the greatest cause of losing the likeness in pictures'.¹⁰⁴

Apart from the actual pose, there are various aspects of a portrait drawing that offer information about the sitting itself. Lorne Campbell suggested that aspects such as pupil size and lights in the sitters' eyes provide information regarding the lighting during the sitting.¹⁰⁵ However, the painted version of a portrait may not be a pictorially exact copy of the drawing. Lighting and clothing may change and in the case of the drawing of Lady Guildford, (Figure 14), the drawing has an informality that the painting lacks. This is discussed at greater length in Chapter Four. As discussed in Chapter Two, research conducted by the author has not provided any evidence that Holbein used a drawing machine¹⁰⁶ or other optical devices in the creation of the portrait drawings and it is therefore assumed that Holbein would have drawn his

¹⁰³ See Mark Roskill, 'Lady with a squirrel and starling by Holbein: Incursions of the Figurative in his portraits'. Hans Holbein: Paintings, Prints and Reception. Studies in the History of Art. 60. New Haven: Yale University Press. 2001.177

¹⁰⁴ Nicholas Hilliard, A Treatise Concerning the Arte of Limning, together with A More Compendious Discourse Concerning Ye Art of Limning by Edward Norgate, with a parallel modernized text edited by R K R Thornton & T G S Cain. Mid Northumberland Arts Group 1981.81

¹⁰⁵ Lorne Campbell, Renaissance Faces: Van Eyck to Titian. Yale University Press.2008.36

¹⁰⁶ See Appendix Three for a discussion on the reconstruction and use of a Dürer-style drawing apparatus.

portraits during live sittings.¹⁰⁷

3.6.3 Holbein's drawing process: a brief synopsis

Directional strokes on Holbein's drawings are often cited as evidence of his left-handedness. Karel van Mander was the first to refer to Holbein as a left-handed artist, claiming it was rare and unusual.¹⁰⁸ Signs of left-handedness (for example, shading in oblique strokes downwards from left-to-right as opposed to a right-to-left direction of a right handed person) is often used for attribution purposes, not just for Holbein, but other known left-handed artists such as Leonardo da Vinci and Michelangelo. Such evidence has been claimed to be 'nearly as reliable as a signature'.¹⁰⁹ However, it has also been suggested that many left-handed artists, such as Leonardo, Michelangelo and Holbein could have used both hands to draw and write, which makes it slightly more problematic if used as a tool for attribution.¹¹⁰ Furthermore, in the Windsor Holbein drawing catalogue, Karl Parker pointed out that left to right shading can betray an off-set.¹¹¹

Each of the corpus drawings that relate to a painting of the same sitter has an individual data sheet (see Tables 7 to 23, in Appendix Four) that constitutes a more in-depth description of the materials and techniques, and signs of use of the drawings. There are also tables that are grouped in accepted chronological order, demonstrating relational size and the location of drawing media (Table 6, also in Appendix Four). However, a

¹⁰⁷ Three drawings by Holbein are of sculptures; the Duke of Berry and Duchess of Berry from 1524 and John Colet, but they are depicted as though of flesh.

¹⁰⁸ Karel van Mander, *Schilder-Boeck* 1604.1906 .189

¹⁰⁹ See Christian Müller.2006.22, where Müller claims that working out left handedness in Holbein's drawings is a useful tool for attribution, in relation to the marginal drawings in *Praise of Folly*. See also Carmen Bambach, 'Leonardo, Left-Handed Draftsman and Writer'. www.metmuseum.org/special/leonardo_master_draftsman/draftsman_left_essay.asp in which Bambach says that Leonardo's left-handedness had 'significant implications for the connoisseurship of his drawings, despite number of copies of drawings where left handedness has been mimicked. Essay on this site was derived from the exhibition catalogue: *Leonardo da Vinci, Master Draftsman*. Ed. Carmen C. Bambach. Metropolitan Museum Publication: New York.2003.

¹¹⁰ Christian Müller, 22, where he cites clinical neurologist Richard Jung's ideas on artistic left-handedness.

¹¹¹ Karl Parker.1945.32. See also John Shearman, 'The Organization of Raphael's Workshop'. Art Institute of Chicago Museum Studies vol 10 *The Art Institute of Chicago Centennial Lectures* 1983. 4-57. On page 47 & 48 he discusses off setting of drawings. An off-set is a transferal of a drawing not through paper but directly from its surface to make a reverse impression. The drawing, often in black or red chalk, is dampened and put through a press. Useful for printers for transferal, it was also used by artists in the 18th century to make copies of their work, which was then over drawn to strengthen the faint lines of off-setting the original.

brief and general description of Holbein's drawing technique here will help to explain why the media in this section has been placed in a particular order.

Holbein's portrait drawings share a common element in terms of sequencing of media: starting with basic outlines in silverpoint or chalk, then proceeding to model and add volume by filling up the features predominantly with chalks and the addition of some watercolour. The introduction of a range of coloured chalks to unprepared papers, and later pink prepared ones, somewhat altered the appearance of the drawing, making interpretation of the drawing process and media harder to decipher, but the principal structure is the same. Further, portraits on pink prepared papers have the addition of black aqueous media, which serves to fix and strengthen outlines, as well as picking out various features such as lip line, nose, eyes and hair. They also feature the occasional highlight in white body colour and watercolour used for the irises. These aspects are discussed in more detail within the sequencing of the media in this section. However, it is not always possible to unravel Holbein's technique in terms of the sequence of drawing material, especially when the media is multi-layered, as is often the case when he started to use more dry drawing media such as chalk.

3.6.4 Holbein's use of metalpoint for portrait drawing

Metalpoint as a medium in Holbein's portraiture is important for two reasons. As a traditional drawing tool prior to the availability or use of coloured chalks, it features in very few of his surviving portrait drawings. This suggests that the prepared papers were not used primarily as a traditional substrate for drawing with metalpoint. More importantly, historians, such as Parker and Ainsworth, have suggested that Holbein may have used metalpoint as a tool with which to trace over his drawings for transfer, thereby leaving a mark, something that seems unlikely given it may affect the appearance of the drawings. This aspect has never really been clarified in Holbein literature and causes confusion in the interpretation of the media of the portrait drawings. Since its potential use has been tied to the function of the drawings, it is discussed more fully in relation to the function of prepared paper and transfer in Chapter Four. Although the role of metalpoint as a tracing tool means that it may come last in the sequence, it is helpful to clarify here, where possible, if it was used as a tool for drawing or as a tool for tracing.

3.6.5 The characteristics of metalpoint

A stylus for drawing is made from a soft malleable metal or alloy that leaves a mark on the substrate, be it paper, parchment or a preparation layer. Styluses made from lead were used for the demarcation of text lines on medieval manuscripts and were an established drawing instrument during the late Middle Ages.¹¹² The metals used for drawing were commonly silver, lead and sometimes gold, along with other less precious metals such as copper. Styluses of silver and lead were usually alloys, such as a lead-tin alloy or silver-copper alloy.¹¹³ Alloying would help provide a better texture with which to draw. Significantly, this amalgam of different metal alloys meant that not one metalpoint was exactly alike, making them hard to identify.¹¹⁴ The stylus could be cast so as to provide two ends for drawing, with a fine point at one end and a blunter point at the other, in order to change the width of line and add more versatility.¹¹⁵ It could also take the form of metal wire in a holder.

The choice of metalpoint was dependent on the substrate. A lead-based metalpoint could be used on unprepared paper or parchment, whilst silver and gold styluses needed a more abrasive ground, as described in the section on prepared papers earlier in this chapter.¹¹⁶ The difference in qualities, properties and tones of metalpoints must have played a part in an artists' choice of media. For example, given that lead point can be used without going to the lengths of preparing a surface – a requirement for silverpoint – it might have been the choice if an artist wished to save time. But lead's inherent softness, although somewhat tempered by the tin alloy, meant it had the propensity to become blunt and be more readily smudged. Both these qualities could explain its more limited use and preference for silverpoint, and therefore the need for prepared papers. Metalpoints are often described in terms of their limitations of tone,

¹¹² James Watrous.1957. 4 & 10 which has a useful list, suggesting chronology of when metalpoints were used.

¹¹³ See Janet Ambers, Catherine Higgitt & David Saunders, Eds. Italian Renaissance Drawings: Technical Examination and Analysis. Archetype Publications in Association with The British Museum: London, 2010.48, where their findings confirmed such alloys.

¹¹⁴ See for instance, Alain Duval, et al 'Particle induced X-ray emission: a valuable tool for the analysis of metalpoint'. Nuclear Instruments and Methods in Physics Research B 226 .2004.60–74. Watrous.1957 & Ambers, Higgitt and Saunders.2010

¹¹⁵ Meder describes various shapes and sizes of stylus. Silver does seem to be the predominant and perhaps the most preferred of metalpoint.

¹¹⁶ See, Letizia Montalbano et al, 'Italian Metalpoint Drawings: International Studies of the Artistic Technique.' ICOM 13th Triennial Meeting, Rio de Janeiro, 22-27 September 2002: preprints, ed. Roy Vontobel, James & James (Science Publishers) Ltd. 2002.609-614.

texture and variation in line, but they can still be used to stunning effect and for fine detail, as illustrated by van Eyck's exquisite Portrait of a Cardinal (?Niccolò Albergati), c.1435, (Figure 47), (Kupferstichkabinett, Staatliche Kunstsammlungen, Dresden, Inv. C775. 212 x 180mm, two different silverpoints and gold point on white/grey prepared paper) executed, deliberately, in more than one metalpoint type.¹¹⁷ A discussion of this drawing, in relation to the use of colour, is found in Chapter Four.

Although some literature on drawing materials provides a certain amount of insight into metalpoint, information on its use and identification is still not as comprehensive as it could be.¹¹⁸ Identifying metalpoint as a drawing tool in Holbein's early portraits on prepared paper is a little more straightforward in comparison to discerning the use of metalpoint in the later, more complicated, multi-layered portraits with chalks. The identification of the types of metals used in metalpoint drawings by visual examination can be difficult, if not impossible, because of the number of variables involved. Some metalpoints and alloys can change colour on exposure to air as a result of the corrosion products from oxidisation. Such colour change is dependent upon the composition of the metal stylus, the substrate on which they are drawn, and the air quality and exposure to light. Since substrates can affect our judgement when examining what media was used, we need to take care in assessing colour changes. Although as a general rule gold does not tarnish, silver forms silver sulphide on oxidization and turns a more transparent yellowish/brown, whilst lead forms lead carbonate, darkening on exposure. However, colour change is not always consistent because of the different alloys present, and it may not tarnish consistently depending on the type and colour of the substrate they are applied to. Lines drawn in metalpoint are flatter and less textured than say, charcoal or chalk, which scatters and is grainier. However, over a period of hundreds of years it is somewhat harder to differentiate between materials in quite the same way as when freshly applied.

3.6.6 Holbein's portrait drawings in metalpoint

¹¹⁷ T.Ketelsen, I. Reiche, O.Simon & Silke Merchel, 'New information on Jan van Eyck's portrait drawing in Dresden'. The Burlington Magazine. Vo1947.170-175.March 2005

¹¹⁸ See the following for more information regarding metalpoints: Joseph Meder, The Mastery of Drawing. James Watrous.1957 . Janet Ambers, Catherine Higgitt & David Saunders.2010 and the anticipated, The Luminous Trace: Drawing and Writing in Metalpoint by Thea Burns, to be published by Archetype Publications, December 2012.

There are a number of portrait drawings in the corpus relating to the paintings of the same sitter where possible metalpoint use is unclear, despite various attempts at analysis. These need to be separated out into those where the metalpoint was used as a drawing tool versus those that may have been traced over with a metalpoint to facilitate transfer of the image.¹¹⁹ Since signs of transfer are linked to the tool that traces the contours, whether it leaves an indentation and a mark, or just a blind indentation, is discussed in Chapter Four, as these have connections to materials and techniques being linked to the function of the drawings.

Recent research has shown that a number of Italian Renaissance drawings in metalpoint have an underdrawing executed in a dry drawing medium, often the more easily erased black chalk.¹²⁰ This preliminary dry media sketch is not surprising: Cennini, for instance, mentions starting with charcoal before using silverpoint.¹²¹ The intriguing presence of what is interpreted as a sort of underdrawing to drawing was revealed through the use of IRR, with the medium of silver, rendered invisible in this light, revealing this initial drawing on a number of those Italian Renaissance drawings examined.¹²² It was not possible to carry out IRR analysis on the metalpoint drawings of the Meyers. However, this type of initial drawing prior to a more permanent line, such as metalpoint, is a technique that Holbein has employed elsewhere: not under silverpoint in this case, but under the black pen and ink study drawing of the More Family group, 1527, (Figure 53), (389 x 524mm, Basel Kunstmuseum, Kupferstichkabinett, Inv.1662.31, black aqueous media in both pen and brush, over black chalk, inscriptions in brown ink). Remnants of black chalk are still visible in some areas as underdrawing.

Whilst we cannot dismiss that Holbein sketched out some preliminary lines with black chalk or charcoal prior to committing to the somewhat inerasable silverpoint, of the 1516 drawings, there is no microscopic or other visual evidence of this on either portrait. The placement of this black chalk further suggests it is on top of rather than underneath the silverpoint. In its current condition therefore, silverpoint appears the

¹¹⁹ As suggested for various drawings, for example, by Karl Parker in his 1945 catalogue of the Windsor drawings and Maryan Ainsworth in her 1990 Burlington article

¹²⁰ See Giovanni Verri & Janet Ambers, 'Revealing Stratigraphy', Italian Renaissance Drawings: Technical Examination and Analysis, eds Janet Ambers, Catherine Higgitt & David Saunders. 2010.96

¹²¹ Cennini.1960. 17

¹²² See Verri & Ambers.2010.89

initial and predominant media, defining the contours as well as modelling of the drawing.

Whilst silverpoint makes up the main constituent of the media of his two earliest surviving portrait drawings that relate to a painted portrait - Jacob Meyer and his wife Dorothea Kannengiesser, 1516, (Figures 1 & 2, executed predominantly in silverpoint on grey/white prepared papers), these 1516 portraits also display certain stylistic aspects and characteristics that get carried over in to the later, more complex chalk portrait drawings. The silverpoint, oxidised to a warm brown hue, appears to have been used in different ways. It is used to shade and model the face, and in some areas was used repeatedly over the same line to darken the stroke, as seen in the plaited necklace of the portrait of Dorothea for instance, (Figure 2). A carbonaceous dry medium that looks like black chalk has been over-laid onto the silverpoint contours. It appears as a continuous thin, black line on some of the more salient facial features, such as the sitters' lip lines and nose contours as well as in sporadic touches, picking out elements of their costume and facial features, such as the eye lashes and brows, (Figure 2.1). The irises, rendered in silverpoint, are over drawn with black chalk to create Dorothea's pupils: a contrasting effect not always possible in silverpoint alone. The condition of both drawings is poor, more so the portrait of Dorothea, and it could be that there was once more black chalk than is currently present, evidenced from residual chalk on Jacob's eyes as well as along some contours.

Perhaps most intriguing is the very crimson red chalk used for the more fleshy aspects of their eyes, noses, and to add some colour to their faces. The red chalk appears to have been used in a relatively thin stick form, and is applied using small strokes that are still clearly visible on the face and nose, rather than blended and stumped. This helps to model the face, providing some depth. It is difficult to work out if the red or black chalk came last in the sequence of drawing, mainly because of the condition but also because the two can merge with each other along the contours. However, the way the red overlaps the black on the contour of Jacob's nose would indicate that the red was applied last as a sort of colouring-in process. There is no obvious sign of these drawings having been traced over with a tool for transfer, but it is often problematic, especially with metalpoint drawings in general, to ascertain if the indentations are from the act of drawing or the act of tracing. This is discussed at greater length in the section

on transfer techniques. The use of black media to over-draw the contours of the portrait drawings is something that is in keeping with Hans Holbein the Elder's workshop drawings and an aspect Holbein carries through to many other portrait drawings, and is also a feature of his paintings.

3.6.7 The presence of metalpoint on Holbein's pink prepared paper portraits

Whilst Holbein's use of metalpoint as a drawing medium is clearly visible in his early portrait drawings, the use of it in his later drawings on prepared paper is not so clear. The presence of a ground does not necessarily indicate intentional use of metalpoint, especially with regards to Holbein's drawings, where it also acts as a mid-tone. The identification of metalpoint is complex: not just in distinguishing what metal it may be, but discerning whether it is a metal-based drawing medium at all. Metalpoint, especially lead, can be difficult to distinguish from black chalk without instrumental analysis. There is little visual evidence for Holbein's use of silverpoint as a drawing tool on portraits executed on pink prepared papers, produced during the second English period (1532-43). The only clear and confirmed example of silverpoint use as a drawing tool is not for the portrait of the sitter itself, but in the depiction of a piece of jewellery drawn next to the portrait of Lady Ratcliffe, 1532-43, (Figures 39), (301 x 203mm, Parker 19, RL12236, coloured chalks, black aqueous media, silverpoint). As mentioned above, unlike lead and carbon-based drawing materials, IR radiation renders silver-based metalpoint transparent.¹²³ Brown in hue, this particular part of the drawing appeared to be silverpoint and, when the drawing was examined using IRR, this area was not visible, further indicating the use of silverpoint for this aspect of the design, (Figure 39.1). Ideal for producing fine, detailed, linear drawings, silverpoint was an apt choice for this part of the drawing

Other drawings from the corpus selected for this research were also examined with IRR, but the majority of the readings proved inconclusive in confirming the presence of silverpoint. This is because it is much more problematic confirming the presence of silverpoint, or any metalpoint for that matter, on those drawings where it may have been used as a tracing tool, because it invariably traces over lines of a carbonaceous

¹²³ See S.Tanimoto and G.Verri, 'A note on the examination of silverpoint drawings by near-infrared reflectography'. Studies in Conservation. 2009 54.106-116.

nature, which are visible in IRR. IRR is therefore not likely to confirm the media of silverpoint as drawing or tracing tool, if it is over or underdrawn with carbon black in dry or aqueous form. In many of the drawings that show signs of transfer in the form of indentations over a drawn line, the drawing media gets pushed into the trough as the drawing is traced and could be interpreted as a drawn line rather than a line resulting from indentation caused by tracing; this is where some of the confusion has arisen.

The media used for the portrait drawings of Richard Southwell, 1536, (Figure 24), and Jane Seymour, 1536/37, (Figure 26), executed on pink prepared papers, are examples of this uncertainty. They both show signs of having been traced for transfer, whether directly on to a panel or via an intermediate sheet. If metalpoint was used on these drawings it was used as a tracing tool not as one for drawing. As much as it seems unlikely to want to cause disfigurement by using another drawing tool with which to trace, it cannot be discounted. The tracing tool draws over the lines of the chalks and aqueous media, forming indentations. Some of the more friable media has been rubbed off after years of wear and tear, emphasising this indented line. This can make the indented line from tracing look like a drawn line, (Figure 24.1). The portrait drawing of Lady Margaret Butts, c1540/43, (Figure 32), also falls into this category of uncertain media identification. This drawing is in very poor condition and is heavily indented from being traced over. There is much loss of media and it is very hard to tell if metalpoint was used as a drawing tool or a tracing tool. The indented lines of her forehead are disfiguring from being heavily incised into the surface and are more likely the result of an act of being traced. The marks that make up her costume, which are hardly indented at all, could be lines drawn in metalpoint or marks left as part of the transfer process.

The portrait drawing of Lady Audley, c.1538 on pink prepared paper is the only extant drawing that relates to an attributed Holbein miniature, (Figures 28 & 29). The drawing shows no physical sign of having been traced for transfer. Susan Foister has commented that the necklace worn by Lady Audley in her portrait shows extensive use of metalpoint, (Figure 28.1).¹²⁴ This is not surprising since the media somewhat stands

¹²⁴ Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.24-25.

out in contrast to the scarcity of the rest of the drawing. But under close examination it does not appear to be the case. The lines do not have the uniformity of a metalpoint drawn line. Instead they display characteristics of chalk in the variation of thickness of line and in its particulate nature. Holbein was incredibly adept at using chalks to different effects. Lines could be thick and textured to cover a bigger surface area. On the other hand such lines could be fine and precise, almost pen-like, with precision and crispness. The necklace media does not display signs of oxidation often associated with silverpoint, nor does it appear to be lead point under magnification. IRR examination confirms that it is not silverpoint, as the lines remain visible, (Figure 28.2), although the possibility remains that it could be lead point. However, Raman analysis of the jewellery, and of Holbein's notations, showed a strong carbon signal, indicating a carbonaceous media such as black chalk. So far the accumulating weight of evidence points to carbon of some kind.

3.6.8 Erasmus's hands: an example of Holbein's metalpoint drawing

No discussion of Holbein's use of silverpoint for portrait drawings seems complete without mentioning the drawings of Erasmus's hands. The only surviving sketches of a sitter's hands by Holbein, these two sheets offer the opportunity to compare two mediums at close proximity, and also perhaps to glimpse the beginnings of a portrait study. Two Studies of the Left Hand of Erasmus of Rotterdam; Study of the Right Hand Writing, c.1523, (Figure 67), (206 x 152mm, silverpoint on white/grey prepared paper with red and black chalk, Inv. 18697, Musée du Louvre, Cabinet des Dessins) and Study of the Right Hand of Erasmus of Rotterdam and Portrait Study, c.1523¹²⁵, (Figure 68), (200 x 280mm, silverpoint on white/grey prepared paper with red and black chalk, Inv.18698, Musée du Louvre, Cabinet des Dessins) were done in preparation for the Erasmus portrait, 1523 (L658, The National Gallery, London, 736 x 514mm, oil on wood) but may also be linked by the writing hand of the other two existing Erasmus portraits, Erasmus of Rotterdam Writing, 1523, Basel Kunstmuseum, Inv.319, 370 x 305mm, oil on

¹²⁵ Dismissed as 1523 by various historians, a date of 1532 has been given to the portrait study in black chalk because Erasmus looks 'considerably older', and said to be of similar age to the Roundel Portrait of Erasmus, 1530/31, Basel, Kunstmuseum. Is seven years considerably older? It seems unlikely that Holbein would have added this sketch at a later date. See Müller.2006. 289

paper on panel and Erasmus of Rotterdam Writing, 1523, Musée du Louvre, Inv.1345, 430 x 330mm, oil on panel.

The two sheets of studies of hands are extraordinary in their precision and handling of the mediums of silverpoint and chalk, demonstrating Holbein's ability to capture an outline in both materials. The sketch of the partly finished hand illustrates Holbein's drawing process and sequencing of media, (Figure 67.1), (Inv.no 18697). The hands were outlined in silverpoint, now slightly brown in hue; these silverpoint lines are wispy, as Holbein searches to establish the contour; if executed in chalk, these initial lines could have been more easily reduced or hidden. There is a sense of Holbein having repeatedly gone over some outlines, strengthening the contours in affirmation of the final shape. The interior is fleshed out and modelled with shading in silverpoint in strokes across fingers and hand, creating volume. Red chalk adds the flesh tone, and to model the shape of the hand. It spills over the edges of some of the contours, indicating its position as last in the sequence. These drawings also demonstrate that metalpoint can have variation depending on what part is used: using the tip to create a finer line for the contours, or tipping it slightly on its side to create a thicker line, as seen in the back and forth strokes of the shadows, (Figure 67.2). There is some damage to the preparation around the tips of the fingers of both sheets. This seems to have been caused from the act of repeated drawing over some lines rather than as an act of tracing for transfer, as it does not follow the entire hand shapes.

In contrast to the silverpoint drawing is the sketch in black chalk of Erasmus's hand holding a pen. Seen in close proximity to the silverpoint hand, it is possible to see the differences in how the media sits on the prepared paper, (Figure 67.3). The chalk contours are not overdrawn and show more freedom because of it. They also display the versatility of the chalk line, something Holbein exploits in his portrait drawings to amazing effect. Some lines are fine, indicating a more pointed tip, and some are thicker and rougher, indicating a wider width. However, although the sketch of the hand in black chalk is sketchy and freer with a sense of speed to capture Erasmus' moving hand, it still has a linearity, and economy and precision with relatively few hesitant lines. These drawings show great confidence and skill in both mediums. Under magnification, the media used for the beginnings of Erasmus's portrait appears to be black chalk. If it is the start of what would have been a fully worked up portrait, it again

shows great skill at being able to capture a likeness with relatively little working. It could also be that this black chalk sketch acted as an underdrawing over which to add the more permanent silverpoint.

3.6.9 Chalks

Holbein's skills and surety in the manipulation of metalpoint for portraiture is apparent from the 1516 portraits of Jacob Meyer and his wife Dorothea, but it was not an ideal medium for live sittings. It is much harder to correct and does not offer the tonal qualities of coloured chalks. Furthermore, once committed to making a mark, it is hard if not impossible to erase, unlike a more forgiving dry medium like chalk. Holbein's predominantly chalk portraits on unprepared papers span his employment in both Basel and England. Those on pink prepared papers, in the main, relate to Holbein's second period of employment in England from 1532 until his death in 1543. Holbein's use of black and red chalk was included in his silverpoint drawings and continued to be the main constituent of many drawings, often forming the first lines laid down. His introduction of a broader range of hues marks a significant change to the appearance of his portrait drawings and will be discussed in this section. The drawings that relate to paintings of the same sitters that are part of the selected group for this thesis are the main focus of this section. This section will consider the definition of coloured chalk, and explore the question around their fabrication and use.

3.6.10 A brief introduction to chalks as drawing media

Naturally occurring inorganic minerals, including the artists' earth pigments sienna, red oxide, umber, ochre and terre verte are all iron oxides and have been used as pigments since prehistoric times.¹²⁶ Each pigment displays a wide range of properties, including a large variant of colour shades within each group, which are dependent on the composition of the earth segment from which they came. The earth colour is a result of the nature of the iron oxide. There are a number of factors that determine the properties of earth pigments, such as the nature of the iron oxide and the amount of

¹²⁶ See James Watrous.1957.110, who gives a partial list of chalks in other colours to be found in nature and Joseph Meder. 1978.86

clay present. The colouring matter in yellow ochre, for example, is mainly hydrated oxide of iron, whereas in red ochres the oxide is in the anhydrous form. The colour of siennas is dependent on the presence of iron oxide and a small amount of manganese oxide. However, it is the particle size and the crystalline shape that influence the pigments visual properties. A clay base is common to nearly all iron oxides. Clay is an important ingredient of natural chalks and what makes them worthy of drawing with, affecting not only the hue but also their softness, hardness and texture. These factors are important in terms of what makes a good chalk for drawing: too hard and it is difficult to make a mark, too soft and the chalk crumbles. The author's attempts at shaping natural chalks confirmed that some are easier to manipulate than others. A red drawing chalk from France was readily cut into segments and a fine drawing line achieved. French black drawing chalk was harder to cut and produced a hard, fine line. Raw sienna was also easy to shape and placed in a holder, proving a good drawing tool, (Figure 69). Volcanic red from Italy was very crumbly and too soft to shape and cut, implying that it was not possible to use in its raw state.¹²⁷

Known generically as the 'trois crayons' technique, natural red, black and white chalks are found in European drawings from the later 15th century. However, there is a significant lack of information regarding chalks from the 15th and 16th centuries, especially with regards to their composition. This issue involves the debate around whether artists fabricated their own chalks or relied on natural ones, with no added ingredients, shaping them, as they needed.¹²⁸ Conservator and drawing materials scholar Thea Burns has investigated this in a comprehensive study of pastel drawing, but there is still little published on the analysis of drawing and other friable media.¹²⁹ Burns has written extensively on the origin of the word pastel and the confusion around the seemingly interchangeable terminology of chalk, crayon and pastel.¹³⁰ 16th

¹²⁷ Natural chalks for drawing were supplied by Pip Seymour, Fine Art Products, London.

¹²⁸ Artist-craftsmen could be particular about their source of white chalk because of this variation in quality, and what particular job the chalk was needed for. Analysis of fossil remains seem to confirm that certain types of chalk were indeed selected for certain properties, for instance 'Champagne chalk' from Northern France was reportedly the best type of chalk for artists. See Unn Plahter, 'The trade in painters' materials in Norway in the Middle Ages. Part II: Materials, techniques and trade from the twelfth century to the mid-fourteenth century'. Trade in Artists' Materials: Markets and Commerce in Europe to 1700. Eds, Jo Kirby, Susie Nash, Joanna Cannon.2010.67

¹²⁹ Thea Burns, The Invention of Pastel Painting, Archetype Publications: London.2007. 8-16

¹³⁰ Thea Burns, 'Distinguishing Between Chalk and Pastel in Early Drawings'. The Broad Spectrum, Studies in the Materials, Techniques and Conservation of Colour on Paper. Eds. Harriet K Stratis and Britt Salvesen. Archetype Publications Ltd: London. 2002.13

century pharmacists dispensed powders in cakes or pastilles and this has partly led Burns to argue that:

...the term 'pastel' was adopted in early modern usage for fabricated chalk sticks because it characterised the method of their fabrication. It did not, in the early centuries, designate an artist's tool or technical procedure clearly distinguishable from fabricated chalk.¹³¹

Burn's research not only dispelled Watrous' assertion that the only natural chalks of any importance within the technical history of drawing were red, black and white,¹³² but also demonstrated that prior to the burgeoning of pastel drawings in the 18th century, there was a broad range of naturally occurring coloured chalks, something that has not really been acknowledged to its full extent before.¹³³ The range of hues within each basic colour category illustrates this and can be seen in Holbein's portrait drawings. For example, the red chalks that he used range from the crimson red of the flesh tones used in Basel for his 1516 portraits of the Jacob Meyer and his wife Dorothea, (Figures 1 & 2), to the russet red of the clothing of William Warham in 1527, drawn during his first visit to England, (Figure 10). Thea Burns has suggested that the assumed limited range of naturally occurring coloured chalks is what has led to the supposition of fabrication of sticks of chalk or pastel in the first place, but it may be that this was not always necessary.¹³⁴ We should therefore keep an open mind about the existence and obtainability of a wider colour range of natural chalks and not just assume Holbein used fabricated chalks.

Depending on the physical characteristics, naturally occurring coloured chalk-like minerals such as ochres can be shaped into a point or cut and formed into a stick and used as a drawing tool.¹³⁵ For example, natural earths may already include some impurities such as clay, which would serve as extenders and make them soft enough to draw with.¹³⁶ If the consistency of these chalks were not ideal for drawing, then these

¹³¹ Thea Burns.2007. 8

¹³² James Watrous.1957.110

¹³³ See also Thea Burns, 'Chalk or Pastel? The use of coloured media in early drawings'. The Paper Conservator.1994. 18.51

¹³⁴ Thea Burns.2002.13

¹³⁵ Thea Burns.1994.49-56

¹³⁶ Joyce H Townsend, 'Analysis of Chalk and Pastel Materials'. The Paper Conservator, The Journal of the Institute of Paper Conservation. 1998. 22.21

chalk-like minerals could be powdered and fashioned into cohesive sticks with the addition of a binder such as gum arabic.¹³⁷ These are known as 'fabricated' chalks. The distinction between pastel and fabricated chalk in the early modern period then is intangible. Pastels were not available commercially until 18th century, by which time many other coloured pigments were being used. This resulted in the creation of drawings in full colour: something that Holbein was not able to do in dry media, and perhaps accounts for the many notations on colour found on his drawings. The array of hues within the restricted colour range of red and yellow alone indicate that Holbein could obtain chalks from naturally occurring deposits but whether they were then made up into sticks is not clear.

There is a question around whether Holbein's chalks were used in their natural state - cut into points or sticks - or fabricated. Within the natural chalk colour range, it is very difficult if not impossible without instrumental analysis to visually distinguish between fabricated and natural chalks in Holbein's work. The presence of unnatural additives or organic binders usually indicates that the drawing chalk in question is fabricated, although they often appear in quantities too small to analyse without the aid of an electron-scanning microscope.¹³⁸ However, taking samples of the dry media on Holbein's drawings was not possible and visual examination did not clarify if the chalks were fabricated or not.

The sparsity of the chalks often rendered Raman analysis inconclusive in terms of pigment identification. Further it was not able to distinguish some pigments because of the dominance of the vermilion in the preparation that overwhelmed potential readings. However, whilst this research has not been able to clarify if the chalks were fabricated or not, the spectrum of Holbein's dry media fits within the natural chalk colour range. Holbein used chalks in variations of reds, browns, and yellows, black and very occasionally white, to execute his portrait drawings. He also blended the chalks as he drew. It is this tonal range that has resulted in Holbein's drawings being associated with fabricated chalks in art historical literature.¹³⁹

¹³⁷ Thea Burns.2002.12

¹³⁸ Joyce H Townsend.1998.22.

¹³⁹ For example, Susan Foister. Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.29 and see Marjorie Shelley, 'An Aesthetic Overview of the Pastel

3.6.11 Holbein's use of chalk for portraiture

The study of Holbein's portrait drawings, purely on a visual level, has revealed interesting aspects regarding his use of dry media as a portrait drawing technique. The link between this more sophisticated use of colour and Holbein's paintings is discussed in relation to the function of the drawings in Chapter Four. Despite the more limited colour range of the chalk portraits of French court artist Jean Clouet (1480-1541), there has been much art historical discussion that it was from Clouet that Holbein may have 'learned' the technique of using coloured chalks.¹⁴⁰ However, as Christian Müller has argued, as well as already being part of his earlier work, Holbein's use of coloured chalks may have been influenced by artists nearer to home.¹⁴¹ For example, Hans Holbein the Elder's workshop portraits in silverpoint from 1502 are worked in silverpoint only, but from around 1508 red chalk begins to be introduced, in touches to the lips, ears and faces of the sitters, (see Figure 60, Bildnis des Zimprecht Schwarz, c.1508, Inv.1662.190, for example). Holbein's portraits of 1516 are very much in keeping with this workshop style and use of red chalk.

It was therefore not necessary for Holbein to have gone to France in order to be exposed to the use of coloured chalks. Holbein's Swiss and German contemporaries were also using a wider range than red and black from the 1520s. For example, Swiss artist Niklaus Manuel Deutsch's (c1484-1530) Bust Portrait of a Young Woman, 1518, (Figure 70), (243 x 193mm, red, black and yellow chalk, watercolour or wetted out chalks, on cream paper, Inv.U.X.10, Kunstmuseum, Basel Kunstmuseum, Kupferstichkabinett,) illustrates a painterly approach to the use of coloured chalks. Furthermore, Wolf Huber's (c1485-1553) drawing, (Figure 71), Portrait of a Man Wearing a Fur Lined Coat and Broad Rimmed Hat, 1522, (277 x 215mm, red, black and yellow chalk, aqueous black, white highlights on cream laid paper, Inv.16336, Kupferstichkabinett, Städel Museum, Frankfurt), seems a much more appropriate link to make, not only in terms of the media and how it was used, but also in terms of geography. This drawing is

Palette: 1500-1900', The Broad Spectrum, Studies in the Materials, Techniques and Conservation of Colour on Paper. Eds. Harriet K Stratis and Britt Salvesen. Archetype Publications Ltd: London.2002.3

¹⁴⁰ For various arguments regarding Italian or French influence, see: Paul Ganz, 'L'influence de l'art français dans l'oeuvre de Hans Holbein le Jeune', Actes du congrès d'histoire de l'art 2, Paris Les Presses Universitaires, 1924.292; Peter Mellen, Jean Clouet. Complete edition of the drawings, miniatures and paintings. Phaidon:London,1971.29 and Griener and Bättschmann, Hans Holbein, trans. Cecilia Hurley and Pascal Griener, Reaktion Books.1997.134 f

¹⁴¹ Christian Müller.2006.30 and 317.

reminiscent of Holbein's portrait of Henry Guildford, 1527, (Figure 12), in the technique of blending the chalks to create a flesh tone on the sitter's face. German artist Leonard Beck's (1484-1530) portrait drawings of men in hats, in University College of London collections, also make better comparisons with Holbein's work showing extensive and early use of the descriptive nature of coloured chalks and as such these drawings are closer to Holbein's work than Clouet's in their rendering.¹⁴²

In terms of sequencing, both black and red chalks play a part in Holbein's portrait drawings. The use of black chalk as a preliminary marker for more permanent media has already been mentioned in relation to the study of the More family group portrait, for example, and was used extensively in other drawings to make the first mark of a portrait drawing.

Natural black chalk is a composite of carbon and clay.¹⁴³ Depending on its properties it can be cut and shaped in to sticks that can be drawn with. Like most other drawing materials, the quality of black varied. It can be very hard to identify and distinguish the difference between carbon-based drawing materials such as charcoal or black chalk and even sometimes from metalpoint. Not only can black chalk look like metalpoint (as discussed earlier in relation to Lady Audley's necklace) but Holbein uses the same materials to staggeringly different effect, making identification more problematic. His ability to make a limited choice of media sing out with such variety was extraordinary. In most cases, visual examination of the drawings indicated a black chalk rather than charcoal or metalpoint.¹⁴⁴ The black chalk of Holbein's portrait drawings played a major part in the initial shape of the drawing. It was also used to depict facial features, hair

¹⁴² See Portrait Bust of a Young Man wearing a cap, c.1500-42, Leonard Beck, UCL Collection, Inv. G.145, for example. A portrait on unprepared paper, but with some blue coloured wash applied around the sitter. Also, Portrait of a Young man in a cap, turned to the right, c.1500-1542, UCL Collection, Inv. G.146, coloured chalks on unprepared paper with some yellow wash in eyes and cloak. Moreover, Beck's coloured chalk drawings are dated earlier than Holbein's surviving coloured chalk portraits.

¹⁴³ As already discussed, distinguishing natural from fabricated chalk was not possible, but also cannot be discounted. For instance; artificial white chalk, made from marble dust and egg white is mentioned in the document *Illuministarum* of 1500, see Der 'Liber Illuministarum' aus Kloster Tegernsee, Bartl, Krekel et al. (eds.) Stuttgart 2005.275

Whilst not directly described as being used for drawing, the fabrication of this white chalk indicates that chalks were produced by combining pigment dust and a binding media. With thanks to Gunnar Heydenreich for this information, written correspondence, April 2013.

¹⁴⁴ Charcoal is made from burning wood, commonly lime, beech, willow and vine twigs in the exclusion of air. It is the exclusion of air whilst burning that results in the wood being charred and not just turning to ash. Charcoal is one of the oldest drawing materials. There is little evidence that Holbein used charcoal for his portrait drawings, although it was almost certainly used to aid transfer: for pouncing or the carbon paper technique used for transferal to the grounded panel

and costume. Shadowing and modelling on the faces was often picked out in black chalk. Chalk is a versatile medium and in Holbein's hands, black chalk can exhibit many variations of line: from broad sweeps to cover large surface areas, to fine lines that make up contours and details. This is illustrated well in Figure 14.1, a detail from the drawing of Lady Guildford where the fine lines of her necklace and shoulder contour are in contrast to the broad sweeps of black that act to block in her headdress. These techniques are used across the coloured chalk range. Chalks can be smudged and blended and this is aptly demonstrated in Holbein's rendering of flesh tones and sitters' hair: both features that would require some attention to detail in terms of being specific to a sitter, and therefore may have required a certain tone only achievable by mixing different coloured chalks.

In some cases, it appears that Holbein wetted out the chalks. That is, he applied water with a brush to move the chalks around and more readily fill a large space, often overlaying this area with more detail in finer strokes. This technique occurs on the unprepared paper portraits of Lady Mary Guildford, (Figure 14) and her husband Henry Guildford, (Figure 12), both of 1527, as well as in the portrait of William Warham, (Figure 10), also 1527. Henry Guildford's hair has been created by stumping¹⁴⁵ and then wetting out of the black chalk, so too has William Warham's black hat and coat. This is indicated by the way the particles of black have been moved around so that they, in places, still appear chalky but in others have dissolved to give a wash effect. Henry's hair is overdrawn with black chalk, creating individual strands that give depth to an otherwise flat expanse of black. Brown chalk has been wetted out, acting as if a watercolour, on Mary Guildford's headdress. There is still a chalkiness to it (powdery and particulate) that suggests it is wetted chalk rather than watercolour. This technique of wetting out is also used on drawings executed on pink prepared papers, although less frequently as there is the added complication of a wet application activating the water-soluble pink preparation. Instead, there is an increased use of black aqueous media on the drawings with preparations.

Examination of Holbein's portrait drawings has shown that he used red chalk for the initial outlining of certain facial features and as an important component of the flesh

¹⁴⁵ 'Stumping' involves spreading dry media over the surface with a finger or cloth or leather covered cloth.

tones of the drawings. Under magnification, the extent of use of red chalk for these initial touches and definitions becomes apparent on both unprepared and prepared papers. In most cases, red chalk was used first in the drawing sequence to delineate the eyes, the ears (if present in the drawing), mouth, and nose. Although features, such as the eyes, are invariably overdrawn with other colours to further define and shape, elements of the red chalk remain to establish the fleshy aspects of the lower lids. The portrait of Henry Guildford, (Figure 12), illustrates an example of heavier use of red chalk around the eye and mouth area. The nose, eyes, (Figure 32.1), jowl and frown lines of the portrait of Lady Butts, show the application of red chalk first. Despite the very faint and limited amount of drawing media that constitutes the portrait of Edward, Prince of Wales, (Figure 30), what can be made out appears to have red chalk delineating his mouth and nose. The drawing of William Warham, (Figure 10), displays a very faint underdrawing of red chalk around the profile of his nose, as well as delineating his eyes and more faintly around his face.

There is one drawing in particular that has a distinct red facial contour and that is the drawing of Dorothea Kannengiesser, 1525/26, (Figure 5), (395 x 281mm Inv.1823.141, Kupferstichkabinett, Kunstmuseum, Basel, Inv.1823.141) executed on unprepared paper. One of three portraits drawn in preparation for the painting known as The Darmstadt Madonna, this drawing, along with the other two, has been catalogued as black and coloured chalks and lead point.¹⁴⁶ However, visual evidence from microscopic examination of this drawing does not indicate lead point, but black chalk. The heavily incised lines that follow the contours have pressed the media into a finer line and this could be one reason for the misinterpretation, (see Figure 5.2).¹⁴⁷ The red contour of Dorothea's face starts under her true right eye and follows the cheek down to her top lip, (Figure 5.3). It also shapes the nose from the brow line down and around the nostrils, where black chalk is also used. There is slight evidence of a red contour on the tip of the nose of the drawing of Anna Meyer, (Figure 6 & 6.2), but the rest of the contouring is in black. The face contours of the portrait of Jacob Meyer, (Figure 4), are also drawn in black. We can only speculate what the sequencing could have been in

¹⁴⁶ Müller.2006.333 & 334.

¹⁴⁷ Written communication with paper conservator Chantal Schwendener at the Basel Kunstmuseum clarified that the leadpoint assertion was not the result of instrumental analysis, something which has not been carried out on these three drawings.

forming these contours. For example, the black contour could now be covering the initial red one for the drawings of Anna and Jacob and hence are hidden.

Blending of media in order to render flesh tones is especially apparent on those portraits executed on unprepared papers. Red chalk played a major part in depicting the sitters' flesh tones for portraits on unprepared papers. Often, other coloured chalks were mingled so as to create a skin tone specific to that sitter. The flesh tones of the portraits of William Warham and Thomas More, both drawn on unprepared papers, appear to be stumped chalks and/ or washes, then overdrawn with chalks to create volume. Warham and More have just their faces tinted and it is very precise in the placement, suggesting it may have been blocked in after the outline. Under magnification, the presence of vermilion in Warham's flesh tone, (Figure 10.2), implies that it was applied aqueously as a tint or wash and then built up with chalks for the modelling of the face, (Figure 10.3). Thomas More, on the other hand, has his flesh tones rendered in dry chalks only, (Figure 8.2), and again the flesh tone appears to have been applied within the contours of his face.

Blending of coloured chalks is wonderfully demonstrated by the beard and head hair of Charles de Solier, Sieur de Morette, c.1534/35, (Figure 18). A drawing on pink prepared paper that is in very good condition, it illustrates the complex layering of media that Holbein could achieve. The depiction of Charles de Solier's facial hair shows Holbein combining drawing materials to build up the colour and strands of the beard: a technique also seen in the facial and head hair of the portrait of William Reskimer, (Figure 16). Yellow and brown chalks are laid down first in banding, reflecting the character of the sitters' beard. These colours are blended together to form a gingery colour. Over this is laid further red and yellow chalk in fine lines, depicting strands of individual hairs. Strands of black aqueous media, followed by fine lines in white opaque watercolour, applied with a brush, complete the sequence, (Figure 18.6). Aspects of this layering are carried across the rest of the hairs on his head, including the eyebrows. A yellow chalk base can be seen under the aqueous black of his eyebrows and the hair on his head. Some 500 hundred years after its execution this drawing still exhibits a mastery of both dry and aqueous media.

Yellow chalks varied in hues, some more vibrant than others, and were often used to depict the more decorative elements of the portraits as well as being amalgamated into hair colour and flesh tones. The use of yellow chalk in Holbein's drawings is often not used as delicately as his other chalks: it is applied in blocks of colour, not finely, which may give an indication of the composition of the chalk, suggesting it was harder to hone into a smaller shape for drawing. A golden yellow chalk depicts the gold chain around Thomas More's neck; the same hue is used for the gold of Richard Southwell's chain, and Jane Seymour's head garment. Furthermore, a similar shade of yellow is used for the gold elements of the costume of Lady Guildford, and has more impact because it is on unprepared paper. A very bright yellow appears on the bodice of the dress worn by Cecily Heron in her portrait drawing on unprepared paper from 1527, (Figure 72), (384 x 283mm, black, red and yellow chalk, with watercolour for the irises, Parker 5, RL12269, The Royal Collection, Windsor). Holbein's vibrant yellow chalks have caused some to speculate that they must have been fabricated.¹⁴⁸ However, in the earth pigment range, yellow ochre can be quite bright and as mentioned earlier in this chapter, proof of fabrication does not necessarily lie in the resultant colour.¹⁴⁹ In a section on yellow ochres in Cennini's handbook, he mentions yellow ochre found in the regions of Colle di Val d'Elsa and compares it with lead-tin yellow (giallorino), which gives some indication as to its vibrancy:

...and I do assure you that I never tried a handsomer, more perfect ocher colour. It did not come out so light as giallorino; a little bit darker; but for hair, and for costumes....I never found a better colour than this.

Attempts to analyse the composition of the coloured chalks were not entirely successful. Raman analysis of chalks is problematic for a number of reasons: they are invariably applied thinly or have been eroded, and their powdery nature means that there is a lack of a good particle size on which to focus. Added to this, interference from the Perspex mounts and the strength of the vermilion signal overrode any other reading. Raman analysis carried out on the drawings of William Reskimer and Thomas More in 2004 was more successful in detecting iron oxide on the yellow elements in

¹⁴⁸ Marjorie Shelley, 'An Aesthetic overview of the pastel palette: 1500-1900'.3 The Broad Spectrum Studies in the Materials. Techniques and Conservation of Colour on Paper. Eds Harriet K Stratis and Britt Salvesen.

¹⁴⁹ See earth colour, Burgundy Yellow Ochre at: <http://kremer-pigmente.de/en/>

these two portrait drawings, in the beard of Reskimer and the gold chain of More, indicating a yellow ochre.¹⁵⁰ Further, red ochre was also detected in Reskimer's beard.

3.6.12 Holbein's sitters' eyes

A close examination of the sitters' eyes reveals Holbein's sequencing and use of materials for a specific feature. It also helps to illustrate the complexity of some of the drawings that incorporate coloured chalks and aqueous media. As already stated, the more media there is, the harder it is to extrapolate the drawing process but concentrating on a single feature can help to unravel some of the sequencing. Of the eighteen drawings that make up the corpus under particular scrutiny, thirteen are three-quarter profiles, two are profiles and three are full face. That makes a total of 34 eyes for possible exploration. Media common to most of the eyes examined can include the following:

Red chalk for the initial definition; black and coloured chalks; black aqueous media to define the contours of the eye lids and encircle the irises, to depict lashes, eyebrows, and pupils; watercolour for the irises and opaque white watercolour for the highlights.

The exceptions to this list of materials are the early drawings of Jacob Meyer and his wife Dorothea for the double portrait of 1516, which are drawn in silverpoint with the addition of black chalk for depicting the pupil, (Figure 2.2). The differences in the eyes of Holbein's sitters are dependent on the varying predominance of each material on each drawing. For instance, for the eyes of Henry Guildford, 1527, on unprepared paper, the predominant media is chalk of varying hues blended, with little or no aqueous media, making the contours harder to decipher. This is in contrast to the depiction of Richard Southwell's eyes, a portrait executed on pink prepared paper, which show less chalk and an increased use of aqueous black media for definition.

The use of red chalk is apparent in nearly all the sitters' eyes. For the majority, it is the first media in the sequence of drawing. The depiction of Richard Southwell's eyes is a good example of Holbein's use of red chalk with other media overlaid. Here, Holbein has used red chalk, black chalk and then aqueous media – this sequence makes sense as

¹⁵⁰ Written communication with Alan Donnithorne, Head of Paper Conservation, Royal Collection, Windsor. For Raman spectra results carried out in 2010 for this research project, see tables and individual data sheets on the corpus drawings.

a drawing process: the use of red chalk on a pink priming such as this would be more easily hidden, removed or blended if any mistakes were made or alterations needed. Furthermore, it also serves to add a natural fleshiness to the eyes' rendering. Application of the more friable black media makes that line more definite, but also a little more changeable than the final more committed black, wet line. The technique in the depiction and placement of the lashes is also a recurrent characteristic. The depths of the lower lids are defined by the placement of those lashes, (Figure 24.2). Holbein made a note to himself on the drawing of Southwell to 'make his eyes a little yellowish' – perhaps as a prompt whilst using the drawing during painting but also because making the eyes a little yellowish may have been more problematic when applied over a pink ground.

It was not always clear whether the whites of the eyes were rendered in white chalk, watercolour or whether, as is the case with the drawing of Lady Guildford on unprepared paper, the paper was left blank in those areas. However, in oblique light, the whites of the eyes of William Warham, drawn on unprepared paper, appear to have been rendered in white chalk. Whilst it is hard to decipher any particulate material, it has the appearance of a scattering of white pigment in that area.

Highlights for Holbein's sitters' eyes, when present, are achieved either by the application of a touch of white, aqueous pigment or, more commonly, by the manipulation of watercolour in varying shades of intensity and placement to give the effect of light. Holbein uses this technique to depict the light in the eyes of the drawing of Simon George, c.1535, executed on pink prepared paper, creating highlights using varying densities of watercolour, (Figure 22.1). The rendering of highlights for the depiction of Jane Seymour's eyes, also depicted on pink prepared paper, on the other hand, are created by an application of a touch of white opaque watercolour to signify the light direction, just seen on her pupil, upper right, (Figure 26.1). It is quite hard to locate and may have reduced due to wear and tear, but is visible under magnification.

3.6.13 A copy and an original: a comparison of techniques

As discussed in Chapter One, although rare, some copies of Holbein's portrait drawings exist. A comparison of an attributed drawing with a copy makes for interesting analysis of Holbein's drawing processes, and the extent to which the copyist understood them.

The two portrait drawings of poet and ambassador Sir Thomas Wyatt, Parker 64, the original and Parker 65, a copy (Parker 64, RL12250, 373 x 272mm, attributed to Holbein and Parker 65, RL12251, 370 x 277mm, not attributed to Holbein) in the Royal Collection, illustrate a lack of understanding of Holbein's technique, Figures 73 and 7, respectively. There are many similarities: the pink prepared paper, the size of the sheets and the relative size of the head, almost as though a tracing. Neither of the drawings show signs of having been being traced for transfer in the form of indentations. Holbein has used coloured chalk to depict the colour of Wyatt's beard and moustache and over this he has painted individual strands of hair in an aqueous black medium with what appears to be a fine brush, (Figure 73.1). In contrast, the copyist has either ignored or overlooked the chalk underdrawing and only seen the dominant black aqueous media, thereby omitting any of the subtlety of the chalk, (Figure 74.1). Although condition may play a part in the amount of media still left on these drawings, there is next to no modelling in red chalk on the copy, (Figure 74.2), unlike that on the face of the autograph version, (Figure 73.2). The copy is instead left looking rather flat, with the black media in stark contrast to the pink preparation.

3.6.14 Holbein's use of aqueous media

Black aqueous media, be it ink or watercolour, can be a dominant feature of Holbein's portrait drawings. James Watrous listed the four inks most commonly used by Old Masters: carbon black, iron gall 'black', bistre and sepia.¹⁵¹ Whilst all of these may appear black on first application, only carbon black remains 'black' whilst the others can turn brown on exposure to air. Holbein's black aqueous media was carbon-based, to date there is little evidence to suggest that Holbein used iron gall, bistre or sepia for portrait drawing. This is not only borne out of visual evidence but was also indicated by Raman analysis. There is very little to distinguish between a carbon black watercolour and carbon black ink in the early modern period. Furthermore, although the use of a brush or a pen may guide us in whether media can be classified as watercolour or ink, since ink can be applied with either pen or brush, the distinction of media is still not clear. Therefore the term aqueous black media has been used

¹⁵¹ James Watrous.1957.67

throughout to encompass both possibilities.¹⁵² The basis of both black ink and black watercolour was a black carbon pigment mixed with an aqueous binding medium. European black inks and watercolours were made from carbon of varying sources: soot was obtained from burning oils and resins, and from the charcoal of wood, twigs, bones, ivory and peach kernels. The resulting black particles were ground finely, with the addition of water and a binding medium, such as gum arabic or animal glue.

It is common for descriptions of drawings to be very unspecific about black as a colour and its variations of tone. We tend not to differentiate it in the same way we do shades of yellow, green or blue, for instance, making it a rather neglected colour in its use in drawing. Black can provide different nuances depending on what it is made from. Cennini, for example, acknowledges 'several kinds of black'.¹⁵³ Depending on the source, black pigments provide different properties and may be selected for a specific use. So-called 'Frankfurt Black', originally made from burnt lees of wine (but now bone black), was apparently particularly good for intaglio printing.¹⁵⁴ Soot, vines and peach kernels were preferred for watercolours.¹⁵⁵ Parker refers to Holbein's use of Indian ink in many of the catalogue entries for the Windsor drawings, whilst Paul Ganz refers to Chinese ink.¹⁵⁶ These are in fact the same, and fall into the category of carbon black. Both these blacks, prepared from soot as the pigment (lampblack) are mixed with gum and hardened into stick form, ready to be watered down; they were available from the 16th century onwards.¹⁵⁷ But whether Holbein used carbon black aqueous media in soluble stick form as suggested by Ganz and Parker can only be speculated. Being carbon-based, Holbein's black, whether ink or watercolour provided an intense and stable black.

It is not always easy to distinguish the method of application, although Parker and Ganz seemed to be more confident in their assertions. Parker distinguishes the method of application - a brush or pen or often, both - whilst Ganz suggested Holbein 'made

¹⁵² Watrous stated that watercolours 'with their black pigments and gum binders were either analogous or identical to the composition of the old carbon inks'. James Watrous.1957.69

¹⁵³ Cennini.1960.22

¹⁵⁴ Ad Stijnman, 'Frankfurt Black: "Tryginon appellantes, faex vini arefacta et cocta in furnace"'. Trade in Artists' Materials: Markets & Commerce in Europe to 1700. Eds. Jo Kirby, Susie Nash and Joanna Cannon. Archetype Publications Ltd: London.2010.415

¹⁵⁵ Ad Stijnman. 2010.415

¹⁵⁶ Paul Ganz, Handzeichnungen Hand Holbein des Jüngereren in Auswahl. 1937.15, trans. Susan Foister

¹⁵⁷ For more information on carbon black pigments see John Winter, 'The Characterization of Pigments Based on Carbon'. Studies in Conservation .1983. 28.49-66

use of the brush and reed pen according to his needs'.¹⁵⁸ Distinguishing brush from pen is not always straightforward. Whilst they have different qualities (a brush mark can vary in thickness along the same line, unlike the more rigid and fixed precise quality of the quill pen) they can appear quite similar: if the brush is loaded with pigment and used precisely, the line variations are not so apparent. Whilst a pen may have been used on occasion, the marks made on many of Holbein's portrait drawings would seem to indicate a brush. This is suggested by a variation of the thickness of the line, common to linear brushwork, especially in the contouring of costumes. It is also apparent in the flick of the eyelashes, the encircling marks around irises and the characteristic tapering or stuttering of pigment on the ends of strokes in general.

Holbein's use of aqueous media for his portrait drawings came towards the end of his drawing process. Having laid in all the dry colour, the sequencing would suggest that Holbein then applied aqueous black for the contours of the face, hats and hair, both in blocks and as individual strands or lines. It makes more practical sense to apply an aqueous medium last, thereby fixing lines and features in place that have been depicted in a more friable dry medium. The amount of detail that could be added using this aqueous media varied, being quite prominent on some drawings but not on others. This affects to some extent what we perceive to be the level of finish. Holbein's use of black aqueous media for the contours of the drawings has somewhat overshadowed his more subtle use of aqueous media to depict other features of his sitters, especially of those executed almost entirely in dry colours on unprepared papers. For example, Holbein applied some fine details using aqueous media of different colours as well as black to facial features on some of the more chalk-dominant drawings. Closer inspection has found that some areas have been picked out in aqueous media, such as the watercolours used to render the irises of William Warham, Henry and Mary Guildford and Sir Thomas More, all dated 1527 and executed on unprepared papers. It is not always possible to be definitive about what pigments were used, but Raman analysis revealed that azurite was used to render More's irises. The portrait drawing of the Unknown Gentleman has particularly piercing blue eyes, making this a more obvious use of aqueous media, (Figures 20.3 and 20.4).

¹⁵⁸ Paul Ganz, Handzeichnungen Hand Holbein des Jüngerer in Auswahl. 1937.15, trans. Susan Foister

The more aqueous media that is present on the portrait drawing, the closer it seems to be to the act of painting. This is especially true of the portrait of Sir John Godsalve on pink prepared paper, c.1532-3, (Figure 34), (367 x 296mm, Parker 22, The Royal Collection, Winsor, RL 12265) that is fully worked up in watercolours and black aqueous media, including a Raman-confirmed azurite back ground. This drawing is discussed at more length in relation to Holbein's use of colour in Chapter Four. The portrait drawing of Simon George, c.1535, (Figure 22), also on pink prepared paper, displays an extensive amount of black aqueous media in comparison to say, the portrait drawing of Jane Seymour, c.1536/7, (Figure 26), where it is minimal. The deep black aqueous media used on the drawing of Simon George, applied with a brush, depicts individual hairs on the sitter's head and facial hair. These have been laid over a drawn chalk base. It has been used extensively on the hat and more delicately in following the profile of his face. The contour that follows the sitter's profile shows how the act of reinforcing the shape is done in stages, stopping and starting as the line is followed, evidenced by the little flick of the brush on the bridge of his nose, (Figure 22.2).

Black aqueous media is just about discernible in a fine line around the left side of the face of Jane Seymour. The nostrils and tip of the nose, as well as the eyelids, lashes, touches of her eyebrow hair, pupils and the salient lip line are also painted in black, (Figures 26.2 and 26.3). Black aqueous media is used to shape the lips of many of the sitters' mouths. It is this line that defines the shape and character of the mouth. The only other aqueous elements on the portrait of Seymour are the irises, rendered in a soft green watercolour. Holbein clearly had a preference for watercolour rather than dry colour when it came to rendering the sitters' irises, since the majority of the portraits display this feature. This is an aspect that has not really been illustrated in Holbein literature before, probably because it is not expected on a drawing rendered almost entirely in a dry medium. An examination of a Jean Clouet drawing, catalogued as black and red chalk was therefore assumed to be 100% dry media.¹⁵⁹ However, on examination, this drawing also proved to display watercolour for the depiction of the irises, in this case, blue, (see Figures 75 and 75.1). The fact that both Holbein and one of his contemporaries employed this technique so specifically indicates that it was through

¹⁵⁹ See britishmuseum.org, online catalogue for: Portrait of Guillaume de Saulx, Sieur de Tavannes, c.1529-40, 245 x 191mm, black and red chalk with watercolour on cream laid paper. British Museum Inv.no: 1910,0212.54,

both necessity and choice: there were no fabricated chalks in eye colours such as blue and green at that time, and it also would have been much easier to apply small areas of watercolour with a fine brush than with thicker, friable chalk.

White opaque watercolour, when present, is used to define features and to indicate light source in the form of highlights. Highlighting is not present on all Holbein's portrait drawings, although this does not mean it was not added: opaque paint is often applied more thickly and by its very nature is more prone to flaking off a drawing. For example, there is still a tiny remnant of white on the nose of the portrait of Unknown Gentleman, Parker 33, (Figure 20), which is just about visible on close inspection. The portrait of Charles de Solier, (Figure 18), executed on pink prepared paper, still has a more substantial touch of opaque white watercolour on his nose, (Figure 18.1). Some aspects of the sitters' clothing were depicted in white opaque watercolour: the white shirt worn by the Unknown Gentleman, Parker 33, for example. In this case, the white pigment is not immediately obvious. Any white media applied over a pink preparation would have had to be applied fairly thickly in order to make an impact, such as seen in the depiction of John Godsalue's white shirt, (Figure 34). The use of white chalk for highlights was not found, although this does not mean that Holbein did not use it: white chalk, if used sparingly to depict highlights, is also less obvious when applied over a pink preparation and is likely to be more readily eroded over time.

There are a number of portrait drawings where there is a fairly extensive use of white opaque paint for highlighting. Margaret, Lady Elyot, c.1532-34, (Figure 36), (280 x 209mm, Parker 14, RL12204, The Royal Collection, Windsor) executed on pink prepared paper, has white opaque paint applied in small strokes, highlighting her brow and her eyes and nose, (Figure 36.1). The portrait drawing of Elizabeth, Lady Vaux, c.1536 (Parker 25, RL12247, 281 x 215mm, pink prepared paper) is an example of the use of white opaque paint to highlight the eyes but to also depict pearls on the headdress, (Figure 76). The blackening of these would seem to suggest that the white is lead-based. Highlights have been discussed above in relation to how Holbein depicted his sitters' eyes, but they are also occasionally present on other parts of the sitters' face. White opaque watercolour is also used to depict the grey hairs in the portrait of Charles de Solier, seen in his head hair, beard, and eyelashes, (Figures 18.5). In terms of

sequencing, these would have been the last drawing details added. However, if present, the very last layer of a drawing's sequence is the physical signs of having been traced.

3.7 Transfer techniques

Since a number of Holbein's drawings show signs of having been used for transfer, (see Table 4, Appendix Four), it is helpful in this chapter to address the methods by which Holbein would have transferred his drawings to the painting support. Further, it will help to define and explain what those signs of transfer are, some being more obvious than others. Defining signs of use is something that has not been adequately done before and has led to subsequent confusion over the role of certain types of media, such as metalpoint. For example, was it used as a tool for drawing or as a tool for tracing over the lines of the drawing to facilitate transfer? Significantly, a lack of images of what it is previous authors are referring to has prompted further confusion.¹⁶⁰

Contours are strokes that define shape, and are prominent in Holbein's portrait drawings. It is these contours that are followed in order to transmit the likeness of a sitter to the substrate of the painting, usually a panel in this instance. Direct and indirect use of a cartoon is important to consider as it can offer information about how a drawing relates to an underdrawing. Direct use of a drawing would imply that its outline was traced and transferred directly on to, for instance, the panel's prepared surface. Indirect use implies that an intermediary cartoon, such as that produced from the carbon-paper method or pricking through the drawing and into an intermediary sheet of paper, was used for the transmission of the design. The level of finish and quality of some of Holbein's surviving portrait drawings suggest that they were more than just outlines to be transferred. Using an intermediary or substitute cartoon leaves the original design, or in Holbein's case, portrait drawing, more intact and useful for reference whilst painting and an original reference for a workshop from which to make patterns.

The transfer of such drawings would have been common workshop practice in both Basel and England in the 16th century, not least because it ensured 'the continuation of

¹⁶⁰ See, for example, Maryan Ainsworth, 'Methods of Copying in the Portraiture of Hans Holbein the Younger.' *Le Dessin sous-jacent dans la peinture. Colloque VIII, Louvain-la-Neuve, Collège Érasme. Belgium, September 1989.* Eds. Hélène Verougstraete-Marcq et Roger van Schoute. 1991.12

the *master's style*'.¹⁶¹ However, a reticence in discussing such mechanical processes within contemporaneous literature and a lack of documentary evidence that Holbein in fact had a workshop, makes this information all the more scarce in terms of Holbein's working practices. We therefore look for clues and signs of methods of transfer on the drawings themselves, as well as in the underdrawing of paintings. That is, of course, if the drawings were indeed used to facilitate transfer. Although not actually part of the drawing process, when present, the physical signs of transfer come last in the sequence when reading the drawings. These signs are physically evident either in the form of prick marks, indicating the pouncing method or more commonly for Holbein's portraits, linear indentations, indicating tracing with a tool. It is important to bear in mind though, that if neither of these physical signs are evident, it does not mean that the drawing was not traced or further used in some way to facilitate the painting. For example, tracing the outlines with a form of tracing paper would have been a third option open to Holbein and one that may have not left any marks. These three options will be discussed in turn.

Pouncing involves pricking the contours of a drawing with a pin and dusting a powdered carbon such as charcoal on to its surface, thereby transmitting small dots of black powder onto the painting substrate, such as a ground on a panel. These dots could then be fixed and joined up, using a wet brush or an aqueous medium, creating a continuous line. Pricking the drawing through a secondary support sheet meant that this intermediary sheet could be used as a substitute cartoon to be pounced, leaving the original drawing undisfigured by the carbon powder, although still peppered with holes.

Pouncing is the earliest form of transfer and has its origins in fresco and stained glass and embroidery design.¹⁶² Although several authors have asserted that it was the principal technique of replication in 16th century workshops,¹⁶³ it is not easy to identify

¹⁶¹ Francis Ames-Lewis, 'Drapery "Pattern"- Drawings in Ghirlandaio's Workshop and Ghirlandaio's Early Apprenticeship'. *The Art Bulletin*. 63.1. March 1981. 49

¹⁶² See S A Ives & J Lehmann-Haupt who note chronology of pouncing in 'An English 13th Century Bestiary: A New Discovery in the Technique of Medieval Illumination'. K.P Kraus: New York.1942.21-45 and Carmen Bambach, Drawing and Painting in the Italian Renaissance Workshop: Theory and Practice, 1300-1600. Cambridge: Cambridge University Press, 1999.

¹⁶³ See for example, Jean C Wilson, 'Workshop patterns and the production of paintings in sixteenth-century Bruges', *The Burlington Magazine*, 132.1049.523, August 1990 & Peter van den Brink, 'The Art of

in an underdrawing and, further more, very few pounced drawings survive to support the argument that it was the transfer method most commonly used. Although very few pounced drawings survive from the late 15th and 16th centuries, evidence of pouncing is visible on some underdrawings on panels.¹⁶⁴ Evidence of pouncing on an underdrawing but not on the drawing itself could imply the intermediary sheet was pricked instead; this would preserve the original. The pouncing method of transfer is evident on the portrait drawing of Sir Thomas More, 1527, (Figure 8), (Parker 3, unprepared paper, mainly chalks). Whilst there is evidence of some carbon media in the pin-holes, (see detail) there is no scattering of carbon dust on the surface of the drawing, suggesting it was not used directly for the transfer to panel. Instead, we could conclude that a substitute cartoon was made from placing a secondary sheet of paper underneath the drawing when it was being pricked and that this was the one to be pounced. Whether the prick marks on Thomas More are contemporaneous or later is not clear. Viewing this drawing from the verso, (Figure 8.3), demonstrates the importance of the contour in transmitting a likeness of a sitter, as it is clearly recognisable as the drawing of Thomas More from the outlines alone.

A less disfiguring method of transfer was achieved by covering either the back of the drawing, or better still a support sheet underneath it, with chalk or charcoal, thereby producing carbon copy paper. The drawing was then traced over with a stylus and an outline left on the panel or on the secondary piece of paper, forming the substitute cartoon which could then be used without the worry of damaging the original further. The use of a substitute cartoon or at least an intermediary sheet of paper covered in some friable medium seems to have been Holbein's preference, because of the clean backs of the drawings. As described in Chapter One, the drawings have undergone multiple backing removals, which may have removed some evidence of use. However, some historians have commented on the correspondence with the contours on the recto with black carbon residues on the verso of some drawings, concluding that this

Copying: Copying and serial production of paintings in the Low Countries in the sixteenth and seventeenth centuries'. Brueghel Enterprises. 2001.12-44. Maastricht: Bonnefantenmuseum

¹⁶⁴ The Making Art in Tudor Britain project team at the National Portrait Gallery, London, have found very few English painted panels that show definitive signs of pounced underdrawing. Verbal communication with Tarnya Cooper, NPG & see <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain.php>, where research findings are searchable.

confirms transfer.¹⁶⁵ Whilst a number of drawings have very fine black particles on the face area of the versos, it is hard to explain their presence given that the drawing would not have been laid directly on to the carbon side of the underlying sheet.¹⁶⁶

Figures 77 to 80 demonstrate, via reconstruction, the different friable materials that could have been used to transfer the drawings in this way. Figure 77 shows the use of charcoal, which is rather messy and leaves a large amount of dust around the outlines. Although some of this can be brushed off the panel ground once the lines are fixed, the dust could be potentially disfiguring for subsequent painting. Figures 78 and 79 demonstrate the use of black and red chalk, which proved far less friable. The mock-up drawing was easily transferred using both chalks and charcoal, with minimal pressure applied to the stylus, (Figure 80).

We have an idea of the instruments for tracing from historical documents. For instance, Giorgio Vasari (1511- 1574) suggested taking:

... an iron point or else one of ivory or hard wood and go over the outlines of the cartoons, marking them firmly. In so doing the cartoon is not spoiled and all the figures and other details on the cartoon become very well outlined on the panel or framed canvas.¹⁶⁷

The tool for tracing is an important part of this discussion. With the exception of lead, a metal, wooden or ivory stylus used to trace a drawing would not leave a drawn mark on unprepared paper. However, it could leave an indented line depending on the amount of pressure. If the traced line strays from the drawn one then it manifests itself as a blind indentation, as seen on the image of William Warham, 1527, (Figure 10.1), (Parker 12, unprepared paper, mainly chalks) and Dorothea Kannengiesser, c.1526, 5.1 (unprepared paper, mainly chalks). On both these drawings, the traced line mostly follows the drawn one, but occasionally moves away from it, leaving a blind indentation. Although not so apparent, this is also the case on some drawings on pink

¹⁶⁵ See Müller.2006.333 with regards to the Darmstadt Madonna drawings of Jacob Meyer, Dorothea Kannengiesser and Anna Meyer; Maryan Ainsworth.1990.183 where she links marks on the back over the contours with the transfer process because of the carbon method.

¹⁶⁶ Some drawings, where more aqueous media has been used for the contours on the recto show some of the aqueous media bleeding through ie: Unknown Gentleman, Parker 33.

¹⁶⁷ Giorgio Vasari, Vasari On Technique, trans by Louisa S Maclehorse, Dover Publications: New York, 1960. 231

prepared papers. For example, the portrait drawing of an Unknown Gentleman, 1535, (Parker 33, pink prepared paper, chalks and aqueous media) shows signs of having been traced, but not with a silverpoint as there is evidence of blind indentation, as seen in Figure 20.2, showing traced marks on his clothing.

A third transfer option open to Holbein would have been the use of a tracing paper, although the use of the word 'paper' can perhaps a misnomer in early formats. For example, the Strasburg manuscript, describes how to make parchment 'transparent' by washing and stretching.¹⁶⁸ Further, oiled parchment is one of three options listed by Cennini for making tracing paper along with dried fish glue sheets and oiled paper.¹⁶⁹ The rigidity of both parchment and fish glue options seem unlikely for tracing the portraits where a more flexible choice would be preferable, if not re-usable. Different types of oil had different drying times and were not so suitable: for example, olive oil is very slow to dry and so not entirely apposite, unlike walnut oil that dries thoroughly and is not as yellow as linseed.¹⁷⁰ As long as the oil was dry, no marks were necessarily left on the drawing. However, as discussed in Chapter One, some of the drawings apparently traced by Vertue have been noted in catalogues as having oil stains from this process.¹⁷¹ Once prepared, the tracing paper would be laid over the drawing and traced over with a brush, which would not make any impression on the drawing underneath, or drawn over lightly with a stylus.¹⁷²

Curiously, there are numerous drawings where the indentation is not apparent along every drawn line, not even the salient ones of the face. For example, Unknown Gentleman, 1535, (Parker 33 on pink prepared paper) shows signs of each line of the costume having been traced, with the face showing almost no signs of transfer: only the contours that form his ear and back of his head are indented. This is in contrast to the drawing of Lady Butts, c.1540/43, (Figure 32), (Parker 67 on pink prepared paper) whose facial contours are heavily indented, with fewer indented lines following her costume. This discrepancy in traced outlines within a single drawing is apparent on

¹⁶⁸ The Strasburg Manuscript: A Medieval Painter's Handbook, trans. Viola and Rosamund Borradaile. Tiranti:London, 1966.65

¹⁶⁹ Cennini.1960.13-15

¹⁷⁰ Hilary Smart, 'The methods of manufacture of translucent coated papers and their conservation problems'. 1981, unpublished 2nd Year MA project, Camberwell School of Art. 15

¹⁷¹ See for example Chamberlain.1913, Vol. II. 249, quoting Walpole, Anecdotes, ed. Wornum, Vol.i.,84

¹⁷² Joseph Meder.1978.398

portraits executed on both prepared and unprepared papers. Every line of the drawing of Jacob Meyer, 1526, (Figure 4), on unprepared paper, for example, has indented lines on all facial and costume contours: most evident in raking light (Figures 4.4, 4.5 and 4.6). Whether this inconsistency in tracing within drawings and from one drawing to the next is the result of the methodology of the tracer or if certain parts were taken more care of in terms of inflicting damage, is hard to say. This discrepancy is not restricted to this method of tracing for transfer. Art historian Jean Wilson has recorded the inconsistent use of pouncing even within the same pattern.¹⁷³

The act of tracing using the three methods discussed in this section could result in underdrawings that were not the exact shape of the drawing; this is important to bear in mind when the relationship of the drawing to underdrawing is discussed in the next chapter. However, the fact that numerous contours of the drawings that are indented from having been traced over match up with underdrawing contours further reflects their use as face patterns, either directly or indirectly, and therefore the often close relationship of drawing to painting.

¹⁷³ Jean C Wilson. 'Workshop patterns and the production of paintings in sixteenth-century Bruges' . The Burlington Magazine, Aug.1990.132.1049.524

Chapter Four: The Function of Holbein's Portrait Drawings

4.1 Introduction

The main focus of this chapter is an analysis of Holbein's working processes in relation to the function of the drawings. In the previous chapter a description of the portrait drawings and their materials and techniques was provided through observation and technical analysis. This chapter moves this information on to demonstrate how those materials and techniques can enrich our understanding of the purpose of these drawings. This will be supported through comparison with his other genres of drawing.

Our interpretation of a drawing and how we assign a function to it is influenced by various factors, both physical and esoteric. The first part of this chapter will review what we mean by function and how the classification of drawings has influenced the way we read them. This will help to demonstrate that Holbein's drawings do not necessarily fit neatly into accepted categories: especially given they fulfilled more than one function. Although the primary purpose of the drawings was to capture likeness, the drawings had the potential to fulfil several other functions: for example, they were used either directly or indirectly as face patterns for physical transfer to the panel, and as a reference during painting for colour and specific features. The portrait drawings were kept together as a collection in Holbein's lifetime, and also provided further proof of Holbein's skill and a reference if needed again.

The second part of this chapter concerns the function of Holbein's portrait drawings as evidenced through his materials and techniques. The appearance of a drawing is the result of the materials used and the way they were applied, as well as its condition. However, the final result also says something about the style of an artist. In Holbein's case, some of the stylistic attributes cross over from drawing to painting and these will also be discussed. More elusive aspects regarding the appearance of the portrait drawings: the range of levels of 'finish' and quality as well as signs of use and the interpretation of them in relation to the paintings' underdrawings, will also be included in order to establish what their relationship to one another was. It will be argued that the various functions that the drawings could potentially fulfil can be elucidated

through a thorough examination of Holbein's choice of media, its placement on the paper, and an analysis of the physical signs of use of the drawings. An analysis of these factors enables a more comprehensive understanding of Holbein's working practices for portrait drawings: something that has been lacking in Holbein literature.

4.2 What is a drawing?

Since its materials seemingly define an artwork's characteristics and nomenclature, asking ourselves what a drawing is forces us to consider our definitions, and also how a drawing may function. Asking such a question also reveals that drawings can be more complex to define and describe than we think, and therefore open to different interpretations. During the Renaissance period, drawing was seen as forming the basis of all the arts: architecture, sculpture and painting, but not necessarily as an art form in its own right.¹ Rather, it was an important stepping-stone for a secondary phase of production. There was and still is a sense that drawing is a way of working out ideas.

Drawing is generally differentiated from painting by the dominance of line over mass. But having said that, it is the artist's choice of media, including the tools and the substrate, that tend to determine the extent of how linear or painterly the drawing may more or less be.² For example, if the emphasis is on contours or if the division of boundaries is more blended. Limited definitions of drawing do not give a drawing its full capacity of range. For example, basic definitions do not encompass the aspects of watercolour nor wetting out of chalks that are included in Holbein's portrait drawings: both of which are perhaps painterly aspects of his draughtmanship. However, whilst these techniques may increase the mass, they do not obscure the linear aspects of his work. The emphasis on contour is a significant aspect of Holbein's style, not only as a draughtsman, but also as a painter.

Expanding the definition for a more descriptive interpretation, a drawing could be

¹ Giorgio Vasari, *Le vite de' più eccellenti pittori scultori ed architettori*, Ed. G. Milanesi, Florence, 1906, vol. I.168.

² Swiss art historian Heinrich Wölfflin (1864-1945) discusses the linear, ie: draughtsmanly, plastic, relating to contours and the painterly ie: tactile, without an emphasis on boundaries, relating to the German *malerisch*, 'painterliness'. These terms were used as a way of focussing art historical terminology with regards to characterising an artists's style and the changes in art perceived by Wölfflin from the 16th century to the 17th century. *The Principles of Art History* Dover Publications: London. 1915.18

defined as a two dimensional depiction of forms on a surface using lines, with the inclusion of colour and shading if desired. When we talk about an artist's style we are discussing his choice and use of materials and the resulting characteristics of that drawing. The choice of materials is determined by many factors such as, what would have been available at the time, what the artist's concept is, and the function of the drawing. The development of structure may involve bolder outlining, in which case the precision of a pen or brush could be suited: this is certainly the case for Holbein, who applied the black aqueous media last

There are many different types of drawing, encompassing many sorts of drawing techniques. These vary according to the effect the artist wants, and depending on whether the drawing is an end in itself, an independent and finished work of art, or a preliminary step which will lead to some other medium or form. Although distinct from the final product, such drawings also have intrinsic artistic value. Preliminary drawings include sketches, studies, designs, cartoons and underdrawings. Holbein's portrait drawings were not necessarily intended as independent works of art in their own right. They were a means to an end, with the potential as face patterns for transfer to panel. There could also have been used as presentation drawings to the sitter as an example of the artist's skill. Furthermore, there could have been more than one copy of the drawing, reflecting their use in the studio, as a presentation drawing or a working drawing.

4.3 Classification of drawings: history and terminology in relation to function

In order to establish the function of Holbein's portrait drawings, this section will explore what we mean by 'function' within the context of drawings. There are a number of factors that influence our interpretation of an artwork, especially in relation to its function. Two issues are of particular interest in this aspect with regards to Holbein's portrait drawings. The first is the influence of terminology on our understanding of function and the second is how the limited survival rate of drawings can affect our interpretations of an artwork. The classification and terminology of drawings in general, as well as the limited numbers of drawings from which to draw conclusions

are factors that have had consequences on our interpretation of the function of drawings, including Holbein's portrait drawings.

An understanding of specific manufacture may increase our understanding of an object's function within its cultural, historical and economic setting and helps to set Holbein's drawings in context of their purpose. This in turn can help to reveal the function of an object in its own time rather than how we value it presently. As was demonstrated in Chapter Two, how we have interpreted and therefore understood Holbein's drawings has been limited and not always accurate. Our understanding of an artwork is influenced by multiple factors – why we are asking the question, our point of view, the cultural context of the art work not just in its day but also within current value systems and very importantly, the material qualities and condition of that artwork.³ Since artistic intention can only be implied, as it is in many cases unknowable, it is more appropriate to talk in terms of purpose when discussing the function of a drawing. Nomenclature can imply a drawing's function, which consequently encourages us to make certain assumptions about that drawing. Since different types of drawings have different functions, accurate definition of these types provides a better grasp of what category of drawing is being described. The function can be inferred not just from subject matter and in relation to another object but also from examining the media chosen and the method of application: in other words, from the appearance of the drawing. That is why we need to be as clear about a drawing's description as possible.

But what do we mean when we refer to a drawing's function and why is it relevant? The function of a drawing relates primarily to our questioning of why it was drawn: what was its use? Did it stand alone as an independent drawing or was it part of, and a means to an end of, an artistic process? In most instances, drawing was a necessary process within sixteenth century artistic practice. Through drawing, an artist would work out composition and the motif. Drawings also provided the basis for carrying out works on a larger or more elaborate scale. Drawings could have been used for presentation to the clients, for working out spaces and design, for use physically in the

³ See Katherine Crawford Luber's article 'Albrecht Dürer's Maximilian Portraits: An Investigation of Versions'. *Master Drawings*, 29.1.Spring 1991. 30-47. This is an interesting study on versions of portraits of Maximilian in relation to materials and function of the drawings and status of the artwork.

production of another piece, or for use as reference. It also seems that many designs would be copied to keep the original preserved – and the same could be said of Holbein's portrait drawing - the survival and condition of which would seem to indicate that they were not used repeatedly to make portraits. The act of drawing from life as the initial stage prior to painting a portrait was practical: for instance, in 1945, K T Parker, cataloguer of the Windsor drawings wrote that 'their sole purpose was to provide the painter with the pattern he needed, and to enable him to proceed without constant reference to the living model'.⁴ So whilst they may have been drawn initially to capture the likeness of the sitter and to illustrate Holbein's skills in this task so as to prompt a commission, subsequently they could also be used to begin the painting process by either being traced over, creating an intermediate pattern, or being traced over directly on to a panel. These views and conclusions regarding Holbein's portrait drawings are not necessarily new, but they have never been expressed in detail and combined to provide a fuller picture of the function of his portrait drawings.

Artists and art historians have been disputing the issues around drawing and its role within artistic practice for centuries. This has influenced both the status of drawings and the manner in which they are written about.⁵ Despite drawing being seen as the father of the arts, they have not always been afforded the same depth of study as sculpture and painting. Unlike these disciplines, drawings were relatively inexpensive to produce and often the means to an end in terms of design. Their worth was therefore not in their materials, nor in their commodity as the valued, final commission. Since it could be argued that most early drawings were preparatory in function because they were not necessarily valued in their own right, it is important to establish just what we mean by 'preparatory', and also to note that there are many types of drawings that fall within this category. The terms 'working drawing', as with 'preparatory drawing' are phrases used to describe a drawing that is one part of a working process that contributes towards the production of a final piece. 'Preparatory drawing', 'preliminary drawing', 'cartoon' and 'face pattern' all fall within this category of working drawing: they are not meant as objects that necessarily stand in isolation, since the terminology

⁴ K T Parker, *The Drawings of Hans Holbein at Windsor Castle*. Phaidon Press.1945. 33

⁵ See for instance, Fredrika H. Jacobs, 'An Assessment of Contour Line: Vasari, Cellini and the "Paragone"'. *Artibus et Historiae*, 9. 18. 1988. 139-140

implies they are auxiliary to an artistic process that contributes to the work towards a final piece.

Art historians William Robinson and Martha Wolff have distinguished between what they call *independent studies*, that is finished, autonomous works of art, as opposed to *working studies* - those that are part of a process towards a final piece.⁶ They have also suggested that work that is monogrammed or dated would further indicate that the drawing was autonomous.⁷ There are no signed portrait drawings by Holbein. Taking in to consideration the fact that the sheets on which they are drawn may have been trimmed, it does not mean that he did not sign them. However, a signature might not have been necessary: they were kept within his possession for use and reference during his lifetime and perhaps we can assume from this that they were not produced as independent drawings for another party. Robinson and Wolff suggest that the rise of the status of the artist is reflected in the survival of more independent drawings as opposed to working drawings.

Unlike a preparatory study that is not always necessarily a one-to-one scale, the term 'cartoon' is specific in its use in fulfilling a one-to-one transfer. The definition of a cartoon embraces a wider circle of drawing terminology, including that of a face pattern, and would fit into the category of 'working drawing': a drawing which is made as part of a thought process and open to change and re-working. Curator and art historian Carmen Bambach has written extensively on the cartoon as a drawing of certain function in terms of usage for transfer of a design, as well as an art work revered contemporaneously in its own right.⁸ Although her thesis concerns drawings of the Italian Renaissance, it is useful to examine what she has said with regards to the elevation of the status of a cartoon to an artwork in its own right: an interpretation that may explain how Holbein's portrait drawings have been subsequently considered.

Some terms are clearly more specific within the category of cartoon. For example, face patterns function as cartoons in their one-to-one transfer but are more specifically

⁶ William W. Robinson & Martha Wolff, 'The Function of Drawings in the Netherlands in the Sixteenth Century' from catalogue: The Age of Bruegel: Netherlandish Drawing in the sixteenth century - Washington (National Gallery of Art) and New York (Pierpont Morgan Library) 1987.25

⁷ William W. Robinson & Martha Wolff. 1987.34

⁸ Carmen Bambach Drawing and Painting in the Italian Renaissance Workshop: Theory and Practice, 1300-1600. Cambridge University Press. Cambridge. 1999.294-295.

portrait related. Holbein's portrait drawings had the potential to function as and fulfil the role of face pattern: a shape to be transferred either to another sheet of paper or directly on to the panel. As is evidenced from signs of transfer on the drawings, the clothing, although invariably less detailed, was often transferred in outline to ensure a sense of proportion and to connect the neck to the body. However, face patterns of known sitters were not necessarily re-used in the same way as those of other types of patterns and were not necessarily a motif, and therefore generic in the same way as vine leaves or architectural features.

An artist's choice and use of a drawing medium should be understood in the context of the purpose of the drawing, as materials are rarely arbitrarily selected. However, we do still have to approach the interpretation of drawings through materials and techniques with caution. In making any judgements, the quality and condition of the drawing must be taken into account. Moreover, we may not always be certain at what stage of preparation the drawing may represent. For example, in her article on drawings as intermediary stages, art historian Ellen Konowitz points out that we have to be careful in making assumptions about drawings according to their appearance.⁹ For example, given two drawings of the same scene when one is sketchy and seemingly not completed whilst the other is highly finished, she comments that we tend to assume the first was preparatory for the latter, but is not always the case.¹⁰ We also have to be wary of drawings that may be copies of drawings, which further complicates their function. Many 15th century Netherlandish drawings were copies after other studies and there are some contemporaneous copies of Holbein's portrait drawings within the Royal Collection.¹¹ There are also many contemporaneous copies of Jean Clouet's portrait drawings. There is no doubt that many early drawings could be considered copies. Often a subsequent version of a portrait prompts us to consider the function of the portrait resulting from multiple use of an image.

In an article on Dürer's portraits of the Holy Roman Emperor, Maximilian I

⁹ Ellen Konowitz, 'Drawings as Intermediary Stages: Some Working Methods of Dirk Vellert and Albrecht Dürer Re-Examined'. *Simiolus:Netherlands Quarterly for the History of Art*. Vol.20. No.2/3 1990-1991.144.

¹⁰ Ellen Konowitz, 1990-1991.144.

¹¹ For example, portrait drawings of Sir Thomas Wyatt, Parker 65 in the Royal Collection; portrait of John Fisher at the British Museum, Gg,1.416 & portrait of Sir John Gage, RF 5641 at the Louvre; all of varying qualities

(1459-1519), art historian Katherine Crawford Luber builds her argument to suggest that the two different painted versions of Maximilian functioned in different ways: one presented the private man and the other, the public one. Much could be said to be the same about the function of portrait drawing versus portrait painting in general. The drawing and the painting of Lady Mary Guildford, 1527 (Figure 14) is a good example of this.¹² The drawing shows her relaxed and almost coquettish, in comparison to the more formal and serious persona portrayed in the oil painting, (Figure 15). The drawing and painting may have been of the same person, but they functioned quite differently: the former being a result of a live sitting; an example of Holbein's skill to show the sitter and resulting in a potential pattern for a portrait painting, and the painting functioning as a likeness of the person for more status-related, public consumption. Luber ties the fact that the portrait drawing of Maximilian I was repeatedly used to it having been drawn from life, which seemingly therefore imbues it with more importance. However, this particular emphasis seems to overlook the most important part of the drawing's function: re-using the drawing would have been good workshop practice. It was economical and was a practical use of a pattern that had been taken from a drawing from life, and if further patterns were taken from it, there was no actual need to draw another live portrait.¹³ The really pertinent point made in Luber's article is around her discussion of Dürer's use of the *same* drawing as a pattern to produce portraits, which in themselves had different functions: the preliminary portrait drawing and its use to produce a woodcut and two paintings using the same preliminary portrait drawn from life. Repeated use of a face pattern was standard workshop practice in 16th century portrait production.¹⁴

The survival of early European drawings from the 15th and sixteenth centuries is relatively rare in comparison to later centuries, reflecting the status and function of drawing during this time. It is therefore important to remember that since very few drawings in general survive from this early period, any conclusions we draw are from a very limited resource and may in part explain why we do not perhaps appreciate their

¹² Lady Guildford portrait drawing: Basel Kunstmuseum, Kupferstichkabinett. Inv.1662.35. Lady Guildford portrait painting: St Louis Art Museum, USA. Inv. 1-1943, 870 x 706mm.

¹³ Katherine Crawford Luber, 'Albrecht Dürer's Maximilian Portraits: An Investigation of Versions'. Master Drawings. 29.1.Spring 1991. 45.

¹⁴ See Making Art in Tudor Britain, <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/double-take-versions-and-copies-of-tudor-portraits.php>

original purpose. For example, only around six hundred 15th century Netherlandish drawings survive worldwide, with only Jan van Eyck's drawing Portrait of a Cardinal (? Niccolò), c.1435 (Kupferstichkabinett, Staatliche Kunstsammlungen, Dresden, Inv. C775) attributed with certainty (Figure 47). This latter point is an important one since the authorship of most early drawings is uncertain. The question of attribution and our drive to attribute has perhaps overshadowed more significant issues surrounding what the appearance of a drawing may reveal about its function.

In establishing the function of Holbein's portrait drawings it is important to emphasise the problems inherent in approaching them from a contemporary perspective. Fifteenth and sixteenth century drawings are more highly prized today than they were originally, in part because of their scarcity, but also because of the cult of the artist and the emphasis we put on the importance of authorship and not the production.¹⁵ Although drawings had status and intrinsic value as a workshop resource we need to take in to account a drawing's anonymity within a workshop, as well as its ephemeral nature and inherent material vulnerability as contributing factors to the paucity of drawing from this period.¹⁶ It is important to highlight the comparatively higher survival rates of Italian Renaissance drawings over northern Renaissance drawings. It has been suggested that the larger number of Italian drawings on paper from this period in comparison to those of the Northern Renaissance may be a consequence of Netherlandish painters working out their design directly on to the grounded panels for painting rather than on the more ephemeral paper.¹⁷ However, given the importance levied on workshop designs, it seems somewhat unfeasible that complex designs and compositions would not have been worked out on paper first, suggesting that many of these drawings just did not survive.¹⁸

It could be argued that the paucity of drawings from this period has forced comparisons between Holbein and his contemporaries that are not necessarily the most appropriate in further assisting our understanding of Holbein's drawings. Holbein's

¹⁵ Jean Clouet's drawings are exception in that they were drawings that stood alone, more often done as finished portraits for the sitter's retention or as a collection within albums.

¹⁶ See Susie Nash, Northern Renaissance Art, Oxford: Oxford University Press, 2008.167

¹⁷ Maryan Ainsworth, Review: 'Early Netherlandish Drawings from Jan van Eyck to Hieronymous Bosch'. Master Drawings. Autumn 2003. 41.3.305. Where she concludes this from the amount or extent of underdrawing, using the grounded panel as a 'sketchpad'.

¹⁸ See Susie Nash.2008.167-177

drawings are a unique example of a collection of preparatory portrait drawings in England. Further, there are very few extant contemporaneous copies of Holbein's portrait drawings, including those that were once amongst the Great Booke itself.¹⁹ The work of French artist Jean Clouet (1480-1541) is often used as an artistic comparison to Holbein portraits, and although Clouet's portrait drawings survive in greater number, they functioned differently to Holbein's portrait drawings.²⁰ Clouet's drawings were meant for the sitter's retention and not seemingly used as face patterns for panel painting, unlike Holbein's drawings. As a result of the cult of personality, there was a sixteenth century French fashion for portraits in both painted and drawn form. Clouet's portrait drawings were copied in large numbers and made into albums as family treasures.²¹

Albrecht Dürer (1471-1528) is also a significant contemporary of Holbein's. Dürer's journals of his travels to Italy and the Netherlands in the early 1520s reveal that he drew many portraits of ladies and gentlemen in charcoal and, significantly, that they were sold to these individuals as drawings, which means that they did not necessarily always function as preparatory for commissions in oil.²² The materials for a drawing would not have been prohibitively expensive, so a payment up front for a commission would not necessarily be needed. We can speculate that Dürer must have thought it was worth the effort in case of further commissions in oil for which he could charge more. This aspect is fascinating in many respects. Not only does it highlight Dürer's preference for certain materials to render portraits that may or may not lead to commissions, but also represents a travelling artist at work, continually plying his trade. Furthermore, it illustrates that not all portrait drawings were preparatory for paintings during this period, with hundreds of contemporaneous copies of Jean Clouet's portraits further proof of this.²³

¹⁹ For example, portrait drawings of John Fisher and the Duchess of Suffolk in the British Museum and Guildford, Fisher and Poyntz formerly in the Heseltine Collection, and the head called Sir Charles Wingfield in the collection of Sir Leslie Bart (Chamberlain p254).

²⁰ Collection at Chantilly of Jean and Francois Clouet, of which many are copies.

²¹ See Louis Dimier, French Painting in the Sixteenth Century. London: Duckworth & Co.1904.

²² Albrecht Dürer. Roger Fry,1913 trans. Rudolf Tombo. 1913, Memoirs of Journeys to Venice and the Low Countries. London: Dodo Press. 2009.

²³ See Peter Mellen, Jean Clouet. London & New York: Phaidon.1971.19.500 drawings survive in various albums in the collection held at Chantilly, of which 100, says Mellen, are attributable to Clouet. The albums were popular amongst the French court. Further, there is only one drawing, that of Guillaume Budé, that is associated with an existing painting.

It is important to understand the pitfalls of looking at drawings in isolation. Ainsworth et al suggested that drawings dating from the fifteenth century and later should be considered as part of an artist's working process that fitted within workshop production: often as a stage in the production of a painting, stained glass, tapestry or sculpture.²⁴ Drawing formed the basis of an apprentice's workshop training. It was both a practical and theoretical exercise. Holbein would have undergone such an education in his father's workshop.²⁵ Furthermore, he would be expected to adopt that workshop's particular method and style so that collaborative works did not overly differ.²⁶

In relation to German draftsmanship, the model sheet or model book was still being used during the later fifteenth, early sixteenth century, and such drawings represented the workshop output of the anonymous craftsman. Model books and sheets were produced and repeatedly used for motifs, figures and outlines of pictorial solutions of different themes. These types of drawings were only gradually being replaced during Dürer's working life (c.1484-1528) by personal sketchbooks and nature studies (although these are rare). At a similar time, such workshop possessions began to gain an inherent value as intellectual property.²⁷ Holbein's designs for jewellers' and goldsmiths' work were also originally secured within a book, although today they are loose: *'the book of Drawings of Jewelling work drawn by Holbein'* was noted by George Vertue in 1713-21, owned by Sir Hans Sloane.²⁸ This further emphasises the changing context of such drawings. The transition from being part of a collection within a sketchbook to single sheets must affect their interpretation because objects that form part of a group are understood differently from single, isolated pieces.

²⁴ Maryan Ainsworth, Review of 'Early Netherlandish Drawings from Jan van Eyck to Hieronymus Bosch' (exhib cat) by Fritz Koreny; Erwin Pokorny; George Zeman. *Master Drawings*. 41.3. Autumn 2003. 306

²⁵ See Christian Müller, who includes the workshop drawings in *Katalog der Zeichnungen des 15 und 16 Jahrhunderts*, part 2A 'Die Zeichnungen von Hans Holbein dem Jüngeren und Ambrosius Holbein'. Öffentliche Kunstsammlung Basel Kupferstichkabinett, Basel: Schwabe. 1996. See also Jochen Sander's essay in *Hans Holbein the Younger, The Basel Years 1515-1532*. Munich; Berlin; London; New York: Prestel. 2006. 14-19.

Hans Holbein the Younger: the Basel Years.

²⁶ See Chapters Three & Four for descriptions of Holbein the Younger's early drawings (1516 etc) and those of his father's workshop.

²⁷ Hinrich Seiveking, 'German Draftsmanship in the Ages of Dürer and Goethe: Parallels and Resonance'. *Master Drawings*. Summer 2001. 39.2.114-142.

²⁸ See the so-called 'English Sketchbook' from the Amerbach-Kabinett, Basel, which constitutes half of the drawings – Sir Hans Sloane (physician and collector, 1660-1753) had the other half, which he bequeathed to the British Museum.

Prior to the 17th century, there is no evidence to suggest that workshop drawings and models were considered 'collectable' in terms of works of art in their own right.²⁹ Moreover, their potential for repeated use would often render them ephemeral. For example, there are no known drawings that survive that can be connected with Holbein's printed work and Christian Müller has speculated that they were either lost or destroyed as part of the transfer process of the design to the plate.³⁰ However, there is a woodcut print after the extant drawing and now lost painting of poet Nicolas Bourbon, 1535, (Parker 37, RL12192, 309 x 260mm, pale pink prepared paper, coloured chalks and black aqueous media, see image of Bourbon drawing and print) that demonstrates repeated use of a composition and imagery. This re-use of a portrait composition is not uncommon in Holbein's portraiture. For example, the image of Anne of Cleves is painted on a panel and in miniature format, pointing to an efficient use of a drawing and its repeated pictorial use.

Christian Müller argues that the survival of certain types of drawings does not necessarily reflect the entire oeuvre of an artist's work.³¹ For example, what does survive of Holbein's drawings over-emphasises his work as a goldsmith designer and portraitist in comparison to say, his abilities as court decorator or for wall paintings. Such an observation has an impact, naturally, on one's judgement of an artist's oeuvre and what we are left to compare it with. The number of surviving drawings gives artificial emphasis on certain aspects of an artist's production and, furthermore, the drawing may not truly reflect the processes to reach the final piece.³² We also cannot account for lost drawings, which represent missing links in the artistic processes that may relate to a finished piece, be it a portrait, sculpture, stained glass or tomb design. In much the same way as the paucity of surviving drawings from the sixteenth century distorts our view of them, missing drawings within an artist's oeuvre can further distort our understanding of their working methods. Furthermore, it could be argued that the

²⁹ For example. 'The Paper Museum' of the collector Cassiano dal Pozzo (1588-1657) and the dispersed collection of Thomas Howard, Earl of Arundel (1585-1646)

³⁰ Christian Müller. Hans Holbein the Younger, The Basel Years 1515-1532. Munich, Berlin, London, New York: Prestel, 2006.21

³¹ Christian Müller. 2006.20

³² In the article by Simona Cohen, 'Some Aspects of Michelangelo's Creative Process', Artibus et Historiae, 1988. 19.37.43-63, it is interesting to note how these have been interpreted from surviving drawings that relate to the Sistine Chapel in an attempt to understand how Michelangelo may have progressed to the final design.

contrast of levels of 'finish' between Holbein's portrait drawings indicate that there were different stages of his preparatory portrait process.

For example, Paul Ganz suggested that not only did Holbein paint from memory, but that he produced more detailed drawings than those that survive of the More family from 1527. Ganz speculated that Holbein must have made more detailed preliminary studies of the family because such ladies and gentlemen of high esteem, would not want to sit being drawn for hours on end.³³ Ganz's comment is borne out of the desire to fill what he perceives as gaps in Holbein's creative process in the absence of more drawings. Whilst this could be the case, it may be more useful to address the levels of finish of Holbein's drawings as this could reveal more about the levels of use or degree of reference and how they may have been used whilst painting. This will be explored later in this chapter in a discussion of Holbein's use of colour.

In his book *The Mastery of Drawing*, German art historian Joseph Meder (1857-1934) included a chapter on 'Working Drawings' in which he discusses the different types of drawing, relating them to their function. Meder includes cartoons in this and defines them as falling within that category if they are:

....drawn in charcoal or chalk, often with white highlighting or, when necessary, gouache or watercolour: more rarely they are drawn with the pen... Although in essence they were simply guides to the main lines of a composition, some artists raised them to the level of works of art. They also underwent a development in time, rising and falling in degree of graphic quality inversely with the degree of 'directness' of painting...³⁴

Whilst Meder lists the materials for cartoons he does not always align the choice of materials to the function of the drawing. This passage is interesting in many respects, not least when discussing how Holbein's drawings may have functioned and where they fit in drawing terminology. But this is partly the point. They do not fit neatly into either the category of cartoon nor face pattern since both these definitions omit all their other features and functions. Evidence gathered during this research has established that Holbein's drawings functioned as more than just face patterns. Holbein's portrait drawings are not all the same in terms of their appearance and use. This aspect makes

³³ Paul Ganz, *Holbein: The Paintings. Complete Edition*. London: Phaidon. 1950.11.

³⁴ Joseph Meder, *The Mastery of Drawing*, trans. and revised by Winslow Ames. Abaris Books, Inc. 1978.391

them a challenge to describe and classify in terms of drawing nomenclature and is perhaps what prompted Maryan Ainsworth to say that they defied categorisation³⁵ For example, in the case of Holbein's portrait drawings, some have been shown to relate more than just pictorially to a painting of the same sitter: in other words, they were physically used to transfer the image. This fact makes us clearer on an aspect of the drawing's role as being preparatory, and of its function – as that of a face pattern.

The first purpose of the preparatory drawing was to capture the likeness of the sitter, thereby demonstrating to the client Holbein's immense skill. If the commission was taken up, the drawings could function as a face pattern, with the salient features being traced over to transfer to the panel. Further, from their appearance and their visual relationship to a finished painting, we can also conclude that they could be used during the painting process as visual reference in the absence of the sitter, transcribing features and pallor. This is evidenced through the use of colour, the level of detail, and the written notations on some of the drawings themselves that relate to clothing and features. This demonstrates the multiple functions of the drawings as well as emphasising their purpose of preparatory drawings. The majority of the portrait drawings, however, do not have a painting to which they relate.³⁶ This could be because either the paintings were never executed or they no longer survive.³⁷ The lack of a corresponding painted portrait does not necessarily change the purpose of the portrait drawing. Some drawings, without paintings, show signs of having been transferred, for example (see Table 4, Appendix Four). Conversely, many of the drawings that have a painting of the same sitter show no signs of having been traced, but this does not necessarily mean that they did not play a part in the artistic process; this issue is discussed in the section on contouring below. A survey of the portrait drawings indicated that they were traced for transfer on both unprepared and prepared papers, regardless of the media of the contours.

³⁵ Maryan Ainsworth, "Patrones for phiosioneamyes": Holbein's portraiture reconsidered.' The Burlington Magazine. March 1990. 132.1044.174.

³⁶ There are 50 drawings for which no original painted portrait by Holbein survives or ever existed.

³⁷ For a list of British individuals of which there are drawings or paintings, see Susan Foister, Holbein and England. Yale University Press: New Haven & London. 2004.299

4.4 The appearance of Holbein's portrait drawings: the relationship of materials and technique to function

There are reasons other than local availability that influenced Holbein's choice of materials for portrait drawing: the primary one being that they suited his purpose. This section will incorporate a discussion of the function of Holbein's materials and techniques, the sequence in which they were applied, and any signs of transfer, as described in Chapter Three. When combined, these aspects can help with the 'reading' of each drawing. All the materials utilised by Holbein, as described in Chapter 3, were apposite for the purpose of the portrait drawings and their subsequent translation to a painted portrait. The media and substrate suited the methods required for a sitting: the paper and dry media, for example, facilitating the speed with which to work quickly and accurately. Less obvious aspects such as the significance of substrate size in relation to function will also be included. This section will further demonstrate that Holbein's techniques were grounded in workshop tradition and adapted to suit the job at hand whilst imbued with certain stylistic attributes.

4.4.1 Holbein's substrates: the significance of size to function

Whilst a brief history of papermaking and Holbein's papers was given in Chapter 3, this chapter explores the significance of Holbein's choice and use of paper in greater detail. However, before doing so, it is important to discuss the relationship of size to function: an aspect of an artwork generally overlooked in extant Holbein literature.³⁸ This omission highlights the limitations of judging Holbein's portrait drawings individually rather than as a group, and also of studying reproductions rather than the original drawings. There is something monumental in terms of attention to detail for the more realised drawings, and it is always surprising viewing them close up and seeing how relatively small in size they are. There is little sense within current literature of the differences or similarities of scale of the portrait drawings, not just in relation to each other but also in relation to the associated painting. In the case of Holbein's portrait drawings, size does matter. It matters because size is related to the function of the drawing. It matters further because the size of the paper sheet influences the choice and

³⁸ Parker, Roberts and Foister, for instance, only raise the issue of size in relation to the proportions of the sitters and links with drawing machine rather than links to panel sizes.

use of the media. This is not an aspect unique to Holbein. For example, Gunnar Heydenreich concluded that Cranach varied his technique for reasons of scale.³⁹

Whilst there is a large amount of literature relating to paper sizes in terms of book production there is very little in terms of single sheet sizes for artists of the Early Modern period.⁴⁰ The diversity and uncertainty of mould sizes has meant it is problematic to be definitive about available paper sizes. Therefore, any conclusions we can reach come from the drawings themselves. According to paper historian Dard Hunter, average size moulds used for papermaking in Europe, commensurate with Holbein's lifetime, were commonly 356 x 483mm, with the largest sheets measuring 470 x 673mm.⁴¹ These sizes could certainly have included the papers used by Holbein: both full sheets and from these, those cut to size. The largest of Holbein's portrait drawings are those executed on unprepared papers. The horizontal orientation of the chain lines in relation to the drawing, together with the large sizes of the portrait drawings of Lady Mary Guildford, (552x387mm) and Sir Nicholas Carew, (Figure 40, Basel Kunstmuseum, Kupferstichkabinett, Inv.1662.34, 545 x 384mm), both executed in 1527 on unprepared paper would indicate more or less use of a whole sheet of mould made paper. Alternatively, the smaller drawings such as those executed on pink prepared papers during Holbein's second and final stay in England (1532-43), indicate that Holbein was able to cut whole sheets into 4 or 6 pieces on which to draw, if need be.

It is possible to infer that the lack of demand for Holbein's work during the first visit and the need to impress potential clients such as the More family, may have influenced his choice of larger and grander drawings, with the end result being a painting. The often smaller scale drawings on pink prepared paper, executed during his second and final stay in England and surviving in greater quantity, could therefore reflect the need for more economy: with regard to both saving time during periods of increased output and saving on material costs. This relationship of economy and output is taken up

³⁹ Gunnar Heydenreich, Lucas Cranach the Elder. Painting materials, techniques and workshop practice. Amsterdam University Press. 2007.196.

⁴⁰ For further information relating to sizes and production see, for instance: A summary of Medieval and modern sheet-sizes compiled by P. Gaskell, A New Introduction to Bibliography. 72-75. Sylvie Turner, The Book of Fine Paper, London: Thames & Hudson. 1998. 209 See also Institut d'histoire du livre website: <http://ihl.enssib.fr/siteihl.php?page=4&aflng=en>.

⁴¹ Dard Hunter, Papermaking: The History and Technique of an Ancient Craft. Dover Publications Inc: New York. 1943. 224. Whilst larger papers were made, there are many discrepancies and disagreements regarding mould sizes and it is hard to fathom exact measurements.

further in the section on prepared papers, but if the size of the commission was linked to pricing, then it becomes another factor in the artist's choice of size and the production processes, and may also be a reflection of Holbein's work commitments and the status of the sitter.

As discussed in the previous chapter, the orientation of the chain lines within a drawn sheet offers information about how the sheet may have been divided up prior to drawing. Viewed in transmitted light, the orientation of Holbein's portrait drawings reveals both vertical and horizontal positioning of the chain lines.⁴² This is interesting because Etienne Jollet has argued that Holbein's contemporary, Jean Clouet, was selective in his use of paper and its orientation, employing a deliberate compositional use of the chain lines.⁴³ In his book on Jean and Francois Clouet, Jollet suggests that Jean Clouet actively used the chain lines to position key points of the face by using the horizontal chain lines as divisional lines dividing the face into proportional zones.⁴⁴ In contrast, the examination of Holbein's portrait drawings in transmitted light show that he had no preference for a particular orientation of chain line; they did not play any part in the composition, and chain line orientation is the random result of how the sheets were divided and subsequently used.

The position of the sitter in Holbein's portrait drawings is in proportion to the substrate, placed centrally and at times filling the space, with the face being the main area of media concentration. We can therefore gauge a good deal of information about the original size of the drawing's substrate from the way the sitter occupies the sheet. This aspect became very apparent when all Holbein's portrait drawings were viewed as a group at Windsor. Given the portrait format of Holbein's papers it was generally not a problem about how to position the sitter within the shape. The portrait drawings on plain and prepared papers have no doubt undergone some trimming throughout their lifetime, if not by Holbein himself, then by proceeding custodians. This is evident from

⁴² See Chapter Three, which includes a section on papermaking and moulds

⁴³ Etienne Jollet. trans. Deke Dusinberre. *Jean and François Clouet*. Paris : Editions De La Lagune. 1997.60

⁴⁴ It is also interesting to note that the position of joins on the panel was often taken in to account in relation to positioning the face whilst painting. Therefore it was frequently the case that the middle panel would be wider than the two outer panels so that the join did not run down the face of the sitter. The avoidance of this join seems more appropriate in a finished painted portrait.

certain aspects of the sitters' clothing or hats for example, that are cut off abruptly at the edges of the paper.⁴⁵

Most of the sitters depicted in Holbein's painted portraits have their hands included in the composition: something that is not true of the drawings.⁴⁶ The absence of hands in a drawing of a sitter has prompted some historians to conclude that Holbein's drawings have been cut considerably; the drawing of Richard Southwell, 1535 (370 x 281mm, Parker 38, Royal Collection, Windsor, RL12242) being one such example, Figure 24.⁴⁷ Given that only 11 out of the 100 or so surviving portrait drawings by Holbein depict hands, together with the fact it is unlikely that all of these were trimmed to such an extent to exclude this aspect, it is reasonable to conclude that hands were not generally executed on the same sheet during a sitting. On a purely practical level, it would have taken far longer to also draw the sitter's hands during the same sitting. However, some drawings, include drawings of hands: the portrait drawing of Nicolas Bourbon, 1535, seen in profile, has the sketchy beginnings of a hand, as does the drawing of Jane Seymour, 1536/37 (503 x 285mm, Parker 39, The Royal Collection, Windsor, RL12267), for example.⁴⁸

With the exception of the portrait drawing of John Godsolve⁴⁹, early 1530s, (363 x 295mm, Parker 22, The Royal Collection, Windsor, RL12265, Figure 34), none of the hands included in any of the drawings are drawn in the same detail as that of the separate Erasmus hand studies, described in the previous chapter.⁵⁰ Although rare,

⁴⁵ See for instance the portrait drawings of Jane Seymour (Parker 39), Sir Thomas More (Parker 3), William Warham (Parker 12)

⁴⁶ The scarcity of inclusion of hands in the portrait drawings of Jean Clouet led art historian Peter Mellen to conclude that Clouet clearly was not able to draw them very well (see Peter Mellen.1971.26). Art historian Joanna Woodall maintains that in relation to likeness, hands were an important aspect of portraiture in the Early Modern period and including the hands in a portrait would make the commission more expensive. (See Joanna Woodall, 'Pre-face', workshop presentation, Making Faces: Portraiture and Models of Likeness. 18 February, National Portrait Gallery.2011).

⁴⁷ See Stephanie Buck, Jochen Sander, et al. Hans Holbein Portraitist of the Renaissance. The Hague, 2003 Royal Cabinet of Paintings Mauritshuis: The Hague., 2003.105, with regards to the portrait drawing of Southwell and Jane Roberts, Holbein and the Court of Henry VIII. The Queen's Gallery, Buckingham Palace. 1978.77, in which she concludes the hands of the drawing of the Unknown Gentleman, Parker 33, are cut off.

⁴⁸ The following portrait drawings also have sketched in hands: John More the Younger, William Parr, Lady Ratcliffe, Marchioness of Dorset, Thomas Boleyn all in The Royal Collection (see Parker's catalogue) at Windsor and Boy with a Marmoset and Anna Meyer, in the Kupferstichkabinett, Basel, Kunstmuseum.

⁴⁹ The portrait of John Godsolve is unlike the majority of the portrait drawings in that it is fully coloured with watercolour and very painterly in technique, mimicking a panel painting and this may account for the attention to detail.

⁵⁰ See Susan Foister, Holbein and England. Yale University Press: New Haven & London, 2004.49

there are surviving drawings of studies of hands by other sixteenth century artists, such as Albrecht Dürer, Leonardo da Vinci and those from Holbein's father's workshop, that could have acted as separate entities to portrait drawings, (Figure 41).

The portrait drawings were clearly functioning to capture the face of the sitter, as evidenced by the more sketchy aspects of the sitters' clothing in most of the drawings. It is reasonable to infer that as hands are perhaps less specific to a sitter than their faces, more generic hand patterns were used. From these facts it is possible to conclude that it was more commonplace to sketch the hands separately or to draw them free hand on to the panel.⁵¹ Both these options are evidenced in Holbein's underdrawings of hands. In the portrait of Simon George, c.1535, (roundel diameter 310mm, Städelsches Kunstinstitut, Frankfurt, Inv.1065, Figure 23) for example, the underdrawing of his hands is clearly the result of a pattern; the mechanical means of which appears to have been pouncing (Figure 23.1).⁵² In contrast, the looser underdrawing of the hands of Jacob Meyer, c.1526, (377 x 272mm, Basel, Kunstmuseum Kupferstichkabinett, Inv.1823.140) depicted in the group portrait of the Darmstadt Madonna, (1465 x 1020mm, on loan to Städelsches Kunstinstitut Frankfurt 2003-2012) seem to infer that they were drawn free-hand, unlike his face, which is the result of a traced pattern.

The geographical origins of Holbein's papers as well as paper type was discussed in Chapter 3, but it should be reiterated that even if the sitters were linked in some way, it did not always mean that Holbein used the same paper for each of those related sitters. For example, the seven drawings for the More family group of portraits of 1527 are on very similar sized papers, but are drawn on at least two different batches of paper.⁵³ The choice of paper may have been arbitrary, in that Holbein had to use whatever was to hand or available, but the size of the paper would be a considered decision. Since most artists would have to employ proportions imposed by the support, the choice of support and the size is significant. It is significant in the case of Holbein, not just in terms of economics, but also in relation to what the drawing may be transferred to.

⁵¹ See Susan Foister, Martin Wyld and Ashok Roy, 'A Lady with a Squirrel and Starling'. National Gallery Technical Bulletin. 1994. Volume 15.15-16.

⁵² The underdrawing of Simon George's face is also a result of a pattern, but not pounced.

⁵³ 4 out of the 7 have watermarks, 3 of which are the same type. This may give a sense of timing even though we do not know how long batches of paper lasted, but perhaps similar papers would imply drawings of sitters were executed relatively close to each other?

Although the function of the drawings in terms of patterns for transfer will be discussed later in this chapter, in relation to size, it is important to reiterate that many of the portrait drawings are the same scale of the portrait part of the paintings' underdrawing. This one-to-one transfer from extant drawings implies that the size of the final panel was known, and that the scale of the drawing was chosen accordingly. Therefore, the size of the image becomes meaningful as it relates to the potential size of the panel, not just the function of the drawings' use for transfer.

It would appear that as early as 1516 Holbein's portrait drawings were drawn with the final painting size in mind: the Meyer Double Portrait (385 x 319mm Basel, Kunstmuseum. Inv.312, Figure 3) is proportionally related to the drawings of the sitters and may indicate they were used for transfer, although how they were transferred is not certain. This is in contrast to his father's and Ambrosius Holbein's portrait drawings, which are small and of sketchbook format. For example, Ambrosius Holbein's Portrait of a Young Boy, 1516, (Basel Kunstmuseum, Kuperfstichkabinett, Inv.1921.44, white/grey prepared paper, silverpoint, touches of black and red chalk, Figure 42) measures 144 x 100mm and was used as a model for the painted portrait of the boy, also at the Kunstmuseum (Inv.295, 1516) measuring 335 x 280mm. There is not a relational one to one size of the drawing to the painting in this instance.

Although the overall sizes of the sheets on which Holbein's portraits were drawn may not have matched the overall size of the panels, the ratios are very similar. The sizes of panels in the sixteenth century naturally vary depending on the commission type and cost. A standardization of sizes imposed on altars in the fifteenth century had by the sixteenth century affected the sizes of panels used for painting supports.⁵⁴ Cranach's workshop, for instance, was making use of standardised panel sizes by the 1520s because this was a means of working more efficiently.⁵⁵ It would therefore seem practical that paper designs were within the ratios of the panels on which they were to

⁵⁴ Jorgen Wadum, 'Historical Overview of Panel-Making Techniques in the Northern Countries.' The Structural Conservation of Panel Paintings: Proceedings of a Symposium at the J Paul Getty Museum April 1995. Los Angeles: The Getty Conservation Institute 1998. 160

⁵⁵ Heydenreich.2007.42

be painted.⁵⁶ However, to complicate matters, these standard sizes of panels may have varied from region to region, with some regions, such as Saxony, not having standard sizes at all. The same can be said of paper sizes. Unlike Holbein, Cranach's workshop practices are incredibly well documented. However, having been an apprentice in his father's workshop and as a journeyman, Holbein would have been more than aware of how to operate as though in a workshop situation to make his processes more efficient. Some panels in the Netherlands were named after how much they cost: relating specifically to coin denominations, such as the *tronie* or the *stuijvers*.⁵⁷ Since there is evidence that the size of panel paintings were named after the cost, it is possible to conclude that the size of drawing and therefore the size of the panel was linked to the commission price. Research in to panel making techniques in the Northern countries indicates that the smaller panels that were made for portraits measuring around 500 x 600mm were sometimes composed of three planks.⁵⁸ Dendrochronologist, Ian Tyers' research for the National Portrait Gallery's Making Art in Tudor Britain project has found that board orientation follows proportional ratios of portrait and landscape.⁵⁹ For example, vertical boards make up 94% of the portrait shaped panels studied for the project, whilst horizontal boards account for 95% of those portraits of landscape format. In the same way that paper sizes would be dictated by practicalities such as handling of the mould and costs, the same was true of panels for painting on.

There is documentary evidence that in Cranach's workshop pieces were commissioned with particular sizes in mind, and that the artists would have worked around these measurements whilst working out their composition.⁶⁰ Although Cranach's panels may vary in size, the early panels have a nearly identical ratio of height to width of 4:3. There is also this aspect of ratio to consider with the manufacture of paper sizes since there are practical and aesthetic advantages of this ratio. Although this was only noted some centuries later, the height to width ratio of paper is now standardised at the

⁵⁶ '...the painting support and the drawing proportions are determined in relation to one another according to an established system'. Heydenreich.2007.44

⁵⁷ Jorgen Wadum.1998.160-161, explaining the link to coinage. Heydenreich has also highlighted the fact there was no common system of measurement in Germany in the sixteenth century. Heydenreich.2007.367.

⁵⁸ Jorgen Wadum, 'Historical Overview of Panel-Making Techniques in the Northern Countries'. The Structural Conservation of Panel Paintings: Proceedings of a Symposium at the J Paul Getty Museum April 1995. Los Angeles: The Getty Conservation Institute 1998, has a section of standard sizes.

⁵⁹ Ian Tyers, research presentation, Making Art in Tudor Britain Workshop, 2 December 2011.

⁶⁰ Heydenreich.2007.39

square root of two, thereby preserving the aspect ratio when cutting a page in two.⁶¹ In the complex world of various paper sizes, it is also the ratio of each sheet in portrait format that is of interest. The very shape of what we have come to know as 'portrait' is an indication of the length measuring more than the width. The ratio of length to breadth of a sheet of paper was important not only for book production and the way it was folded to make up multiple pages for printing, but also because of the aesthetics of proportion. For example, the ratio of the 'portrait' rectangle is often 1:4, close to the Golden Section of $1:\sqrt{1.6}$, and is seen in sixteenth century panels for painting portraits.

Although Holbein drew and painted sitters to the same scale, this does not mean that the dimensions of the paper and the painting support are the same size, nor does it mean that the shape of the drawing and painting supports match. For example, there are a number of roundels⁶² that relate to drawings that are on rectangular paper, the painting of Simon George, 1535, is one such example.⁶³ Although no painting of them survives, the c.1527 portrait drawings of an English Nobleman (389 x 277mm, Basel, Kunstmuseum, Kupferstichkabinett. Inv.1662.122) and English Noblewoman (389 x 279mm, Inv.1662.123) in Basel have blind indentations in circular form around them that could have indicated a roundel panel shape, (Figures 43 and 44).

The size of a substrate is also significant in influencing an artist's choice of media. For instance, metalpoint was not really suited to drawing on a large scale. Unless it was lead point, it would require the preparation of the paper, and it also has limitations in variation of line and tone: it is better suited to details and smaller scale drawings. It is usually described as not really being suited to larger, sweeping drawings in the same way chalks are.⁶⁴ But it can be used quickly and does not smudge like the more friable mediums. The lack of large-scale prepared papers could have more to do with the need to prepare the substrate than the actual use of the metalpoint. There are certainly

⁶¹ In 1786, German physics professor Georg Christoph Lichtenberg noted advantages of having a height to width ratio, now known as the 'Lichtenberg Ratio'. For an interesting sojourn into paper sizes, see: <http://www.gresham.ac.uk/lectures-and-events/the-uses-of-irrationality-paper-sizes-and-the-golden-ratio>.

⁶² See Paul Ganz on Holbein's circular portraits, where he links portrait medals, the portrait miniature format and small roundel paintings on wood, in 'Ein unbekanntes Herrenbildnis von Hans Holbein Ad J', in Jahrbuch für Kunst und Kunstpflege in der Schweiz 1921-1924.293.

⁶³ Examination of the oakwood support, an x-ray of the painting and analysis of the composition indicate that the painting was originally a roundel, that it was cut down to a rectangle, and that it was later restored to its original round format.

⁶⁴ Edward Saywell, 'Behind the Line: The Materials and Techniques of Old Master Drawings', Harvard University Art Museums Bulletin, Vol.6, No.2, Two Exhibitions. Autumn.1998.12.

examples where the metalpoint lines appear to be very free and sketch-like, as seen in the Portrait of Anne, 1518, (218 x 159mm, Basel Kunstmuseum, Kupferstichkabinett, Inv.1662.207), by Hans Holbein the Elder (Figure 48). However, on the whole it could be concluded that metalpoint and pens were useful for smaller-scale parchments and papers, whereas charcoal and chinks, together with the development and availability of paper, meant that images could be drawn on a larger scale.

The relationship of size to cost cannot be taken in to account when discussing Holbein's miniatures. Executed in expensive pigments and often housed in ornate, carved ivory or metal boxes, these miniatures could very well have been more costly to produce.⁶⁵ But in discussing relational sizes it is interesting to note that there is only one surviving Holbein portrait drawing that relates to an attributed miniature of the same sitter: that of Lady Audley.⁶⁶ The relationship of the portrait drawing of Lady Audley, c.1538 (292 x 207mm, Parker 58, The Royal Collection, Windsor, RL12191, Figure 28) to the miniature painting (The Royal Collection, Windsor, RCIN.422292, Figure 29) of her is more complex in terms of relational size, as the drawing was obviously not used as a one to one transfer for miniature painting. In terms of scale, portrait miniatures rely on detail because of the way in which they are viewed and the way they function - they are invariably small and seen at close quarters, and this invites close scrutiny. It should be emphasised that the original meaning of the word 'miniature' had nothing to do with the size of the painting. Miniature derives from the Latin, *minium*, meaning red lead, a traditional pigment used by illuminators. During the sixteenth century, miniatures were in fact referred to as 'limnings' or as 'paintings in little'. It is usually accepted that miniatures were painted *ad vivum* (to the life) and therefore there was no need to work from a scaled-down drawing of the sitter. Edward Norgate, documenting the art of miniature painting, noted the execution of a miniature during three life sittings.⁶⁷ Whether these drawings were used in the painting of the miniatures is a question that has not really been addressed fully. In the instance of Lady Audley, there are no signs of transfer in the form of indentations on the drawing. However, it is striking how

⁶⁵ Susan Foister, Holbein and England. 2004.34.

⁶⁶ The miniature of Thomas Wriothesely at the Metropolitan Museum of Art has been in and out of attribution to Holbein, but also relates to a drawing of the same sitter, at the Louvre. The same attribution problems occur with the miniature of George Neville, Lord Abergavenny in the Collection of the Duke of Buccleuch, the portrait drawing is in the collection of the Earl of Pembroke at Wilton House.

⁶⁷ Edward Norgate, Miniatura; or the art of limning (c.1627), Oxford: Clarendon Press.1919.27

similar the drawing by Holbein of Lady Audley is to her miniature; the miniature follows the lines of this drawing so closely it is hard to imagine that there is not some connection, albeit just in terms of re-use of a particular pose and composition, as the overlaying of a scaled version of the drawing onto the miniature illustrates, Figure 29.1. Given that it appears to be that Holbein worked from drawings to paintings, it could be that the drawing of Lady Audley was copied to produce the miniature of her.⁶⁸

4.4.2 The function of Holbein's papers

Whilst Holbein's drawing papers were introduced and discussed in Chapter 3, in this section we take a closer look at the function of those papers, over and above their obvious function of being just a carrier for the media. This section will discuss findings that address the substrates that Holbein used, and how he used them, with special regard to the pink prepared papers. In general there is little in the way of detailed comparisons of Holbein's portrait drawings in Holbein literature. Evidence collected from examination of the drawings as a group seems to indicate that whether prepared or not, Holbein's use of papers was dictated by size and purpose. As discussed in Chapter Three, Holbein's papers were good quality, creamy in tone and more often than not, French. Although there is no evidence to suggest that Holbein was particular about a certain orientation of that paper sheet, there was nothing arbitrary with regards to his use of the paper in terms of exploitation of its properties.

It is the art historical norm to separate the drawings according to Holbein's periods of working in either Basel or England, with the drawings executed in England further divided into the years of Holbein's first and second stays. The obvious differences are usually pointed out – that the English 1526-28 first visit drawings are executed on unprepared paper and the second visit drawings on a pink prepared ground. But historical information on Holbein's use of paper is limited. The materials, techniques and appearance of Holbein's portrait drawings are not really so easily segregated, as there are anomalies in each of the art historical separations. Holbein used a pink preparation before his first visit to England: in the early 1520s, which would have been

⁶⁸ Jim Murrell, *The Way Howe to Lyme, Tudor Miniatures Observed*. V&A Publications: London.1983.35. It should also be noted that there is a painting of *Anne of Cleves* in the Louvre, which also has the same pose as that of her miniature version, in the V&A Museum. The relationship of drawing to miniature is therefore not clear.

prior to having contact with the miniaturist Lucas Horenbout. This early use of a pink preparation would therefore call in to question Jim Murrell's theory that Holbein may have adopted the pink preparation method under the influence of his contact with the Horenbout.⁶⁹ The over- simplification of the drawings' descriptions and this artificial separation of work according to when it was executed omits comparison of his early and later drawings, of which there are similarities. As described in Chapter Three, observing such similarities and differences informs our understanding of Holbein's technique.

One should not underestimate the impact paper had on drawing as a genre in general during the fifteenth and sixteenth centuries. Less expensive than parchment, its use opened up a wealth of possibilities for artists' drawing. As a foundation for drawing media, a paper's size, tone and texture have an impact on the visual appearance of a drawing. Even with the addition of a preparation layer that can obscure the paper's features, its texture can still play a part. Paper might therefore be selected to suit the function of a drawing: too textured and pen lines are hard to draw smoothly; too smooth and more friable media has nothing to grab on to. Although Holbein's choice of papers would have been limited to what was available and what he was able to transport with him, there were certain requirements that needed to be met. For example, he must have taken into account the absorbency and opacity of the papers, since they would need to accommodate the use of both dry and aqueous media.

As discussed in Chapter Three, during Holbein's time, papers were not necessarily manufactured for specific end-uses for artists. Quality was obviously important and papers were made of different grades, implying different qualities were needed for different tasks. Late 14th century documentation relating to Burgundian trade suggests that some papers were bought with certain functions in mind, such as for portraiture and designing.⁷⁰ The multi-disciplinary use of paper is evident when looking at Holbein's work on paper. For example, the same papers would have been used for

⁶⁹ Jim Murrell.1983.20. 1525 Lucas Horenbout was working in England & in 1531 Horenbout became the King's Painter and 1534, a denizen.

⁷⁰ Susie Nash, 'The Supply, Acquisition, Cost and Employment of Painters' Materials at the Burgundian Court, c.1375-1419'. Trade in Artists' Materials: Markets and Commerce in Europe to 1700. Table 2. Page 121: 'pour pourtraire et faire patrons sur ycellui' - roughly meaning for portraying and making patterns (?) on this. Then also 1399, paper bought called 'ordinary paper' 'pour traissier et getier des ymaiges set autres besoignes de son mestier' (Table 2 contd. p122) roughly meaning 'for tracing and making (?) images and other needs of the master'.

drawings that functioned differently, such as large-scale cartoons, where several paper sheets were joined together, or small-scale drawings. This is evidenced by the same type of paper, bearing the Eagle watermark, Type N, appearing within the paper of six single sheet Windsor portraits, and repeatedly on the remaining fragment of the joined papers of The Whitehall Cartoon of Henry VIII.⁷¹ Furthermore, as explained in Chapter Three, the same paper type (watermark type D) is also used for drawings on unprepared and prepared papers.

4.4.3 Holbein's pink prepared papers

Holbein's use of pink preparation has been viewed as generic by previous authors, which has led to an over-simplification in terms of the drawings' descriptions.⁷² In turn this has excluded the drawings' finer details, including how Holbein established and individualised the sitters' flesh tones with the application of chalks over the pink preparation. Furthermore, previous research has not investigated fully how these pink preparations may have functioned and influenced the drawing process, nor has it explored the connection of Holbein's prepared papers with his other artistic workshop practices. In order to address these omissions, this section will discuss how the pink preparation functioned, and its connections to other artistic preparatory layers, such as panel grounds and carnations of miniatures. Much of the history of prepared papers and their manufacture was discussed in Chapter 3, which illustrated that in their infancy, most prepared papers were borne out of technical necessity: to facilitate the application of metal point. However, coloured preparations perform other functions, sometimes purely decorative or to facilitate chiaroscuro drawings, thereby facilitating the contrast in colour.

A prepared paper is a sheet of paper that has an applied ground or a layer of coloured wash. Notably, the introduction of colour into the mix tends to change the aesthetic effect of the sheet. The composition of the preparations in colour is not the focus in this

⁷¹ See watermark Table 3a (by watermark type) and Table 3b (by drawing date). See also Registered Papers in the National Portrait Gallery archive, which contain photography and research related information regarding the Whitehall Cartoon.

⁷² Paul Ganz, 'Holbein', The Burlington Magazine for Connoisseurs, 47.272.240 Nov.1925 and Karl Parker.1945.28.

section, it is rather what they look like and why they were applied.⁷³ During the 15th century a wider range of pigmented grounds were introduced. A fine example of this is the green preparation that forms the basis of Hans Baldung Grien's chiaroscuro Self-Portrait, c1502 (Basel Kunstmuseum, Kupferstichkabinett, inv.U.VI.36, 220 x 160mm, Figure 49). This is a mesmerising drawing for many reasons, not least because of the vibrant green preparation and the juxtaposition of the pink and white opaque highlights, utilised to striking effect. However, unlike Holbein's portrait drawings, this portrait does not function as a likeness that is 'descriptive' in the naturalistic sense and, moreover, it would not classify as a preparatory drawing nor function as a face pattern.

In his doctoral thesis on the use and significance of colour in Italian Renaissance drawings, Thomas McGrath makes the distinction between 'decorative' colour and 'descriptive' colour.⁷⁴ Unlike decorative colour, descriptive colour aims to reproduce the appearance of colours in nature. This important distinction is useful when considering and assigning a function to a drawing. As was described in the previous chapter, Holbein was familiar with the use of prepared papers, both plain and coloured, and utilised them for different types of drawings. Unlike Baldung's use of colour for his self-portrait, Holbein used a pink preparation as a descriptive foundation for the flesh tones on which to build the sitter's complexion. The use of this flesh tone pink implies how this preparation may have functioned. Holbein's choice of pink was not just about modelling for a mid-tone, but also about a sense of vivacity, an illusion of flesh. Complexion, it was believed, revealed profound truths about character.⁷⁵ So it would not have been an overlooked aspect.

As demonstrated in Chapter Three, Holbein's early use of prepared papers illustrates a very standard workshop practice, developed out of the technical necessity for the use of metalpoint. However, Holbein did not necessarily prepare the later pink papers to facilitate this specific technical requirement. Although a prepared surface would have given him the option to use a metalpoint, this was not the reasoning behind his choice: metalpoint was used very infrequently as a drawing tool for these portraits. From this

⁷³ Thomas H McGrath Disegno, Colore and the Disegno colorito: the use and significance of color in Italian Renaissance Drawings 22. 1994 PhD dissertation, Harvard University. With thanks to Thea Burns for the loan of this thesis.

⁷⁴ McGrath.1994.16

⁷⁵ McGrath.1994.60

we can infer that the function of the pink prepared paper was primarily to provide a mid-tone on which to build up the complexion of the sitter. Having this particular mid-tone as a foundation for drawing would speed up the drawing process, removing the time consuming activity of shading and working up a flesh colour from scratch. In a time when Holbein's commissions were amassing during his second stay in England, any methods of speeding up the process would have been welcomed. Holbein's methodology would help to cut processes and therefore reduce the amount of labour involved.

Comparing Holbein's drawing process of creating a flesh tone on an unprepared paper with that of a drawing on pink prepared paper perhaps best explains how much time-consuming work was involved in building up the complexion from scratch. Despite the poor condition of some of the portrait drawings, it is clear that Holbein would have individualised the complexion of each sitter, with or without the pink as a foundation, for beginning the drawing. This is evidenced by the amount of detail given to this area of the face in a number of drawings in good condition, both prepared and unprepared. There is no denying that the flesh tone would have been a significant factor in depicting the likeness of a sitter, and further confirms that these drawings were not just face patterns where only the shape was of significance. After all, why go to all that trouble of modelling the flesh tone if not to prove to the commissioner your skill at capturing their likeness as well as make further use of the drawing for reference whilst painting? Some evidence for this is found in Jane Seymour's portrait drawing of 1536/37, which is depicted on a very pale pink prepared paper, and her painted portrait is similarly pale, (Figures 26 & 27). According to the Imperial Ambassador to the English Court, Eustace Chapuys, 1536, she was 'of middle stature and no great beauty, so fair that one would rather call her pale than otherwise'.⁷⁶ There is therefore some indication from this drawing that a particular tone of pink was selected that was appropriate for the sitter, before adding more details particular to the complexion.

General wear and tear on some of the corpus of drawings studied here has meant they no longer hold their original hues. For example, there is hardly any coloured chalk left on the facial area of the drawing of Edward, Prince of Wales, c1538, (Parker 46, The

⁷⁶ A B Chamberlain, Hans Holbein the Younger. George Allen & Co: London. 1913.Vol.II. 111-112.

Royal Collection, Windsor, RL12200, Figures 30 and 30.1) nor on that of Lady Audley, (Figure 28). In contrast, the complexion of Jacob Meyer, (Figure 4), a fine portrait drawing on unprepared paper of c1526, is still in very good condition and illustrates Holbein's modelling and blending of red, black and yellow chinks to create Jacob's complexion. The flesh tone was added after the contours were established, evidenced by the overspill of colour at the neckline and parts of the nose. The whites of Jacob's eyes were modelled by leaving the paper blank and adding what appears to be an aqueous white pigment. The drawing is an example of how much more work was involved in building up to the flesh colour when starting on an unprepared paper of greyish-white. The contrast of colour to paper is made apparent in the image of the profile of Jacob's face, (Figure 4.1). Furthermore, as if deliberately using the paper's topography, Holbein stumped the chinks across the surface, which has further enhanced the portrait's skin-like texture.⁷⁷

The fine condition of the drawing of Charles de Solier, 1534/35, executed on pink prepared paper (330 x 249mm, Staaliche Kunstsammlungen, Kupferstichkabinett, Dresden, Inv.no: C1977-156, Figure 18) illustrates a high level of detail, and also how the additional toning to individualise the sitter's flesh tone was achieved. Attention is concentrated characteristically on the sitter's face, leaving the costume to be more cursorily drawn. Using the pink preparation as the complexion's foundation, Holbein has given volume to de Solier's face using red, black and yellow chinks. These are blended and used more intensely for shading areas of the face, such as under his eyes and around his nose, (Figures 18.1 & 18.2). The shading on the left side of de Solier's face is the result of stumping of chinks, especially black. Black has been used more than usual for shading the face in this drawing, perhaps reflecting the fact that a mid tone of pink requires slightly stronger definition than if one started with a plain paper base. The blending of the chinks for the flesh tone is quite unlike some of the other drawings on pink prepared paper in its degree of attention to detail. This is one of very few drawings whose white highlights are still intact, for example. The careful rendition of the white of de Solier's eyelashes is further evidence of Holbein's ability to attend to

⁷⁷ Stumping involves spreading dry media over the surface, and in this case chalk is rubbed and blended using fingers or perhaps a small piece of leather or soft material. In this way a number of colours of chalk can combine to illustrate a more fleshy tone

detail, whatever the distance of the sitter and the attention to detail is reminiscent of Holbein's c.1526 portrait of Jacob Meyer on unprepared paper.

The drawings of both Jacob Meyer and Charles de Solier seem very complete in terms of detail and concentration of media used. Both make use of red chalk as an initial part of the sequence of drawing in establishing features such as the eyes. Holbein was able to use red chalk more predominantly on a pink foundation for his first lines since it would have been more easily blended in to the pink background if a mistake was made. Whilst both these drawings are very close in detail to their painted likenesses, comparing flesh tones from drawing to painting is more problematic because it is not comparing like for like in terms of materials. Jacob Meyer is depicted as one member of his family within a larger group portrait whilst de Solier occupies his own monumental space in a panel-painted single portrait. Jacob Meyer has a much ruddier complexion in his painted version, with a deeper tone to the red of his rosy cheeks and nose. Whilst the drawing of these sections are not quite as deep in tone, the contrast of skin tones on the sitter's face is apparent from a concentration of more red chalk in those areas. The match is not exact, but the principle is very much the same, (Figures 4.2 & 4.3). Charles de Solier's painted portrait and drawing are very similar indeed. The pink prepared paper of this portrait, together with the attention to detail provided by the chalks and overlaying of aqueous media, adding depth, tone and outline, makes this drawing very close to Holbein's painting style, as comparison of the face of both drawing and painting illustrates, (Figure 18.3 & 18.4).

Holbein economized and speeded up his drawing processes by utilising the pink preparation. It could be argued that such an economical way of working reflected the fact that during his English periods, he may have had no, or limited workshop assistance given his emigre status. Foister calculated that Holbein portrayed well over a fifth of the English peerage in at least one portrait.⁷⁸ By his second visit, Holbein had also introduced full-length portraits, miniatures and goldsmith designs into his repertoire. Such production, especially during his second stay, was surely a significant factor in relation to his choice of techniques. The pink preparation covered the entire surface of the paper, negating any need to colour specific parts within the contour of the

⁷⁸ S. Foister, introduction and catalogue to, Drawings by Holbein from the Royal Library Windsor Castle, London: Harcourt Brace Jovanovich, 1983. 33

face in a separate flesh tone colour and using such a base colour for portrait drawing would have been time saving overall. Ganz asserted that Holbein's use of a pink preparation meant a loss of individuality but he believed that this was because it helped him to speed up his processes:

The demand for his works compelled him to abridge his processes. His preliminary studies were reduced to a minimum of details, but they were sufficient to enable him to paint his portraits, which he contrived to build up from memory with infallible accuracy.⁷⁹

Holbein undoubtedly needed to speed up his processes for his much-desired portraits, but a good memory probably had little to do with his technique; furthermore, 'infallible accuracy' is not provable in this instance. What can be substantiated is that this efficiency was achieved through his use of a pink preparation. The number of drawings on pink prepared papers perhaps gives a false impression of the drawings being overly similar, and might be what prompted Maryan Ainsworth to state that when Holbein came to work for Henry VIII, he 'standardised' his working methods.⁸⁰ The drawing media Holbein used during the 1530s actually differ very little from those used during his first English visit in the 1520s. There is however, a more predominant use of black aqueous media on those drawings from the 1530s, used primarily to define contours. This, plus the condition of the drawings - rubbed and eroded in some places - seems to have given the impression to Ganz that Holbein's technique was simplified:

This new invention simplified the artist's work and limited the use of coloured chalks to a new minimum. The consequence was that now the studies, nearly all carried out by the same method, lost their individual character and their great variety. This procedure, however, enabled him to paint without assistance the numerous portraits ordered by his patrons.⁸¹

Ganz's observations of Holbein's drawings were often astute but in this case he did not take in to account the function of the pink preparation and interpreted its repeated use as generic.

⁷⁹ Paul Ganz. 1950 .11

⁸⁰ Maryan Ainsworth.1990.180

⁸¹ Paul Ganz, 'Holbein', *The Burlington Magazine for Connoisseurs*, Nov.1925. 47.272. 240

4.4.4 Pink prepared paper: its link to the coloured grounds of panel and miniature painting

Using the pink preparation as a foundation for drawing, Holbein would individualise and model the features with chalks whilst drawing from life. The addition of these details in colour adds to the vivacity of the drawing, and would ensure that, in the absence of the sitter, he had a reference whilst painting. In other words, these drawings proved to be useful in more ways than one. Holbein's use of a pink preparation, as well as such extensive use of coloured chalks and watercolour, makes the drawings on pink prepared paper particularly close to the style and appearance of his paintings.

Drawing on coloured papers was seen by Cennini in the 15th century as 'an advancement' as well 'the entrance and gateway to painting'.⁸² The preparation of paper and its link to workshop techniques for painting is significant. In placing Holbein within a typical sixteenth artists' workshop tradition, it is important to remember that an artist-craftsman would carry out many processes and be involved in several artistic disciplines, where techniques and materials could overlap: for example, preparatory drawings, sculpture, and panel painting were all undertaken in the workshop, and it makes practical sense that these disciplines would share techniques, using materials that suited the function and purpose of the work. It is therefore unsurprising that the use of prepared papers is very much linked to painting. This connection of prepared paper to painting is important in a discussion of Holbein's drawing processes, because it demonstrates that he crossed disciplines and utilised similar processes for different artistic practices: for instance, there are stylistic similarities between Holbein's designs for stained glass and the use of black contouring lines in his jewellery design and portraiture. Holbein's use of a pink preparation, therefore, should not be seen in isolation, as it relates not only to his portrait drawing, but also has parallels with the pink imprimatura layers for panel painting and the carnation of miniature painting. In a very practical sense, what links all three 'pink foundations' is their influence in speeding up processes, and the fact that a pink mid-tone is very apt for portraiture.

The word 'imprimatura' is Italian in origin, and relates to a coating, not always coloured, applied to the gesso ground, often over a layer of glue. The English and

⁸² Cennino Cennini, *The Craftsman's Handbook 'Il Libro dell'Arte'*, trans. Daniel V Thompson, Jr. Dover Publications: New York.1954.9

Netherlandish equivalents: 'priming' and 'primuersel', respectively, also relate to this intermediate layer.⁸³ A Tudor miniature carnation is an opaque flesh-coloured ground applied to a vellum substrate in the face area only. This was then drawn upon, much like a pink prepared paper, with any excess carnation being wiped off so as not to affect surrounding colours, before the rest of the composition was completed. The carnation, as with any foundation, has the advantage of providing a smoother surface on which to add the facial features and also provides a foundation colour. Whereas a miniature carnation is applied to the face only, Holbein's pink preparation covered the entire surface of the paper; the reason for this was that Holbein's drawings were working drawings and not independent works of art like a commissioned miniature. In terms of efficiency, covering the whole sheet in batches of production would help to speed up the process of manufacture.

Although there are similarities, a distinction needs to be made between how a pink preparation affects subsequent layering of drawing media, and how it influences the appearance of more translucent layers of oil paints applied over a pink imprimatura or ground. In oil painting, the light passes through the upper layers of paint glazes and reflects off this priming layer, so the colour of the ground has a significant impact on the final appearance of the painting. In terms of behaviour and appearance, the use of pink prepared paper for portrait drawing is closer to miniature painting, because this layer forms part of the final composition that is still visible; in these instances, this pink foundation forms a significant part of the picture, whereas the imprimatura influences the subsequent layers.

Karel van Mander described fifteenth and sixteenth century painting techniques in the *Schilder-boeck*, 1604, which included a description of the layering involved in the preparation of a panel painting:

Some took some charcoal black finely ground with water, then drew and shaded together their subject very skillfully, each part as it should. They then applied on top a

⁸³ For discussions regarding terminology of this painting layer, see for instance Jill Dunkerton and Marika Spring, 'The development of painting on coloured surfaces in sixteenth-century Italy'. Painting Techniques, History, Materials and Studio Practice, IIC Dublin Conference papers. Ed Ashok Roy & Perry Smith. IIC:London 1998.121; Abbie Vandivere, 'In Search of van Mander's Primuersel: Intermediate layers in early Netherlandish paintings'. Art Technological Source Research. ICOM-CC, sixteenth Triennial, Lisbon 2011; and Heydenreich. 2007.98-99.

fine, thin *primuersel* through which you could see everything and behold: the *primuersel* was flesh coloured. When this was dry they saw their subject almost half finished before their eyes, after which they set up everything and finished in one layer.⁸⁴

Here van Mander points out that the flesh-coloured *primuersel* contributes to the effect of the subsequent paint layers. He also points to the sequence of the layering and where the underdrawing lay.⁸⁵ Whilst the effect of a coloured preparation on paper did impact on whatever was laid over the top, the differences in media and translucency of oil paint meant that the *imprimatura* functioned slightly differently to that for a drawing. However, one similarity in their function was their proficiency in achieving the desired effect in an efficient manner.

The history of the use of coloured preparations in drawing and its connection to painting is an area of research that is lacking. In his impressive technical study of Cranach the Elder's paintings, Gunnar Heydenreich's discussion of Cranach's use of paper for portrait studies is relatively sparse. However, he does link the two processes of preparatory drawing to painting and calls for a more detailed study and analysis of Cranach's papers and media in comparison to his paintings. Heydenreich links the use of a light red '*imprimatura*' layer found on some of Cranach's paintings to the coloured grounds for his studies.⁸⁶ This link can also be made with Holbein's preparatory portraits on pink paper to the *imprimatura* or grounds of some of his portrait paintings. In the same way that Holbein's use of a pink prepared paper helped to speed up the drawing process for portraiture, so Heydenreich takes up the link between coloured preparations and the colour of the painting ground, which, he contends, quickened Cranach's painting process, as it 'suggests a fluent transition between studies and paintings that would have supported Cranach's reputation as a *quick painter*.'⁸⁷ Holbein's use of a pink preparation for his drawings as well as for the panel paintings would likewise have aided the drawing and painting process. Holbein used the pink

⁸⁴ Karel van Mander, *Het Schilder-boeck*, trans. Hessel Miedema. Doornspijk: Davaco 1994. Fol 47v,48r

⁸⁵ Heydenreich's research (2007) on Cranach's technique also showed that this pink coloured priming was initially painted on top of the white ground, to hide the underdrawing, but in later years (as seen on Cranach's painting of Gregor Brück 1533) the underdrawing lies on top of a pink coloured priming. This tint, he argues, would modify the white ground and provide a warm flesh tone, influencing the appearance of the paint layers applied subsequently. Heydenreich.2007.101

⁸⁶ Most of Cranach's preparatory portraits were executed on an unprepared paper but their execution in watercolour and painterly aspects, and painting of the flesh tones first, links very closely with the final paintings. Heydenreich.101

⁸⁷ Heydenreich.2007. 102.

preparation conventionally to facilitate a mid-tone on which to build up the appropriate complexion of his sitter. But perhaps less conventional was his use of drawings on prepared paper to act as full-scale drawings with the potential to be used for transfer.

Research at the National Gallery, London, into the intermediate layers of sixteenth century Italian paintings found that the common colour for priming was a warm brownish grey, although pinks and beige were occasionally found.⁸⁸ Abbie Vandivere also noted that such flesh-coloured intermediate layers are not common in 15th and sixteenth century Netherlandish paintings.⁸⁹ Analysis of a number of Holbein's portrait panel paintings has shown that he used a range of coloured grounds or imprimatura: including white; grey and pink.⁹⁰ The fact that an artist would use different imprimatura colours is not unusual; for example, Cranach did not always use a pink imprimatura for his portrait paintings, but also employed other colours.⁹¹

Although Holbein may not have been alone in understanding and utilising a pink priming layer for painting portraits⁹², he does seem to be the only 16th century artist whose preparatory drawings survive that are on a pink prepared paper, which were drawn from life and used as face patterns.⁹³ A number of these grounds do correspond to drawings of the same sitter executed on pink prepared papers. For example, the portraits of William Reskimer, (Figure 16), Edward, Prince of Wales, (Figure 30), and Jane Seymour, (Figure 26), all drawings on pink prepared papers, having paintings with corresponding pink grounds or imprimatura layers. Furthermore, although currently not attributed to Holbein, the painting of An Unknown Man (Parker 33, Figure 20) also has a pink imprimatura layer over the white ground. Given that there is a direct

⁸⁸ Dunkerton and Spring. 1998.121.

⁸⁹ Abbie Vandivere.2011.

⁹⁰ I have not been able to ascertain the colour of the grounds/imprimatura of all of the corpus-related paintings either due to lack of analysis or lack of response for requests for information. No pigment analysis has been carried out on the Darmstadt Madonna that was on loan to the Städelches Kunstinstitut until 2012. For more information regarding Holbein's ground layers see: Petria Noble and Annelies van Loon, 'Holbein's blue backgrounds: meaning, materials and degradation'. Conference poster, The National Gallery Technical Bulletin 30th Anniversary Conference – Studying Old Master Paintings, Technology and Practice.16-18 September 2009. London.

⁹¹ Heydenreich.2007.102.

⁹² See, for instance, evidence regarding coloured grounds gathered during the Making Art in Tudor Britain Project, National Portrait Gallery, London:

<http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/matbsearch.php>

⁹³ Whilst there are some heads drawn on pink prepared papers that were used as cartoons, such as Signorelli's Head of St John the Baptist 1484 (Stockholm 9) and Pollaiuolo's Fides (Uffizi 14506 F) is directly preparatory to a known painting – both of which are full sized and pricked for transfer – they are not the same as Holbein's portrait drawings in terms of their descriptive nature.

relationship of its underdrawing to the drawing, this should also be included in this group.

There are, however, anomalies to this relationship. Despite its corresponding drawing being on a pink prepared paper, the painted portrait of Lady Butts, c.1540/43, (Figure 33, 380 x 272mm, Isabella Stewart Gardner Museum, Boston, Inv.P21e5) has an off-white ground. The painted portrait of Sir Henry Guildford, 1527, (Figure 13, 827 x 664mm, The Royal Collection, Windsor, RCIN.400046) is related to a drawing executed on unprepared paper, with the painting having a creamy coloured preparatory layer; whilst that of Sir Thomas More, 1527, (Figure 8, 402 x 301mm, Parker 3, The Royal Collection, Windsor Castle, RL12268) also on unprepared paper, displays a blueish-grey layer on top of a white ground. There are also a number of portrait paintings for which no drawing survives that also have this pink imprimatura.⁹⁴ For example, cross sections taken from Holbein's painting of Hans of Antwerp, of 1532/33, (Royal Collection, RCIN.40443, oil on panel, 630 x 484mm) reveal that the priming is a mixture of vermilion, lead white, chalk, yellow ochre and some black particles, which could be chalk or charcoal.⁹⁵ Raman analysis of the carnation of the Lady Audley miniature, (Figure 29) revealed the presence of vermilion, lead white and calcium sulphate.

The composition of the pinks for painting, miniature and prepared papers are similar: apart from the substitution of lead white for calcium carbonate, which was more common for oil painted grounds and was identified by Raman analysis on the carnation of Lady Audley, the pigments used are the same. As was discussed in Chapter 3, adjusting the quantities of each of these pigments produced a different pink. Given the differing hues of pinks that Holbein produced, it could be that he selected the pre-prepared papers nearest to the sitter's complexion. But more often than not, these base pinks are built upon to really model and individualise the sitter's complexion so an initial, exact tone of pink was not always relevant. Moreover, predicting the final outcome of the pink preparation is difficult due to the substantial shift in tone upon

⁹⁴ Also with no extant preparatory drawing, the portrait of a Nobleman with Hawk of 1542 (The Hague, Mauritshuis, 246 x 188mm) has a layer of pink imprimatura with a greyish pink layer applied beneath shaded areas.

⁹⁵ Written correspondence with Claire Chorley, Paintings Conservator, The Royal Collection, Windsor. Claire has carried out extensive investigations throughout her restoration campaign of this fine portrait. I am very grateful to her for her invaluable input during this project on many aspects of Holbein's painting techniques.

drying. Given that there are these anomalies it is not possible to conclude that a prepared paper necessarily dictates the colour of a portrait's ground or imprimatura. The function of these grounds is not always straightforward either. For example, according to the examination and technical records at Windsor, the painting of William Reskimer, c.1532/33, (Figure 17, RCIN.404422, 464 x 337mm, oil on panel, Hampton Court Palace) has a complex paint structure, indicating that the panel was re-used, which may account for the thick layer of pink ground that obliterates the underlying colours.⁹⁶

4.4.5 The function of Holbein's drawing media: the link to painting

The part Holbein's portrait drawings played in the execution of the final paintings is not always easy to define, nor is the relationship necessarily the same for each drawing. In fact, the scale of complexity between the relationship of drawing to painting has never really been fully explored within the extant literature. This section addresses this issue through a discussion of Holbein's use of coloured media in his drawings and what part, if any, it may have played in relationship to the finished painting. In other words how the materials of the drawings functioned in relation to the imagery of the paintings. This aspect addresses the parts of the drawing and painting that we can physically see and marks one feature of this complex relationship. Another less obvious but equally complicated part of the connection of drawing to painting, is that of a pattern for physical transfer. This more esoteric aspect will explore the use of the drawing as a physical pattern and therefore the relationship of the drawings contours to the underdrawing of a painting of the same sitter: in other words, trying to define their use in how direct that relationship may have been.

4.4.6 Holbein's use of colour

In terms of understanding the purpose of a drawing, as mentioned above, art historian Thomas McGrath makes an important distinction between coloured drawings that is useful when thinking about and applying its function: descriptive colour aims to

⁹⁶ Technical examination from Windsor conservation painting files, report by Rica Jones, Tate, 2006 showed that various layers were present under the painting: two layers of colour lying beneath the visible image and its pink ground. Initial ground was a white gesso priming, applied directly to the panel. Followed by a dark red paint layer, with no sign of it being part of a figurative design; opaque slate grey layer next, applied all over red layer, varying in thickness and tone; thick application of opaque salmon ground next thereby obliterating any underlying colour.

reproduce the appearance of colours in nature, unlike decorative colour, which doesn't.⁹⁷ McGrath states that the end use of a drawing is significant and therefore the employment of descriptive colour for vivacity is what distinguishes a portrait from a head study, for example. Colour in Holbein's case was used to imitate the appearance of the sitter and was therefore vitally important for the expected verisimilitude in portraiture. The use of colour and the detail of Holbein's portrait drawings make it more apparent that these drawings were not merely patterns for tracing over. In terms of media choice and technique, in Holbein's hands chalks proved to be an appropriate material. The combination of chalks on pink prepared paper made ideal partners. Chalks have more freedom in terms of graphic handling than metalpoints and could render areas of tone and shading. More importantly, in terms of range, chalks could be combined to create a larger colour palette. Holbein made use of red chalk to good effect especially on the pink preparation, not just for flesh tones but for delineation of the eyes also. Red chalk was also useful in that any mistakes were more readily blended in to the pink background.

Before the advent of coloured chalks, artists, including Holbein, found different ways of making provision for the lack of colour in their drawings. Jan van Eyck's c.1435 drawing Portrait of a Cardinal (?Niccolò Albergati) (Kupferstichkabinett, Staatliche Kunstsammlungen Dresden, 212 x 180mm, prepared paper and metalpoints, Figure 47) is the earliest surviving portrait drawing that relates to a finished oil painting of the same sitter. Similarly, as with some of Holbein's studies, this drawing has hand-written notes regarding the colours of garments. There is also a good deal of detailed annotation indicating the colouring of the sitter's face: the area directly around his pupils indicated as *bruyngeelachtich* (dark yellow) and at their edges *blauachtich* (bluish); the whites of the eyes as *geelachtich* (yellowish), the wart *purperachtich* (purple) with many others notes besides.⁹⁸

Van Eyck's metalpoint drawing underwent instrumental analysis in 2005 and findings suggested that it was executed in three different styli; two of silver and one of gold.⁹⁹

⁹⁷ Thomas McGrath. 1994.38

⁹⁸ See S Foister, S Jones and D Cool, Eds. Investigating Jan van Eyck. Belgium: Brepols. 2000.79

⁹⁹ Thomas Ketelsen et al. 'New Information on Jan van Eyck's portrait drawing in Dresden'. The Burlington Magazine. March 2005. 147.1224.170-175

Given the drawing's current condition, it is hard to imagine the difference in tones that the three different styli would have produced, but this could have been a further way of adding some nuance to an otherwise monotone drawing. There may have been little variation between the two silver metalpoints but the gold would have added a different hue. Its placement seems quite deliberate. The gold point was used for the inscription and for the letter 'r' on Albergati's face. It was also used in the overdrawing on the right pupil and on outlines of the mouth. Whilst the authors of the Burlington article seem to think that this indicates later revisions, the gold stylus could have been used to strengthen lines so as to create definition and distinction between areas. Metalpoint cannot produce darker lines the harder one presses, as can be achieved with chalks. Instead going over the same lines repeatedly is the only way to provide more definition. There are certain contours that appear stronger in tone, around Albergati's ear for example, suggesting a repeated stroke, (Figure 47.1).

Not all of the 18 Holbein drawings that relate to a painted image of the same sitter correspond to the paintings exactly in terms of what was transferred visually from one to the other. Although they provide a bit more descriptive colour with the addition of red chalk, the two surviving early Holbein portraits of Jacob Meyer, and his wife Dorothea Kannengiesser, 1516 (described in Chapter Three) are still limited in their use of coloured media, resulting in a stark contrast to their painted portraits in terms of colour, (Figures 1, 2 & 3). The function of these drawings on white/grey prepared paper in silverpoint and red and black chalks was to capture the likeness of the sitters for eventual transference to a panel. Their use during the painting process would have been more limited in terms of using them as reference for colour, not just for garments but more importantly for an idea of the tone of the skin. As a prompt to aid painting, Holbein added notations in the upper left hand corner of the drawing of Jacob. These act as a colour guide, indicating the colour of the eyes (black), beret (red) and for the 'brows to be more yellow than the hair':

an ogen Schwarz/baret rot - mosfarb/brauenn gelber dan das har/ grusen with brauenn

Such notations further indicated their function as preparatory drawings and appear on a number of other drawings, including the seemingly more 'colourful' portraits on prepared papers.

Black, yellow and varying shades of red are also quite limited in terms of how they combine to make colours. The illusion of a wider range of colour is greater for those drawings on pink prepared papers, although at times not much in the way of coloured chalk was added. So there was still a need for shorthand notes that would act as prompts during the painting process. Furthermore, although the pink would speed up the drawing process, it could also be harder to perhaps accommodate the addition of certain aqueous colours that may be altered by the pink. For example, a note to indicate that Southwell's eyes were a 'little yellow' is written to the right of his drawn portrait rather than the addition of yellow chalk for the eyes. Small areas such as whites of eyes would also be more problematic to colour in with a dry medium. Or perhaps it was best left in case of offending the sitter's vanity.

Notations are not present on any of the extant portraits on unprepared papers, although the significance of this is currently unclear. In some ways, Holbein's use of colour had to be slightly more sophisticated on the unprepared papers because he was starting from a white background, which may explain an absence of notes. The level of blending and array of colours reaches great skill in the depiction of the flesh tone of William Warham, 1527, (Figure 10, 401 x 310mm, Parker 12, The Royal Collection, Windsor, RL12272) for example. A myriad of colour on his true left cheek includes a vibrant pink created from a mix of red and white chalks, (Figure 10.5): a complex process made redundant by using the pink preparation.

Notations would have reminded Holbein of what to include in the absence of a sitter, but they would also solve issues around colours that he did not have to hand or were not readily available as dry media. The colour notes on the drawing of Lady Audley relating to her jewellery and dress is one such example: *rot damast* (red damask) for the dress; *rot*, (red, indicating the colour of a jewel for the brooch). Notations would have been quicker than filling in all the colour details with chalks, especially in small, fiddly areas such as jewels. Using watercolour would be more time consuming and may be affected by the pink preparation. One just has to look at Holbein's designs for

goldsmiths to compare his use of intense watercolour colours to depict such pieces; something chalks would not be able to fulfill with quite the same function (Figure 50).

Small but potentially significant details of the drawings are translated to the paintings. Highlights are usually the result of the casting of light during a sitting, but many of Holbein's drawings lack this detail. Ruskin, analysing Holbein's work in his 1872 lecture series 'Ariadne Florentina', praised Holbein for only depicting what he sees, unlike Dürer who depicts what he thought he should see, according to the law of science:

Master Albert.... having to engrave the portrait of Melanchthon, instead of looking at Melanchthon, as ignorant Holbein would have been obliged to do, wise Albert looks at the room window; and finds it has four cross bars in it, and knows scientifically that the light in Melanchthon's eye must be a reflection of the window...Unfortunately (it isn't like Melanchthon)...but like a madman looking at somebody who disputes his hobby. While in this drawing of Holbein's, where a dim grey shadow leaves a mere crumb of white paper....it is an eye indeed, and of a noble creature...Holbein is right, not because he draws more generally, but more truly than Dürer. Dürer draws what he knows is there, but Holbein only what he sees... You must not draw all the hairs in an eyelash...it is impossible to see them.¹⁰⁰

In contradiction to Ruskin's views, Holbein does actually depict individual eyelashes in his drawings and paintings as seen in the portraits of Charles de Solier, (Figures 18.5 and 19.1); perhaps something he would not have necessarily been able to see during a sitting but he may very well have been aware of the detail needed for the depiction of a sitter both in a drawing and in a painting, often viewed at close quarters. Besides which, these kind of details perpetuate the notion of likeness.

The lack of obvious highlights on Holbein's drawings could be for reasons of loss of the thicker, white body colour highlight, such as those still seen on a number of drawings, (see drawing and detail of Lady Elyot, c.1532-4, Parker 14, for example, Figures 36 & 36.1). It is not uncommon to find that the highlights are more subtle and rendered from the play of watercolour from dark to light, such as seen in the eyes of the portrait of

¹⁰⁰ John Ruskin, 'Ariadne Florentina'. 1872. As cited in Erika Michael, Hans Holbein the Younger: A Guide to Research. New York and London: Garland Publishing inc. 1997.77

Simon George, (Figure 22.1). Highlights that are still visible on some of the drawings can also be matched with those on the painted versions. For instance, the applied highlights just about still extant in Jane Seymour's eyes, (Figure 26.1) correspond to those of the painting, and bring into focus the extent to which the drawing was referred to during the painting process. The drawing and corresponding miniature of Lady Audley, is also of note. Unlike Jane Seymour, the white applied highlights on the miniature of Lady Audley are not present on the drawing but the colouring and play of light of her irises on the drawing do correspond with those reproduced on the miniature, (Figures 28.3 & 29.2).

Each of the 18 drawings that relate to painted portraits show both similarities and differences. This is why it is important to take each drawing individually when making these comparisons. The drawn portrait of Simon George (Figure 22) is quite different to his painted version in terms of facial hair, (Figure 23). Although he may have grown a beard subsequently, the underdrawing shows just stubble, as does the drawing, which may suggest that Holbein had to have had at least one more sitting with the client. Although there is usually only cursory attention given to the costumes of the sitters, they are often depicted wearing the same clothes in their respective paintings, albeit with added colour and detailing. Richard Southwell's painted attire, Figure 25, for instance, is very close to that of his drawing. What is left out in clothing colour in the drawings is often compensated by some detail. The dress that Dorothea wears for her drawn portrait of 1516, for example, is strikingly close to the painted version.

Smaller but nonetheless significant drawing details were seemingly not always translated to the painting. For example both Anna and Jacob Meyer's eye colour in the portraits for the Darmstadt Madonna vary from drawing to painting, with Anna's eyes changing quite significantly from pale grey to deep brown, (Figures 6.1 & 7.1). Even taking in to account possible colour change on both drawings and painting over the years, this is a significant change from live sitting to painting. As introduced in Chapter Two, the function of the two portrait drawings has been questioned by Jochen Sander, who asserts that new drawings were made once the painting process had been started.

¹⁰¹ Whether this is the case or not, it does not change their primary function as

¹⁰¹ For a detailed history and interpretation of the underdrawings for the Darmstadt Madonna painting, see Jochen Sander Hans Holbein, Tafelmaler in Basel 1515-32. Munich: Hirmer 2005 with thanks to Susan

preparatory drawings. Anna Meyer's drawing is different to the finished painting in costume and hairstyles also. Holbein, Sander argues, carried out these changes, around 1528 to reflect her new status and betrothal. However, it is unusual for Holbein's portrait drawings not to function in close transmission of information from drawing to painting making it harder to explain why such fundamental details such as eye colour would be different.

The levels of media applied to the drawings differ: despite the poor condition and abrasion of some, from their attention to detail and build up of layers, one can see that others were just more highly finished, which offers further proof that they were not just outlines for transfer. Unusual amongst Holbein's surviving repertoire are two portrait drawings, for which there are no corresponding paintings, but which are important to include here because they have been drawn in chalks and painted in watercolour.¹⁰² A Boy with Marmoset, c.1532-36, (Figure 35, 400 x 407mm, Kunstmuseum Basel, Kupferstichkabinett, Inv. 1823.139) on unprepared paper, and the portrait of John Godsalue, c.1532-3, (Figure 34, 367 x 296mm, Parker 22, The Royal Collection, Windsor, RL 12265), represent drawings that Holbein painted up more fully in watercolour, seemingly mimicking the look of oil paintings. The vibrant blue watercolour that Holbein used around these two drawings is also closely linked to the aesthetics of painting, prompting Wornum to write that 'it wants but a coat of varnish to give it the effect of an oil picture.'¹⁰³

Raman analysis of the Godsalue portrait identified the blue pigment as azurite, a pigment also used for the bright blue background of miniatures: azurite was identified around the miniature of Lady Audley and has also been detected in many of Holbein's oil paintings.¹⁰⁴ This more painterly approach to the discipline of drawing was not

Foister for her translation of pages 255-266 and Jochen Sander 'The Darmstadt Madonna: On the genesis and development of Holbein's panel for Jakob Meyer zum Hasen', Hans Holbein Portraitist of the Renaissance. Royal Cabinet of Paintings, Mauritshuis. Waanders: Zwolle.2003. 37-45.

¹⁰² There is, however, a double portrait of John and Thomas Godsalue (his father) by Holbein of 1528. Oil on panel, 350 x 360mm, Dresden Gemäldegalerie Alte Meister.

¹⁰³ Ralph Wornum, Some Account of the Life and Works of Hans Holbein, Painter of Augsburg. Chapman and Hall: London. 1867.221

¹⁰⁴ Vermilion was also identified on the drawing of Godsalue, as was carbon. For more information regarding Holbein's ground layers see: Petria Noble and Annelies van Loon, 'Holbein's blue backgrounds: meaning, materials and degradation'. Conference poster, The National Gallery Technical Bulletin 30th Anniversary Conference: Studying Old Master Paintings, Technology and Practice.16-18 September 2009. London. And Susan Foister, Martin Wyld and Ashok Roy, 'A Lady with a Squirrel and Starling'. National Gallery Technical Bulletin. 1994. Volume 15.9-10

unknown to Holbein, being a technique evident in his father's workshop. For example, Ambrosius Holbein's Portrait of a Young Man 1517, 201 x 154mm (Kunstmuseum Basel, Kupferstichkabinett, Inv.1662.207a) prompted Christian Müller to comment that it was 'an independent work with aspirations similar to those of a small painting'.¹⁰⁵ Executed on a white/grey prepared paper, the sitter's features are modelled in silverpoint, now barely visible, with red and black chalk, overworked with a brush in black and grey watercolour, (Figures 37 & 37.1).

The portrait of John Godsalve has been drawn on to a pink prepared paper unlike the Boy, which is on unprepared paper. This makes a good comparative study in terms of flesh tones. The Boy's complexion is made up of light touches of red chalk, leaving him very pale in appearance. Godsalve has the advantage of already having some colour established from the pink preparation, over which Holbein applied red and black chalk, and aqueous elements to depict salient features and facial hair: to individualise and model Godsalve's face. Bold outlines in aqueous black, executed with more brushwork than pen, form the contours of the whole drawing making this a striking portrait. A brown watercolour is used to render his fur collar and a slightly darker blue to that which surrounds the sitter, picks out his under-jacket. There is no rendition of the pile of the fur as there is typically in the painted versions of fur by Holbein, (see Thomas More's collar, for instance). Lead-white opaque watercolour depicts the whites of Godsalve's eyes, although now rather blue, as well as his shirt.¹⁰⁶ The blues of the under-jacket and background, as well as the white of the shirt have been applied over and above the black outlines, (Figures 34.1 & 34.2) implying these were added last in the sequence. This is unusual for Holbein's drawn portraits but then this portrait of John Godsalve is not common within his drawn oeuvre and the watercolour colouring is not something that necessarily signals that Holbein did not carry out these additions. The sitter's name, in the top left hand corner, is in keeping with the application and style of the names on most of the Windsor drawings, in crimson and gold. This lettering is applied over the blue watercolour in this instance, which would give some end date

¹⁰⁵ Christian Müller, From Dürer to Goyer 101 Master Drawings from the Kupferstichkabinett of the Kunstmuseum Basel, ed. Christian Müller. Hirmer Verlag: Munich 2010. 27. See Marcus Jacob, 'Bildnis eines Mannes mit rotem Barett von Hand Holbein dem J: Technologische Untersuchung und Konservierung.' Restaurio. April/May 2005. 176-186.

¹⁰⁶ In examination with UV light the white fluoresced an ochrey-yellow colour, which is indicative of lead white.

at least for the application of the blue, if not by Holbein himself. Although Cheke is recorded Lumley inventory as having made the identifications in the late 16th century¹⁰⁷, the inscriptions are probably seventeenth century in date.¹⁰⁸ There is no sign of transfer in the form of indentations on this drawing.

Susan Foister makes an obvious but overlooked point that the unfinished appearance of many of the drawings reflects their primary purpose as working drawings.¹⁰⁹ However, 'unfinished' is not a word that describes the drawing of John Godsalue, which perhaps reflects why it is more problematic to assign a function to it. The function of his portrait is unclear, but it is reasonable to conclude that the purpose of such a highly finished preparatory drawing fulfilled two roles: one was to ensure a likeness and provide a shape to transfer; the other was surely to satisfy the patron of the potential for the finished painting. This scenario was certainly the case for other artists: for example, some of Raphael's preparatory drawings for tapestries show a high level of finish over and above fulfilling their function as cartoons for weavers, rendering these designs something over and above their primary function. It appears that Holbein's watercolour drawings were not intended as paintings or drawings in their own right, but as a stage of the artistic process. These more painterly versions of the drawings could also reflect the status of the sitter and as such warranted a more worked-up example of the finished piece. For example, John Godsalue (c.1505-56) was appointed to the Office of the Common Meter of Precious Tissues in 1532 and therefore held an important position in the Court.

The amount of colour and the partial trompe-l'oeil of Godsalue's right arm resting on a ledge led Roberts to conclude that the drawing may have been intended to be laid on to panel.¹¹⁰ This conclusion is understandable given that, along with its similarity to an oil painting, there is a rare inclusion of the sitter's hands. However, various factors add up to query this and suggest it was not intended as a finished portrait of the sitter: unlike the portraits on paper that have been stuck to a panel, it is not painted in oil colours (see

¹⁰⁷ See for example, Wornum.1867.397

¹⁰⁸ Written communication with Susan Foister.

¹⁰⁹ Susan Foister. Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in 2 volumes.13.

¹¹⁰ Jane Roberts, Henry and the Court of Henry VIII: Drawing and Miniatures from The Royal Library, Windsor Castle. National Galleries of Scotland. 1993.52

Hertenstein for instance) and neither do their underdrawings exhibit the extent of drawing that is seen on John Godsalue before being over-painted in oil. Finally, forming part of the horde of drawings remaining in Holbein's studio after his death, this drawing was kept along with the other drawings as representation of his working collection in the Great Booke.¹¹¹

The use of colour in portrait drawings has prompted many to link Holbein's use of chalks with a more painterly technique.¹¹² This was not just the case with Holbein but also other 16th century German artists' use of coloured chalks for portrait drawing. For example, Holbein's contemporary, Wolf Huber's use of chalk has also been seen as 'akin to painting'.¹¹³ The portrait drawings of Leonard Beck, (1480-1542), born in Augsburg and trained in Hans Holbein the Elder's workshop, also show an early use of coloured chalk and wash to painterly effect.¹¹⁴ Further, the contouring and use of aqueous media for salient parts such as the lip lines also have links with Holbein's portrait technique. Holbein's economical use of media for his drawings also corresponds to his use of painting media. Foister, Wyld and Roy have noted, for example, Holbein's sparse yet effective use of paint in his portrait Lady with a Squirrel, 1526-28 (Inv. NG 6540, 560 x 388mm, oil on panel) and The Ambassadors, 1533 (Inv. NG 1314, 2070 x 2095mm, oil on panels) in the National Gallery, London; neither of these paintings have a drawing to which they relate.¹¹⁵ Simple but effective methods for the depiction of hair in his drawings - overlaying fine lines onto blocked-in colours, are

¹¹¹ Jane Roberts.1993.52

¹¹² See for example, Paul Ganz, 'Holbein', The Burlington Magazine for Connoisseurs. November 1925. 47.272. 230-245, Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in 2 volumes.25; Christian Müller, Hans Holbein the Younger: The Basel Years 1515-1532. Prestel 2006.3 and Hans Holbein: Portraitist of the Renaissance.2003. 89

¹¹³ Jutta Schütt & Martin Sonnabend, Masterpieces of the Department of Prints and Drawings, Städel Museum. 2008. 62. With reference to Wolf Huber's (c1485-1553) drawing, Portrait of a Man Wearing a Fur Lined Coat and Broad Rimmed Hat, 1522, (Inv.16336, Kupferstichkabinett, Städel Museum, Frankfurt, 277 x 215mm, red, black and yellow chalk, aqueous black, white highlights on cream laid paper)

¹¹⁴ See Portrait Bust of a Young Man wearing a cap, c.1500-42, Leonard Beck, UCL Collection, Inv. G.145, for example. A portrait on unprepared paper, but with some blue coloured wash applied around the sitter. Also, Portrait of a Young man in a cap, turned to the right, c.1500-1542, UCL Collection, Inv. G.146, coloured chalks on unprepared paper with some yellow wash in eyes and cloak.

¹¹⁵ Susan Foister, Martin Wyld and Ashok Roy, 'A Lady with a Squirrel and Starling'. National Gallery Technical Bulletin. 1994. Volume 15.10; S.Foister, A. Roy and M. Wyld, Making and Meaning: Holbein's 'Ambassadors', exhibition catalogue, National Gallery 1997. A. Roy and M. Wyld, 'The Ambassadors and Holbein's Techniques for Painting on Panel' in M. Roskill and J. O. Hand (eds), Hans Holbein: Paintings, Prints and Reception. Studies in the History of Art 60 National Gallery of Art, Washington, New Haven and London 2001. 97-107

carried over into his paintings. Charles de Solier's facial hair is a prime example of this translation from drawing to painting, not just in terms of image but also in terms of the layering technique. Although some of the detail has now been lost, a connection can be made in the technique Holbein used for depicting the edges of fur on the lapel of Sir Thomas More, and the even more effective wet-on-wet dragging technique he used for the painted version (The Frick Collection, New York, Inv.1912.1.77, oil on panel, 749 x 603mm). In the drawn version Holbein pulls chalk strokes over and outside of the edge of the lapel, suggesting a furry finish to the edges. This technique is used for the painted version also, dragging an array of still wet gingery and dark brown paint over background whites or greens, creating crisp wisps like the ends of fur.

The wet on wet technique for painting was also used in some portraits for the rendering of eyelashes: never more beautifully so than those found on the portrait of Hanseatic merchant, Hermann Wedigh, 1532, Figure 51, (The Metropolitan Museum of Art, Inv.50.135.4, 422 x 324mm, oil on panel, Figures 51.1 & 51.2). This also has no related preparatory drawing but it warrants a mention because its condition is near to perfect, and it therefore demonstrates the levels of quality that Holbein's mastery of the medium of oil could reach, as illustrated by the images.¹¹⁶ The pooling of light at the bottom of the eye created by a stroke of white pigment is also characteristic of the eyes of Sir Thomas More in his painted portrait. Whilst More's drawn version does not display this, it is a feature of some of Holbein's portraits on pink prepared paper, such as that of Margaret, Lady Elyot, c.1532-34, as discussed above.¹¹⁷

Perhaps one of the most interesting aspects of Holbein's techniques, reflected in both drawing and painting, is his economical and stylistic use of line. Holbein made stylistic use of black contouring in his painting not just his drawings. This takes the form not only of contours but of picking out features in a bold and direct manner. This aspect will be discussed in the following section because it has connections with the transfer of

¹¹⁶ For more information on Holbein's portraits of Hanseatic steelyard merchants see, Thomas S. Holman, 'Holbein's Portraits of the Steelyard Merchants: An Investigation', Metropolitan Museum Journal, 1979. Vol.14.139-158. And Maryan W. Ainsworth, 'Methods of Copying in the Portraiture of Hans Holbein the Younger'. Les dessin sous-jacent dans la peinture: colloque VIII, 8-10 Septembre 1989: dessin sous-jacent et copies, ed. Hélène Verougstraete-Marcq et Roger van Schoute. 11-13

¹¹⁷ See also portrait drawing no's: Parker 15, 18, 25 and 26 which display the same type of use of white opaque watercolour.

drawings and subsequent underdrawing of some of the paintings, and also because contours or outlines were usually last in the sequence of drawing media.

4.5 Holbein's portrait drawings as face patterns: contouring, signs of transfer and the drawings' relationship to the underdrawing of paintings

The eighteen drawings that make up the corpus of this study are unique in that they relate to extant paintings or miniatures of the same sitter. This proves most useful when establishing how one may connect with the other, and makes it possible to look for clues as to how the drawing could have been used in the creation of the final piece. Thanks to advances in modern analytical technology, the use of the drawings has been further revealed through infrared examination of the paintings' underdrawings: in some cases showing a one to one transfer, thus highlighting an important aspect of the drawings' possible function.¹¹⁸ However, each of the drawings relate to their painted likeness on different levels. For instance, not all their contours were found to have an exact one to one relationship with their underdrawings, and none were straightforward to read. Further, the portrait drawing of Lady Audley, for which only a miniature likeness is extant, has a very different and more puzzling relationship with her painted piece; this is discussed below.

There are many factors that point to Holbein's portrait drawings as preparatory and, as face patterns, having the potential to be used for transfer to panel. This is not just because of the visual similarities of the drawings and the paintings. Even from the limited number of Holbein drawings that survive that relate to paintings of the same sitter, it is evident that they were preparatory drawings for portrait paintings. Their function is apparent from the fact that the drawings were kept together as part of an artist's pattern book, the signs of transfer in the form of indentations or prick marks on the drawings, the detail of the faces and more cursory attention to the costume, and the notations of colour and reminders of accessories. As discussed in Chapter Three, in

¹¹⁸ Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. And Maryan Ainsworth "'Paternes for phiosioneamyas": Holbein's portraiture reconsidered'. The Burlington Magazine. 132.1044.173-186, March 1990.; Maryan Ainsworth, 'Northern Renaissance Drawings and Underdrawings: A Proposed Method of Study'. Master Drawings. 27.1.5-38. Spring 1989.

their simplest form, signs of transfer have been defined as those marks that leave an indented line, or in the case of pouncing, small holes, over and above the act of drawing. Both techniques follow the outline and salient parts of the drawing. The more esoteric and speculative aspects of signs of transfer involve the function of the media itself. The drawings, their materials and the subsequent underdrawings can often reveal information about the method of transfer, and how they relate to each other. Although it is not always possible to resolve these issues fully, one of the most effective methods is through an examination of the contours of Holbein's portrait drawings.

Many of the issues raised and debated by various historians with regards to the contours of Holbein's drawings can be explained, if not fully, then in part, through the examination of the drawings. Contours define the shape and features of the sitters, and are key in the transmission of likeness. These outlines are prominent features in Holbein's portrait drawings to varying degrees, regardless of the medium Holbein used, but feature prominently as black aqueous media, invariably applied last in the drawing sequence.

This section will discuss aspects that constitute this final stage of the drawing process, and also examine the marks that may signify the drawings were used to facilitate transfer to the panel for painting. This will incorporate the function of the contouring, especially the role of the black aqueous media, and the debate around the appearance of the marks that indicate transfer of the drawing, with particular emphasis on the possible use of a metalpoint as the tracing tool. Since the tracing of the outlines of the drawings was key in transferal of information to the panel, this section will end with a discussion of the drawings' relationship to the underdrawings of a selection of the corpus.

4.5.1 Holbein's portrait drawings: function of contours and signs of transfer

As highlighted in Chapter Two, the media, function and even the authorship of the strong contours on Holbein's portrait drawings have been much debated. Many of these authors also make a distinction between those lines made by Holbein as 'sensitive and precise', and those by another hand as 'coarser', attributing the latter to a workshop

or later hands.¹¹⁹ The uncertainty in the literature relating to these contours is due in part to a lack of definition or clarification of what exactly is being described. This is almost certainly a result of the difficulties of deciphering exactly what is present: a problem highlighted throughout this research. This ambiguity comes not only in terms of the media of those contours, but also with relation to marks made as part of the drawing process as opposed to those made as a result of transfer. Furthermore, it has not been helped by the terminology with which they are historically and typically described. For example, Ainsworth's statement that the 'frequent use of metalpoint to reinforce the contours as being indicative of their use as face patterns', is confusing.¹²⁰ Reinforcement is the wrong word in this instance, as it implies a drawn line with metalpoint rather than a line resulting from the contours having been traced. It is unclear whether she believes the metalpoint to have been applied after the drawing was used for transfer to reinforce the contours, or what she interprets as metalpoint lines to be a result of the drawings having been traced over, or indeed whether she means that the repeated tracing with metalpoint used as a stylus had a side-effect of reinforcing the contours.

It is not really possible to establish the authorship of each and every line. Whilst examination can sometimes determine the media, it is not always certain who made the mark. Further, whether those marks are a result of the drawing or transfer process is also not always clear. However by focusing on their function rather than authenticity it has been possible to unravel some of the confusion around these issues, and the findings are discussed further in this section. The accompanying table to this section is the result of the examination of the drawings, and combines the media of the contours, signs of transfer and their relationship to the underdrawings (see Table 5, Appendix Four). Separating out black media outlining and outlining caused by the act of tracing is important in terms of being able to clarify what it is we are seeing when we look at a drawing. The following section explains the appearance and, where possible, the function of each of these aspects.

In an attempt to clarify this issue, it helps to consider the contouring in Holbein's portrait drawings in multiple ways. First there is the contour itself and the shape it

¹¹⁹See Lionel Cust. 'On a Portrait Drawing by Hans Holbein the Younger'. The Burlington Magazine for Connoisseurs. 18.95.270 Feb. 1911 and Maryan Ainsworth.1990.180, for example.

¹²⁰Maryan Ainsworth, 1990.179-180.

defines, which plays a major part in capturing the likeness of the sitter. Where there is a predominant use of chalk these contours can be subtle, whilst still apparent, as in the case of the drawing of William Warham, 1527, or more prominent as in the case of the c.1535 drawing of Simon George, where a carbon aqueous media is the prominent material. Then there is the issue of the make-up of those contours and how they have been affected. For example, whether they have been affected by the means of transfer, such as tracing with a stylus, which pressed down onto the drawing, as is the case with the costume area of the drawing of Richard Southwell, 1536. Here the contours are further emphasised because they act as troughs for loose, friable media, and appear as fine lines, easily mistaken for metalpoint, (Figures 24 & 24.1). This observation encompasses the main area of misinterpretation regarding Holbein's techniques and materials.¹²¹ Sequencing of the media also revealed that the red chalk was laid over some of the finer, black chalk or metal point lines of the costume. This delineation in red was not a feature that was translated to the painted version and their addition cannot be explained.

Sometimes the drawings require closer scrutiny in order to locate signs of tracing. For instance examination in raking light can be more revealing of indentations on lines that are drawn in black chalk or in aqueous media. This helped to reveal indentations on the drawing of the Unknown Gentleman, 1535, (Parker 33, Figure 20). The contour of his ear, traced over by a fine tool, has indented the line, pushing the media further into the paper, creating a finer, indented line, (Figure 20.1). Evidence of blind indentations that do not follow the drawn line makes it clear that the tracing tool was not a metalpoint; the paper is prepared and any metalpoint would have left a mark, (Figure 20.2). The emphasis on the contour in some instances can also be more exaggerated as the result of such transfer practices. This misinterpretation due to an exaggeration of the contour is illustrated with the eyes of Jacob Meyer in his portrait drawing of c1526, (Figure 4.4). This drawing, along with that of his wife and daughter, was catalogued by Müller as 'Black and coloured chalks; lead point and scored lines on the contours'.¹²² However, microscopic examination does not indicate lead point but black chalk whose line has been indented and therefore neatened and exaggerated from being traced over with a

¹²¹ Clarification is still needed for the exact materials used for this drawing – examination with IRR was inconclusive in establishing the presence of metalpoint whether as a drawing or a tracing medium.

¹²² Christian Müller.2006.333 & 334.

tool. This too also left blind indentations when straying from the drawn line and illustrated on all three of the Meyer portraits of c.1526, Figures 5 and 5.1).

4.5.2 The function of aqueous black media on Holbein's drawings

The black contouring of Holbein's drawings can be a dominant feature. Parker offers a number of explanations for the black contouring on many of Holbein's drawings, including the result of subsequent corrections, restorations of abraded chalks, or as a result of a 'tracing apparatus'.¹²³ Holbein's use of black outlining has caused some historians to contest the authorship of such lines.¹²⁴ However, most of this can be explained through visual examination of the drawings, understanding how the black outlining functions, and appreciating how an artist may work. In working out the sequence of the media in some of Holbein's drawings, it is evident that initial lines in friable media are reworked or fixed with a darker more permanent line executed in black aqueous media, and that it is used in specific areas, such as lip lines, eye lashes and brows, as well as hair in general. Significantly, such contouring can be seen to be part of what seems a fairly common workshop practice in the sixteenth century: reinforcement of contours is not just exclusive to Holbein.¹²⁵ There is the precedence of the use of touches of aqueous black on sections along the contours of faces in drawings by Hans Holbein the Elder and his workshop.¹²⁶ However, whilst one could argue that Holbein's drawings did develop a heavier emphasis on contour over the years, it was not just to aid the transfer process, nor was its main purpose to restore lost or rubbed lines. These aspects are evidenced by signs of tracing on drawings which do not have

¹²³ Lionel Cust, On a Portrait Drawing by Hans Holbein the Younger. *The Burlington Magazine for Connoisseurs*. 18.95.270 February 1911; Parker, The Drawings of Hans Holbein at Windsor Castle.29&33; Paul Ganz, 'Holbein'. *The Burlington Magazine for Connoisseurs*. November 1925. 47.272.230-245. Jim Murrell, 'Observations on Holbein's portrait drawings'. *The Paper Conservator*. 1996. 20.6

¹²⁴ Joseph Meder *The Mastery of Drawing*, trans. and revised by Winslow Ames. Abaris Books, Inc. 1978.339

¹²⁵ See for Stephanie Buck, catalogue entry in *Die niederländischen Zeichnungen des 15. Jahrhunderts im Berliner Kupferstichkabinett*. Kritischer Katalog, Turnhout: Brepols. 2001.298: Entry for 'Hans Burgkmair ? IV.11 *Brustbildnis eines Mannes in venezianischer Tracht*', 1490, in which Stephanie Buck describes the materials and the contours, saying that the head contours may have been reinforced by a later hand in black: 'Konturen am Kopf wahrscheinlich von späterer Hand mit Feder in Schwarz und Pinsel in Graubraun übergegangen'.

¹²⁶ See drawing, *Portrait of Sigmund Holbein* at the British Museum inv.no: 1895.0915.987 of 1512.

an emphasis on contour, such as the portrait drawing of William Warham of 1527, and by the fact that such contouring has an artistic heritage.

As illustrated in Chapter Three, Holbein's use of this type of outlining has strong links with workshop practice and is something seen on his father's drawings. It was part of an artistic tradition, an aspect acknowledged by Ganz¹²⁷ in 1937 and more recently by Christian Müller.¹²⁸ They also served as a means of fixing the lines of his drawings with some surety with the dual purpose of covering over more uncertain lines. This is illustrated by the accentuation by aqueous media of the back of the neckline on the drawing of Richard Southwell, thereby pinpointing the exact location of this line. Further establishing it as an accepted technique, in discussing drawing, Cennini recommended using ink in order to 'clear up the drawing further', thereby fixing it 'at the points of accent and stress'.¹²⁹

One cannot say with absolute certainty that contemporaneous or later artists, or custodians did not add some lines.¹³⁰ For example, Italian Renaissance artist (1491-1570) and pupil of Leonardo da Vinci's Francesco Melzi reinforced Leonardo drawings that had been abraded.¹³¹ Further, in a discussion on the fading of metalpoint lines on some of Leonardo's drawings in the Royal Collection, Jane Roberts and Leonardo historian, Carlo Pedretti conclude that some fading of the metalpoint must have occurred during Leonardo's life time as he has 'reinforced' some of these lines with ink.¹³² Although there is a possibility that the black lines on Holbein's drawings were added by another hand, evidence gathered for this thesis suggests that they were part of Holbein's drawing process. The black contours are stylistically part of Holbein's artistic repertoire of techniques – not only in his portrait drawings but also within other of his genres, such as jewellery and stained glass designs, as well as featuring in his portrait paintings and miniatures.

¹²⁷ Paul Ganz, Handzeichnungen Hans Holbein des Jüngeren in Auswahl. 1937.14. With thanks to Susan Foister for her translation of relevant sections of this book.

¹²⁸ Christian Müller.2006.280-281

¹²⁹ Cennino Cennini.1954.7

¹³⁰ Incidentally, Parker also thought that some drawings of Hans Holbein the Elder were retouched along their contours: see Parker catalogue.33 footnote 1.

¹³¹ Carmen Bambach, 'Leonardo da Vinci (1452-1519)'. In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000. http://www.metmuseum.org/toah/hd/leon/hd_leon.htm (October 2002)

¹³² Carlo Pedretti and Jane Roberts, 'Drawings by Leonardo da Vinci at Windsor Newly Revealed by Ultra-Violet Light.' *The Burlington Magazine*. 119.891.398. June 1977

As discussed in Chapter Three, the aqueous media would serve to fix an otherwise quite friable contour. The friable nature of the dry media may account for the discrepancy in some drawings between what media is left and what has eroded. For example, the drawing of Simon George's costume, which was executed summarily in chalk, is now much abraded. Similarly, in the portrait drawing of Lady Audley, very little media remains other than the more durable aqueous elements. This further explains the exaggeration or emphasis on contour, and why it has aroused so much discussion in the literature. It does not seem likely that the black lines were added so as to cover erosion caused by tracing, as has been suggested.¹³³ The drawings certainly do not show signs of having been repeatedly traced.

The amount of black aqueous media varies from drawing to drawing. It can be used sparingly, only picking out salient features such as the eyes, eye-lashes, brows, lip line, nose and profile (as in the drawings of Jane Seymour, Lady Audley and Unknown Gentleman). In other cases it was a little more prevalent: for example, on the drawing of Richard Southwell it was also used for the hat, and for the flicks of a few strands of hair. It also became a dominant feature to depict all the hair strands, as illustrated by the portrait of Simon George, where it is used for the dense black of his hat, and to pick out all the features and face contours. There are a number of drawings within the Windsor collection that are composed almost entirely of aqueous black lines, usually overlaid on to a chalk-drawn composition. This is seen in the drawings of William Parr, 1532-43, (Parker 57, RL12231, 317 x 212mm and Thomas Boleyn, (James Butler, Earl of Ormond), c.1537 with his scarlet red cap, a drawing that Parker notes Ganz asserted was completely overworked by not just one but two 'retouchers' but then never qualified this opinion.¹³⁴

It is important to reiterate the importance of some facial contours and the reasoning behind their emphasis in transmitting likeness. Ganz, for instance, remarked quite aptly on 'Holbein's characteristic way of portraying only the most salient features of his models'.¹³⁵ For example, a person's lip line is what defines the shape and character of

¹³³ Maryan Ainsworth.1990.180

¹³⁴ Parker, 1945.42

¹³⁵ Ganz, 'Holbein'. The Burlington Magazine for Connoisseurs. Nov. 1925. 47.272.239

the mouth and is very effective in its singular delineation. This is illustrated by the pouncing holes on the drawing of Thomas More. This portrait is drawn almost entirely in chalks, meaning its contours are also delineated in this medium, (see Table 16, Appendix Four).. The pouncing holes act as sort of ‘perforated contour’ and when joined up on the panel mimics the lines of the drawing. Once the lip line had been pricked along its length, all that was needed to define the shape and depth of the lower lip was two little holes made on the lower edge of the bottom lip, thus, negating the need to prick out the entire shape of the mouth, (Figures 8.1)

Another possible function of these definitive, black aqueous contours might have been to assist tracing: it would certainly be easier for whoever was tracing the drawing to follow the single, strong contour. This is in contrast to the less decisive contour media of chalk, which is clearly illustrated in the drawings of William Warham or Henry Guildford, where the lack of definitive line means that the tracer can struggle to find a clear choice: this is clearly a huge obstacle if the aim is to capture true likeness. This aspect became apparent when the author and a volunteer traced numerous drawings (over the Perspex) at Windsor.¹³⁶ This demonstrated that no two people trace in exactly the same way. Who would have actually carried out the tracing of Holbein’s drawings is unclear, but it is illogical to suggest that any one other than the artist would make corrections to the drawing during the transfer process, as has been asserted by previous authors.¹³⁷ Discrepancies between the drawing, the tracing, and the underdrawing are therefore factors to bear in mind when deciding on the use of a preparatory drawing and further making assumptions about its relationship to the underdrawing in particular. It is an area open to much interpretation.

The images of the traced drawings strongly evidence the importance of contours in transferal of a likeness. They are key in this aspect. There is no doubt that it was easier to follow the more definitive lines of the aqueous media and that fewer decisions would have to be made by whoever was tracing about what marks to follow. Moreover, it would certainly have improved visibility through tracing paper. Jim Murrell makes the connection between the emphasis on contour and the use of that contour for the transfer

¹³⁶ The tracings were taken in order to compare them with their painted versions, and with the underdrawings of those versions.

¹³⁷ Maryan Ainsworth.1990.180

to panel to create the underdrawing.¹³⁸ He further asserts that due to a lack of indentation, the drawings were traced with oiled paper, concluding that the dark contours were specific for this purpose.¹³⁹ Thorough examination of the drawings during this research has revealed more indentation than previously noted in Holbein literature – on both the first visit drawings and on the later pink grounded drawings – than previously observed; not only on drawings with known/extant paintings, but also with those drawings where a painting no longer exists, as demonstrated in the table of contour evidence (Table 4, Appendix Four).

4.5.3 Signs of transfer on Holbein's portrait drawings

Metalpoint has been cited by numerous Holbein scholars as having been the tool used for tracing the drawings for transfer, and the reason for some of the marks along and around the contours that make up his portrait drawings.¹⁴⁰ As discussed in Chapter Three, Holbein's use of metalpoint as a drawing tool is very rarely found on the portraits executed on pink prepared papers. Although there is still some need for further clarification in terms of material identification, for which future instrumental analysis would prove very useful, it would seem that metalpoint was not Holbein's preferred drawing tool for life drawing. It was neither easily removed if mistakes were made nor did it provide the nuances of coloured chalks. Furthermore, when it does appear to be definitively used, as seen on the drawing of Lady Ratcliffe (Parker 19), it is not to depict part of the actual portrait but as a peripheral decorative design element to the left of the sitter's face, (Figure 39 & 39.1).

It has been hard to bring any certain conclusion to this often-cited use of metalpoint as the possible tool for transfer. Despite this, it has been possible to partly explain the appearance of some of these lines. There is no doubt that some aspects of the drawings are hard to explain, and this is never more so than trying to describe the marks left on the drawings as a result of having been traced. Establishing the use of metalpoint as a drawing or transfer tool has been problematic historically. Holbein literature has been

¹³⁸ Jim Murrell. Observations on Holbein's portrait drawings'. The Paper Conservator. 20. 1996:7

¹³⁹ Murrell. 1996. 6

¹⁴⁰ For example, Maryan Ainsworth. 1989.34 ; Susan Foister. Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.24-25; Jane Roberts, Holbein and the Court of Henry VIII. National Galleries of Scotland. 1993.64

unclear regarding his use of metalpoint. For example, although Parker is rare in that his drawing catalogue describes the media used and its location, most of the time, he does not really indicate whether metalpoint was used for transfer or part of the drawing process.¹⁴¹

The generic term 'metalpoint' is included in Parker's catalogue entries for 16 of the Holbein-attributed Windsor drawings, only one of which specifically mentions the metalpoint type: silverpoint.¹⁴² This is no doubt because the drawings were examined at a time when instrumental analysis was not available and, as already stated, it is difficult to distinguish between materials visually. Parker specifies where he believes metalpoint to have been applied. For example, of the portrait drawing of Richard Southwell, Parker writes the following, which is useful to transcribe in full here as it is a perfect example of the difficulties in the quest to explain the appearance of Holbein's portrait drawings:

...the sharp indentations with metal-point are, as elsewhere, somewhat disturbing. It is possible that these were neither in the nature of reinforcements nor of retouchings, but connected with the transference of the design to the panel.¹⁴³

It is also important to remember that a metalpoint, such as a silverpoint, would mark the drawing and therefore would not be the best choice of tool for tracing if the drawing was to be kept as clean as possible.¹⁴⁴ Whilst not entirely implausible, it seems an unlikely choice for tracing, given that the aim was also to leave the drawing intact and relatively unaffected. This is implied from the fact that the drawings do not show signs of having been repeatedly traced over in order to make copies and because pouncing, a very disfiguring technique, is only apparent on one of the portrait drawings (Thomas More, Parker 3). Furthermore, other instruments could have been used that would not leave a mark – wood, bone or iron – for instance.¹⁴⁵ There are certainly drawings on both unprepared and prepared papers where blind indentation is evident.

¹⁴¹ Parker. 1945, see catalogue entries.

¹⁴² Edward, Lord Clinton, Parker 42, RL12198, 223 x 147mm see Parker.1945. 48.

¹⁴³ Parker catalogue with regards to Southwell page 46

¹⁴⁴ Meder insisted that a clean drawing was a requirement of tracing. Perhaps this is one of the reasons why pouncing was not a preferred technique for. Meder.1978.397

¹⁴⁵ Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes.1983. 25

However, the use of metalpoint as a tracing tool or drawing tool cannot be discounted unless further rigorous analysis is carried out, which might help to identify and decipher the particularly confusing marks; these include some contours on the drawings of Jane Seymour; Lady Butts; Richard Southwell; Edward, Prince of Wales and Lady Audley. There are also a number of drawings for which no painting relates, many of which have contours that require proper identification in terms of transfer tool. Parker thought that the portrait of Richard Southwell had been ‘worked over incisively with metal point’ but this description does not make it entirely clear whether this was part of the drawing or transfer process.¹⁴⁶

The portrait of Southwell does show signs of having been traced, in the form of indentations along certain lines. These indentations occur over almost all the contours of his jacket and shirt, including the buttons. Figure 24.3 shows a copy of the tracing made of this drawing by the author, with the black lines indicating the areas of the drawing that have been indented from the action of pressing down with the tracing tool. The red lines indicate those that do not show this indentation. Having examined 99 Holbein portrait drawings for signs of use, it is clear that this discrepancy in signs of transfer is not unusual. This characteristic is further illustrated in three other examples and illustrated in Figures 22.3, 32.2 and 20.5. Inconsistency of indentation within the same drawing was very common. What this means exactly is unclear at present. It could be that the drawing was traced with uneven pressure, thereby indenting some lines and not others. Very little pressure is actually needed when using the carbon paper method of transfer, for example.¹⁴⁷ It could be that more care was taken whilst tracing around lines of the face, as this is often where the indentation seems to stop, so as not to mar the most important part of the drawing. An example of this not only occurs on the drawing of Southwell, but also on that of Jane Seymour, Simon George and Unknown Gentleman, (Parker 33) all of which show signs of indentation on a

¹⁴⁶ Parker.1945.46

¹⁴⁷ See also Jeffrey Jennings, ‘Infrared visibility of underdrawing techniques and media’. Le dessin sous-jacent dans la peinture. Colloque IX. ed. Roger Van Schoute. Louvain-la-Neuve : College Erasme. Belgium. 1993. 243, where he discusses a methods of pouncing that does not involve making holes nor marking the surface of the drawing – something he calls ‘contact pouncing’ whereby a blackened sheet – ‘dry pigment massaged into the tooth of a thin paper’, thereby reducing the deposit of black carbon on the panel’s ground, is laid under drawing and on to panel or intermediate sheet of paper and the contours of the drawing tapped at intervals, still producing dots but not disfiguring the drawing with holes

significant amount of their costume but next to no indentation along the contours or salient parts of their faces.

This discrepancy could be what prompted scholars to assert that the black aqueous lines were reinforcements, covering damage caused by the act of tracing with a metalpoint.¹⁴⁸ However, evidence from examination of the drawings does not support this: as demonstrated above, the aqueous lines lie beneath the metalpoint/ indented lines, and thus represent the penultimate rather than the final layer in the sequence. What is important to consider, whether the drawings shows signs of having been traced in the physical sense or not, is the fact that in many cases of the surviving drawings that relate to paintings, the contours of the drawings match the underdrawing or the surface of the painting to a significant extent, thereby emphasising the importance of the portrait drawings as face patterns.

4.5.4 Drawings and underdrawings: the relationship of one to the other

The relationship of Holbein's preparatory drawings to the underdrawings has been a key area of discovery in the last fifteen years.¹⁴⁹ Foister was amongst the first to suggest that the preparatory drawings were used as face patterns for transfer to panel, and take measurements to investigate the drawings and their likenesses to their respective paintings.¹⁵⁰ Maryan Ainsworth has written extensively on the subject of Holbein's underdrawings, applying a level of connoisseurship to these as well as revealing the use of Holbein's drawings for paintings not attributed to Holbein, on the grounds of quality and stylistic reasons.¹⁵¹ Further, both historians' work is notable for its discussion on the function and possible means of transfer of the drawings.¹⁵²

¹⁴⁸ For example, Ainsworth.1990.180 & Jeffery Jennings.1993. 244, who also thinks that the black lines are the result of Holbein's drawings being repeatedly traced.

¹⁴⁹ See Rachel Billinge et al, Art in the Making: Underdrawings in Renaissance Paintings. London: National Gallery Company Ltd. 2002. Ed. David Bomford

¹⁵⁰ Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes. 21

¹⁵¹ Maryan Ainsworth, 'Methods of Copying in the Portraiture of Hans Holbein the Younger' in *Le dessin sous-jacent dans la peinture. Dessin sous-jacent et copies*. (Universite catholique de Louvain, Institut superieur d'archeologie et d'histoire de l'art, Document du travail No.26) 11-13. Colloquium VIII. Louvain-la-Neuve: College Erasme, Sept.8-10, 1989, essay published 1991 and Ainsworth.1989 and 1990.

¹⁵² Susan Foister, Drawings by Holbein from The Royal Library, Windsor Castle, with an introduction & catalogue by Susan Foister. Johnson Reprint Co. Ltd, Harcourt Brace Jovanovich: London. 1983. Limited Edition in two volumes. Ainsworth.1989 and 1990.

Evidence of Holbein's drawings having been used for transfer is apparent in two methods: through pouncing, and through tracing via carbon paper. Both of which, when carried out, alter the contours slightly at each stage of tracing and transfer. When tracing over the drawings with melinex (a polyester film) it became clear to the author that sometimes there are multiple lines, and a decision has to be made about which line to follow. This is especially true of the drawings executed mainly in chalk on unprepared paper, where the contours are not so definitive; the portrait drawing of Henry Guildford is a good example of this. Of the 99 Holbein portrait drawings examined during this research, 33 have signs of transfer in the form of indentations, some more pronounced than others. Many reveal that not all contours were traced over with the same vigour.¹⁵³ This makes up a third of the drawings, and provides evidence that they were either used for a painting of the same sitter or were traced over to provide copies in the form of intermediate cartoons. There are also quite a few paintings whose underdrawings indicate they were made from a pattern, but for which no drawing survives. As Table 4 shows, some of the drawings that have an extant portrait painting do not have any signs of having been traced (in the form of indentations) on the drawing itself.¹⁵⁴ However, it is important to note that tracing tools and methods may have been used that did not leave a mark.¹⁵⁵

As demonstrated in the previous section, signs of transfer on Holbein's drawings take the form of either indented lines following the contours of the drawings or, in the case of Thomas More, pricked holes signifying transferral via the pouncing method. The act of tracing these drawings has left physical marks on the drawings. Some are blind indentations, such as those found on William Warham and Dorothea Kannengiesser and Jacob Meyer 1526, (Figures 10.1, 5.1 & 4.5). These occur because the tracing tool has strayed from the drawn line, scoring the unprepared papers instead. This research has discovered that the drawing of William Warham shows signs of having been traced,

¹⁵³ Of the 99, four are not attributed to Holbein in Parker's Windsor catalogue: Parker 82,83,84 and 85. One is a copy of another drawing, Parker 65.

¹⁵⁴ Gunnar Heydenreich's research into the workshop of Cranach found that Cranach portrait paintings show underdrawings that are the result of a traced drawing but that the drawings do not always show signs of having been traced,- ie no indentations. Lucas Cranach the Elder: Painting materials, techniques and workshop practice. 302.

¹⁵⁵ Vasari On Technique being the introduction to the three arts of design, architecture, sculpture and painting, prefixed to the lives of the most excellent painters, sculptors and architects by Giorgio Vasari, translated by Louisa S Maclehorse Dover Publications Inc New York, New York 1960.231

something that has not been commented on before.¹⁵⁶ The drawing displays subtle signs of having been traced with a tool that left no mark apart from an indent. Some indented lines can be more obvious because they follow drawn lines, leaving a crisper, indented line, such as those drawn over the black chalk of the Unknown Gentleman's costume.

Recent literature regarding the 1516 portrait drawings of Jacob Meyer and his wife Dorothea states that they do not show any signs of having been traced – in other words there is no indentation along the contours – for direct transfer to the panel.¹⁵⁷

Examination in raking light did reveal some evidence of indentation but this could be the result of the drawing process with the metal stylus. These indentations are not prominent nor do they occur consistently along each contour; as discussed above, this characteristic is shared by some of the other drawings that relate to paintings of the same sitter. There is no doubt that these drawings have a direct and physical relationship, in terms of transfer use, to their painted portraits because of the one to one relationship of drawing to painting; they may have been traced and transferred via an intermediate cartoon.

The relationship of the preparatory drawing to the finished piece, be it for panel painting or miniature, has proved to be complex and raises many questions. For example, if the drawing matches the underdrawing precisely then the relationship is assumed to be self-explanatory: that the drawing was used directly for transfer, and the only question remaining is the means of transfer and whether there are any physical signs on the drawing and underdrawing. If the drawing and painting are undisputedly by Holbein and relate visually, but the underdrawing is not a precise copy of the drawing, then questions arise as to how that drawing was used for transfer, if indeed, it was.¹⁵⁸ Working out the relationship of a drawing to a painting in terms of the physical part, if any, it played in its transfer is a complicated equation and something that is

¹⁵⁶ E. Foucart-Walter, Les Peintures de Hans Holbein le Jeune au Louvre, Paris. Louvre 1985. 34-35

¹⁵⁷ Müller.2006.164

¹⁵⁸ Issues around copies are another area which further increases the complexity of the use of drawings and tracing of paintings. For more information see, for example, recent discoveries from the research team of Making Art in Tudor Britain: <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/double-take-versions-and-copies-of-tudor-portraits.php>, and see two articles by Linda Freeman Bauer, 'A Letter by Barocci and the Tracing of Finished Paintings.' The Burlington Magazine. 128.998.May 1996.355-357 and 'More Evidence of Artists' Tracings'. The Burlington Magazine. 137.1102. January 1995.38

open to much interpretation. Literature suggests that the reading of underdrawings is fraught with uncertainty, so any interpretation of them must be considered with some caution.¹⁵⁹

With each step in the act of tracing a drawing for transfer, the line is altered, even if minimally. Therefore, care needs to be taken when comparing a drawing with an underdrawing, as the lines have invariably diverged. Holbein's drawings were used to facilitate transfer to a panel, most likely via an intermediate sheet of paper covered with carbon. There are at least three stages to tracing the contours, all of which may distort the final underdrawing. First there is the act of tracing over the contours of the drawing itself, which may deviate from the contours; second, the use of an intermediate sheet, sometimes creating a secondary cartoon, adds in other possible changes in transferring to the panel; and third, the final act of securing the tracing on the panel with wet media may again alter the shape. It is therefore possible to explain discrepancies between drawing and underdrawing as being part of the transfer process, influenced by which lines are followed and how they are joined up, followed by final adjustments made to the underdrawing. This partly accounts for certain lines not matching up with the drawing lines.

It was possible to examine a number of the painted portraits, and also to have access to images of their underdrawings. Findings from these are correlated in Table 5, Appendix Four. Three examples will be presented here in more detail: Sir Thomas More, 1527, (Parker 3), Simon George, 1535, (Parker 35) and Unknown Gentleman, 1535, (Parker 33). These works were selected because together they represent two different types of transfer technique: pouncing and tracing. They also represent three drawings attributed to Holbein, but only two of which relate to portraits attributed to the artist. Although it appears that the drawing was used to create the underdrawing, the third painting, portrait of an Unknown Gentleman, is not attributed to Holbein.

Although the portrait drawing of Sir Thomas More, (Parker 3, 402 x 301mm, Figure 8) 1527, has been pricked for transfer, there is no carbon deposit on its surface. Dots left on the ground of a panel from the act of pouncing comprise a carbon dust, which falls

¹⁵⁹ See Jeffrey Jennings, 'Infrared visibility of underdrawing techniques and media'. Le dessin sous-jacent dans la peinture. Colloque IX. Ed. Roger Van Schoute. Louvain-la-Neuve : College Erasme. Belgium. 1993. 241-252.

through the holes of a design; these are usually joined up with a liquid medium, which creates a more permanent and continuous line by which to guide the painter. Any extraneous dust is brushed off the panel so as not to affect subsequent layering on of paint. Once the dots are joined up in this fashion, pouncing can be very hard to identify. However, there are definite signs of this underdrawing being the result of a pounced pattern: the dotted nature of the line is visible around More's true right eye. It was therefore not surprising to find that the painted version of Thomas, Figure 9, now housed at the Frick Collection in New York, showed evidence of pouncing in its underdrawing.¹⁶⁰ The drawing and painting are also clearly visually similar.

What was perhaps more surprising, as Maryan Ainsworth pointed out, is that the underdrawing does not relate exactly to the pounced contours of the drawing. To investigate this relationship, a tracing of the drawing made by the author was overlaid onto the painting, (Figure 9.1) and onto an image of the underdrawing.¹⁶¹ In both instances, although individual elements of the drawing and the underdrawing matched exactly, the face in its entirety did not. For example, if the noses were lined up, one over the other, then the match was perfect, but the eyes were not lined up. If the tracing of one eye was laid over its corresponded painted eye, the other eye did not line up with the corresponding tracing. Furthermore, the underdrawing showed some pounced marks that did not exist on the drawing. This is evident in the joined dotted line on More's true right inner eye socket, near the bridge of his nose; there are no corresponding prick marks on the drawing in this position. There are also prick marks that do not line up at all with the tracing of the dots from the drawing. This is seen in the position of the small line of underdrawing under More's true right eye, for instance. The differences in alignment are not so extreme that it effects the likeness of More and probably the reason why the drawing was assumed by historians to have facilitated direct transfer to panel until underdrawings were made visible.

Looking at the pricked drawing of Sir Thomas More itself and understanding how it was used may explain this. The drawing does not show signs of having been pounced

¹⁶⁰ Maryan Ainsworth. 1990.177

¹⁶¹ With thanks to Denise Allen and colleagues at The Frick Museum for agreeing to undertake new IRRs of this painting and to Charlotte Hale and colleagues at the Metropolitan Museum of Art for carrying out the IRR.

with the typical disfiguring carbon dust involved in this process in that the front of the drawing is clean, although there is a black residue in each of the holes; most likely the result of 500 odd years of dirt and extraneous drawing media. The drawing could have been pricked through an underlying sheet that was then used for the more disfiguring pouncing process.¹⁶² Although the act of pricking through and the angle of the hole would change, this would not be significantly enough to warrant the mis-match of the current drawing to the contours of the existing painting.¹⁶³

The relationship of the pounced image to the underdrawing is a most puzzling scenario which leads to the conclusion that this drawing was not used directly for the transfer of More's image to create the painting's underdrawing, but may have played a part in creating a secondary pattern that was used for the actual pouncing process. For instance, there is another drawing of Sir Thomas More (Parker 2, RL12225, 380 x 258mm, black and red chalk, brown wash, watercolour for irises, pot watermark, Type D, similar to other drawings executed in 1527, Figure 38) at Windsor. It is not pricked for transfer but it does have indented lines around nearly all of the contours, suggesting it may have also been used as a pattern; see detail in Figure 38.1. The sequencing of the media and the way it has been pressed by the action of tracing suggests that these indentations occurred last in the sequence. A tracing of this drawing was also overlaid over the Frick portrait of Thomas More and proved to be a much better equivalent in terms of a one to one match of the contours, (Figure 38.2). This drawing of More lacks the attention to detail of the other drawings, which further suggests that it may have been an intermediary cartoon, or one that may have been made as the result of a tracing of the painting itself.

There are a number of drawings with associated paintings where the drawings have close matches visually to the paintings but whose equivalent underdrawing contours are not as closely matched as one would expect. The portraits of Simon George, Lady and Henry Guildford and Edward, Prince of Wales are part of this group. The

¹⁶² See Meder.1978.396, citing G B Armenini who describes this procedure in Dei veri precetti della pittura. Pisa: Presso N Capurro.1823.115

¹⁶³ see Ainsworth.1990.177, footnote 28 where she suggests that the residue of black may be the result of the drawing being pricked onto an underlying sheet of paper covered with carbon. This seems less likely given that it is the application of carbon dust not of a covered sheet that is the next step in pouncing.

mismatch of drawing and underdrawing is fairly common in Holbein's work. For example, the drawing of Lady Guildford is quite different to her painted portrait in terms of gaze and demeanour, but certain salient features of the drawing match the underdrawing, such as the lower nose line and the shape but not the orientation of the eyes. The lip line is very different; the drawn version showing a slight smile whilst the painted version is flatter, portraying a more formal appearance. Given the differences, it is not conclusive that this drawing was used to directly create the underdrawing of this painting.

Taking a closer look at the relationship between the drawing of Simon George (Parker 35, c.1535) and his underdrawing of the corresponding painting is also of interest. This drawing, executed in black, red and yellow chalk, greeny blue watercolour irises, and a dominant amount of black aqueous media, is another example of a drawing that has been traced for transfer. The indentations are not obvious along every contour. They are visible along and alongside the cursory chalk contours that make up his costume, along some lines of his ear and back of the neck, and there is a scored line along his forehead, nestling in to the side of the black of his hair. None of the salient lines, such as lip, nose, eyes nor profile have been indented or marked by a tool. The media and appearance of the contours that make up this drawing have not always been interpreted properly and further, historians have not always been able to differentiate between signs of transfer and drawn lines. There are some marks made by the tracing tool where it is not possible to ascertain for certain if it was a metalpoint or not. Their visibility in IRR could be on account of carbon deposits, which would still be visible in this light source, unlike silver, which disappears. Further, under the microscope and in raking light, these lines appear more like blind scored lines than metalpoint ones. Examination of this drawing has shown that in the sequencing of the media, the signs of tracing come last, after the application of the black aqueous lines, not before, as has been suggested by Ainsworth.¹⁶⁴

Overlaying the painted portrait of Simon George with a tracing of his drawn portrait showed that certain features corresponded exactly with the painted features as well as with the underdrawn ones, (Figure 23.2). The underdrawing of the costume proves to

¹⁶⁴ See Maryan Ainsworth.1990.180.where she suggests that the reason we cannot see tracing on some of the lines is because of black aqueous media being applied after thereby obscuring the 'metalpoint' used for tracing.

be more of an exact match in shape and dimension to the drawing than to the painted version. This match of underdrawing to drawing further suggests that the drawing did play a part in the transfer process. The underdrawing is clearly visible in IRR, making up the eyes, nose, ear, lips and shirt – areas that correspond with the drawing exactly when lined up.¹⁶⁵ As with the drawing of More, when certain features were overlaid from traced drawing to painting, they matched exactly, but there is a slight reduction in the width of George's head in comparison to the drawing. Unlike the method for transferring his face, the underdrawing of Simon George's hand appears to be the result of a pounced pattern, suggested by the joined dots around his fingertip, (Figure 23.1). This evidence would further imply that there was preliminary drawing made of his hand.

The relationship of the drawing of an Unknown Gentleman at Windsor to its painting at the Metropolitan Museum of Art in New York is interesting on many levels, (Acc. No: 49.7.28, 386 x 395mm – diameter of roundel – Figure 21).¹⁶⁶ It represents one of two cases where the drawings appear to have been used for production of their underdrawing but that the paintings are currently not attributed to Holbein: the first is Unknown Gentleman, Parker 33, and the second is Lady Rich.¹⁶⁷ The circular format of the portrait of Unknown Gentleman has led to links being made with Holbein's miniature format. The painted version is contemporaneous, dated around 1535 and calls into question who, other than Holbein, might have access to and use of the drawings.¹⁶⁸ Ainsworth later demonstrated in a *Master Drawings'* article of 1989, and a *Burlington Magazine* article 1990, that the contours of the drawing match those of the underdrawing for the painting, and that these must have been transferred by means of an interleaf. This is also one of the drawings that scholars have asserted that the hands

¹⁶⁵ This was tested using images of the underdrawing and drawing traced on to melinex and digitally with images on the computer

¹⁶⁶ The circular format of the portrait led to links being made with Holbein's miniature format. See Duveen Pictures in Public Collections of America: A catalogue Raisonne with Three Hundred Illustrations of Paintings by the Great Masters, which have passed through the House of Duveen. The William Bradford Press, New York, 1941 as cited in Katharine Baejter Notes from interdepartmental memo from Katharine Baejter to Everett Fay 21 May 1990. Metropolitan Museum of Art.

¹⁶⁷ The portrait drawing of Lady Rich, Parker 55 and the painted version, not attributed to Holbein but the drawing seemingly used for transfer, at the Metropolitan Museum of Art, New York, Inv.no. 14.40.646. See Ainsworth.1989.17 and Ainsworth 1990.183

¹⁶⁸ Katharine Baejter Notes from interdepartmental memo from Katharine Baejter to Everett Fay 21 May 1990. Metropolitan Museum of Art.

have been cut off.¹⁶⁹ One of the reasons for its dismissal is the character of the underdrawing, connoisseurship of which has become an increasing focus.¹⁷⁰ The use of the drawing by someone other than Holbein, along with some non-autograph copies of drawings at Windsor, led Ainsworth to conclude that Holbein did not exclusively use the drawings. As has been discussed in previous chapters, because of Holbein's legal status in England that excluded him from employing assistants, there is no official record of him having a workshop. But this does not mean he did not have one, or that his drawings were not intended to be used by others.

The portrait drawing of the Unknown Gentleman has been traced, indicating transfer via these lines. Lines of the sitter's costume have been indented along the chalk lines, creating finer, darker lines where the media has been pushed, which is what prompted Ainsworth to conclude these were created by the tracing tool of metalpoint or sharp chalk.¹⁷¹ Not all the contours have been indented from the act of tracing. There is no clear sign that the tool used to trace the outlines was a metalpoint and furthermore, the presence of blind indentations indicates it was not silverpoint, (Figure 20.2). Apart from the ear, no other feature of the sitter's face shows signs of tracing through indentation, although the contour of his head and hat has been traced over. The painting's underdrawing style indicates that it is a result of a transferred pattern. This is evidenced in the slight skips in the line and areas where it appears that the drawing instrument (according to conservation examination records, this is a pen) has been removed and then placed down again as it follows and fixes the initial carbon line.¹⁷² This kind of stuttering can be typical of underdrawings that show a transferred pattern.

The associated roundel painting of the Unknown Gentleman comprises a wooden support made up of two planks of oak; dendrochronology revealed a plausible creation date of 1532 or later.¹⁷³ Examination of the underdrawing and comparison with the drawing confirmed the discrepancies in the underdrawing mentioned in its

¹⁶⁹ Jane Roberts, Drawings by Holbein from the Court of Henry VIII , Art Gallery of Ontario, Toronto 1988, Johnson Reprint Corporation Harcourt Brace Jovanovich. 18.

¹⁷⁰ Ainsworth. 1989.17; Jane Roberts 1988.18

¹⁷¹ Ainsworth.1990.183

¹⁷² Paintings Conservation Department Examination and Condition Record, June 29 2006, Karen E Thomas, Paintings Conservator, Metropolitan Museum of Art.

¹⁷³ Information taken from Paintings Conservation Department Examination and Condition Record, June 29 2006, Karen E Thomas, Paintings Conservator, Metropolitan Museum of Art.

conservation examination report.¹⁷⁴ For example, an ear appears to have been drawn (true upper right) but was never painted. This is a feature, although very small and hard to discern, that is evident on the drawing also, (Figures 21.1, 21.2 & 20.3). The curls of the beard, drawn freehand, extend lower in the underdrawing than in the painted version, matching the drawing better than the painting. The hat profile has also slightly shifted from underdrawing to painting, as has the edge of the shirt collar. These discrepancies tie the drawing to the underdrawing, whether transferred directly or via an intermediary cartoon, this underdrawing follows the drawing almost exactly and further indicates that it is not a tracing from another painting. Overlaying a tracing of the drawing over the painting and an image of the underdrawing shows a very good match of contours, (Figure 21.3). There is a lot of restoration that has compromised the original paint layers making it difficult to get a clear picture of how the painting would have looked or of its original quality. Arguably, its poor condition and compromised painted layers could have played a large part in its lack of attribution to Holbein. This is in contrast to the contradictory attribution to Holbein of the portrait of Lady Butts, c.1540/43(472 x 369mm, oil on panel, Isabella Stewart Gardner Museum, Boston, Inv. P21e5, Figure 33), which is also in poor condition and with an underdrawing created via the original drawing. Such inconsistencies perhaps highlight the irregularities within the decision-making mechanisms that can govern attribution.

The relationship of Holbein's portrait drawings to the paintings of the same sitter has proved to be complex. Despite strong visual similarities, how the contours of a drawing of a sitter may relate to the underdrawing of its painting is not always straightforward. Such issues are very well demonstrated by an examination of the drawing and painting of Charles de Solier, Sieur de Morette, 1534/35, both to be found in the Staatliche Kunstsammlungen, Gemäldegalerie, Dresden.¹⁷⁵ There are no signs of transfer in the form of indentations on the drawing of Charles de Solier and the underdrawing visible on his painted portrait is sparse.¹⁷⁶ Slight lines can just about be made out along his lip

¹⁷⁴ Information taken from Paintings Conservation Department Examination and Condition Record, June 29 2006, Karen E Thomas, Paintings Conservator, Metropolitan Museum of Art.

¹⁷⁵ Charles de Solier portrait drawing: black, red and yellow chalks, black aqueous media with white opaque watercolour and coloured watercolour (eyes) on pink prepared paper, 330 x 249mm, Inv. C.1977-156. Portrait painting, oil on panel, 925 x 754.

¹⁷⁶ Martin Wyld's analysis of The Ambassadors by Holbein has also revealed that the underdrawing for this painting, present in the form of carbon in cross-sections, is impossible to make out because of the masking impact of a mid-grey imprimatura, which does not allow for contrasts in infra red. Martin Wyld:

line and around the eyes, but nothing definitive enough to take any meaningful measurements and therefore come to any definitive conclusion about the role of the drawing in terms of transfer of the contours. Whilst there is no doubt a direct relationship in terms of a complete likeness of drawing to painting, where it differs, and quite dramatically, is with the proportions of one to the other:

Some measurements were taken of the facial features of the drawing and compared with those of the painting:

Charles de Solier	Drawing	Painting
Eye distance (outer eye to outer eye)	52mm	85mm
Lip line length	29mm	45mm
Face width (line under eyes)	90mm	144mm

The painted face is much larger than the drawn face. But given that we cannot make out the underdrawing it is impossible to fully understand a correlation of the contours and if the drawing was traced and transferred and then amended during the painting process to reflect the increase in size. Together with the other examples discussed above has helped to establish the fact that no one painting relates in the same way as any of the other paintings and this individuality has to be taken in to account. Discrepancies can be down to changes during the painting process, the loss of a drawing or intermediary cartoon which may have related more closely to the underdrawing or even that these differences reflect the different techniques of whoever carried out the transferal.

'The Restoration History of Holbein's *Ambassadors*'. The National Gallery Technical Bulletin, 1998. 19.4. I was not able to procure the information regarding the ground layer of the painting of Charles de Solier.

Conclusion

In 1867, art historian and Holbein scholar, Ralph Wornum wrote that 'I have seen many of Holbein's works, but certainly not all, and I find him exceedingly difficult to pronounce upon.'¹ Some 145 years later, Holbein's drawings have still escaped elements of explanation in terms of their appearance, and this research has not answered all those questions. However, it has enabled a significantly better understanding of Holbein's working processes. A comprehensive survey and examination of the portrait drawings has helped to explain the condition of the drawings and established how this may have impacted on their historic interpretation. It has also clarified some historic misinterpretation through identification and sequencing of materials, methods of application as well as identifying signs of use of the drawings.

Holbein's portrait drawings illustrate how complex and multi-layered drawings can be. Holbein used unprepared and prepared paper for the substrate. On these surfaces he drew with metalpoint and red, black and other coloured chalks. He utilised watercolours, black aqueous media and white highlights. Findings during this research have confirmed that the materials Holbein used reflect what was available to him at the time and in the geographical locations he worked. The overarching impact of his portrait drawings, designs, and to some extent his paintings is the emphasis on outline. Holbein's use of coloured chalks, watercolours and the blending of these means that his portrait drawings are not just a concentration of contours, but also reflect his abilities as a painter within his drawings. Further, the way in which he used his materials reflects the purpose of the drawings, and his style of drawing.

The research methods chosen, which included the now well-established multi-disciplinary triumvirate of art history, science and conservation, proved to be a very effective means of increasing the understanding of Holbein's drawing materials and techniques. The archaeological approach was particularly useful for establishing the

¹ Ralph Wornum., Some Account of the Life and Works of Hans Holbein, Painter of Augsburg. Chapman & Hall: London 1867.

sequencing of materials, which in turn helped to identify the materials present, and differentiate marks that represented a drawn line, and those that indicated signs of transfer: an aspect often confused in previous literature.

Drawings from Holbein's German, Basel and English periods comprise very similar materials; it was therefore not the materials Holbein used but how he used them that is significant. Some key findings from this research offer insight into 16th century workshop practice. For example, it has established that the prime function of the pink preparation was not as a conventional ground for metalpoint but the basis for a flesh tone; the pink speeded up this process and potentially shortened the sitting time. If the paper was not prepared there was more work to do to establish the flesh tone on a lighter paper, as evidenced from the creation of the flesh tone from amalgamating coloured chalks on the unprepared drawings. Reconstruction of the pink preparation found that the paper needed to be tethered, something not mentioned in the contemporary recipe books. Reconstruction also revealed that the colour change from wet to dry was quite significant and therefore a final shade potentially hard to predict: a finding that could account for the large range of pinks created by Holbein. The pink preparation also accommodated both dry and aqueous media. Further modelling to the face and individualisation of flesh tones were created with the addition of varying red, black and sometimes yellow chalks.

Whether the paper was prepared or not, red and/or black chalk was used for the initial contouring: the sequence is more obvious on some drawings than others and for certain details of a drawing. For example, to delineate Richard Southwell's eyes, the black aqueous lines were applied over red chalk. This research established that the majority of the sitters' irises were painted in watercolour; this was not just about creating a transparent colour apt for irises, something not necessarily possible with chalks, but also about the ease of application in a small area using a brush.

Last in the sequence of drawing media is the black aqueous contouring: the authorship of which has been much debated historically. Black aqueous contouring is the most disputed aspect of the drawings by scholars: the loss of chalk can artificially emphasise them, making them more prominent. However, having examined the drawings, the

function of these lines is better understood. Contouring is important in establishing and then transmitting likeness. The function of these lines was to fix the more friable media: something documented as part of workshop practice. Black was frequently used to pick out details such as individual hairs and the lip line; the black established shape and definition (making it potentially easier to trace) and constitutes something carried over into Holbein's paintings. Further, having located them in 16th century artistic practice and identified that indentations from tracing are made over these lines, it is reasonable to conclude that they are not later additions but lines made by Holbein as part of his drawing process.

Holbein's use of metalpoint as a drawing tool or a tool for tracing the drawings was one of the most complicated issues to untangle. Holbein literature has not been clear about this in its description of the drawings, especially those on the pink preparation.

Although Holbein did create portraits in metalpoint, which display a conventional use of a ground for silverpoint, this research did not find metalpoint as a definitive material for portrait drawing on the later pink prepared papers. The exception is the drawing of Lady Ratcliffe, where it forms part of a design to the left of the sitter, but is not on the portrait itself. Whether metalpoint was used as a tool for tracing over the drawings is harder to say: some lines have been misinterpreted as metalpoint because of the impression left by a tracing tool, when in fact it is a result of the friable media being pushed in the indentation, creating a crisp line, rather like a drawn line. Furthermore, evidence of blind indentations on the some portraits executed on prepared paper provides further evidence that it is the mark from a tracing tool rather than a metalpoint stylus.

Signs of transfer come last in the sequence because it is the finished drawing that is traced. Drawings on prepared and unprepared paper show signs of transfer: one drawing is pounced, others appear to have been traced over with a tool, sometimes leaving an indentation, either blind or impressed into the media.² A definition of what we mean by signs of transfer on Holbein's drawings has been more clearly defined by this research. However, it is not always entirely evident how Holbein transferred his

² Sir Thomas More, 1527, Parker 3, RL12268, on unprepared paper, is pricked for transfer; two examples of drawings showing indentations from having been traced over include: William Warham, Parker 12, RL12272, unprepared paper & Lady Margaret Butts, c.1540/43, Parker 67, RL12264, on pink prepared paper. For others with signs of transfer see Table 4 & 5, Appendix Four.

drawings or who may have had access to them. The use of Holbein's drawings by others is also something that is open to question; there are a number of copies of his portrait drawings, both within and without of the Royal Collection, which could indicate the duplication and use within a workshop by others both during and after Holbein's lifetime.

One of the major problems of making sense of this part of the research is that there is no consistency in the traced lines on many of the drawings: for example the portrait of Lady Butts is heavily indented along the lines of her face, but not along her costume, whilst the portrait of Simon George illustrates intermittent indentations along the drawn lines. In contrast, the 1526 portrait of Jacob Meyer has indentations along almost every line of the drawing. Such inconsistency raises questions about the relationship of the drawings to the underdrawing of a painting. This aspect has proved to be incredibly complex, with few of the drawings having a straightforward one to one match with the underdrawing. For example, although the individual features of the drawing and underdrawing of Simon George match exactly, there is no overall match of the face pattern: lining up the ears of drawing and underdrawing results in a mismatch of the drawn and painted nose. An example of a good match of drawing contour to underdrawing contour is that of the Unknown Gentleman, which includes elements that appear in both drawing and underdrawing, but not on the painting itself: in this case a small ear, making a strong case for the drawing being used for transfer.

Discrepancies in the marrying of the contours of the drawings to underdrawings could be explained by the act of tracing itself, to the use of intermediary cartoons, and by changes made to the painting or underdrawing after tracing. What is important is that some of the traced lines on the drawings match some of those of the underdrawing, thereby confirming a close relationship of drawing to painting. With improvements in technology, mapping and matching of indented lines on the drawing - both blind and those over the drawn lines - to the underdrawn lines of paintings may provide more accurate answers as to how that drawing may have been used and what elements match up.

This research has contributed to a better understanding of the function and use of the drawings. Although the relationship of drawing to painting is not always

straightforward, in terms of function, Holbein's portrait drawings had the potential to play a major part in the production of the final painting: they could be used as face patterns and as a reference whilst painting. Physical evidence on some of the drawings suggests their use for transfer. Moreover, thanks to advances in modern analytical technology, particularly IRR, the close relationship of the drawings to the underdrawings has been revealed.

An aspect outside the scope of this research is the intriguing topic of copies: not just of the portrait paintings but also of the drawings. Copying was common workshop practice in the training of apprentices, but more significantly for this research, copies were made as patterns for repeat use by artists and their workshop.³ Uncertainty surrounding the extent of copies of Holbein's drawings during and after his life makes understanding the use of his portrait drawings for transfer all the more challenging; it also raises questions about the use and distribution of Holbein's drawings or copies of them.⁴ The function of these duplicates is as yet unclear, but it can be argued that the copying of drawings was carried out for a number of reasons: for multiplication of the image for use in a workshop, thereby keeping the original intact; copying for training purposes; and in the case of Clouet's portraits, many copies were made and placed into albums as family treasures for circulation.⁵ The use of copies in a workshop calls in to question the status of Holbein's portrait drawings. It cannot be said with absolute certainty that all the portrait drawings are the result of having been drawn from life: some could represent intermediary stages in the preparatory process or indeed some could be copies or versions of the original life drawing. This is an area that warrants further investigation.

Apart from the portrait of an Unknown Gentleman, 1535, (Parker 33, RL12259, The Royal Collection, Windsor), there are a number of other paintings not attributed to

³ See for instance, Egbert Haverkamp-Begemann, Creative Copies: Interpretative Drawings from Michelangelo to Picasso, London: Sotheby's Publications, New York: Harpers & Row, 1988. 16. And R Billinge et al, Art in the Making: Underdrawings in Renaissance Paintings. Ed. David Bomford. London: National Gallery Company Ltd, 2002. 43-46; Susie Nash, Northern Renaissance Art. Oxford: Oxford University Press, 2008. 167-177.

⁴ There are a number of copies or versions of Holbein's portrait drawings, discussed in Chapter One and Three, such as the two drawings of Sir Charles Wingfield in the Royal Collection, Parker 36, RL12249 and some outside of the Royal Collection, such as the portrait of Cardinal Fisher, Bishop of Rochester, Parker 13, RL12205 and a version at the British Museum, as well as the silhouetted oil on paper version at the National Portrait Gallery.

⁵ See Louis Dimier, French Painting in the Sixteenth Century. London: Duckworth & Co.1904.

Holbein but where the drawings may have played a part in the production of the painting: for example, the Portrait of Lady Rich at the Metropolitan Museum of Art, New York, (Acc.no: 14.40.646).⁶ However, it is also the case that copies may have been made from the paintings themselves: drawing on recent research at the National Portrait Gallery, it is interesting to contemplate how the drawings may relate to later painted copies.⁷ The Making Art in Tudor Britain project team concluded that because of exacting match of proportions and features, the copies were the result of the copyist having access to the original Holbein painting, or at least a pattern made from the original painting.⁸

Susan Foister has pointed out that there is not enough information in the drawings alone to produce faithful copies of a painted portrait, such as those that have been investigated during recent research at the NPG.⁹ The drawings certainly held enough information for the transfer of likeness, but in order to reproduce a copy of a painted portrait, including all its additional attributes (such as the faithful copy of the Louvre version of William Warham at the National Portrait Gallery) then the copying would have to come from the original painting itself. Historian Peter Parshall has commented that it was important for imitation, especially of the natural world, to be as truthful as possible, and with portraiture, likeness would have been key when making copies, making the 'authorised' original drawing or painting an important pattern source.¹⁰ As an example, this concept is illustrated by the repeated use of the portrait drawing of Maximilian I because the original was drawn from life, as discussed in Chapter Four.¹¹

There are still many questions left unanswered in terms of Holbein's materials. For instance, it was not possible to confirm whether Holbein used natural or fabricated chalks, because no samples could be taken that may have identified a binder that would

⁶ See Susan Foister, Holbein & England. 69-71.

⁷ See npg.org.uk: <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/matb-case-study-7.php>

⁸ npg.org.uk website: <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/case-studies/matb-case-study-7.php>

⁹ <http://www.npg.org.uk/research/programmes/making-art-in-tudor-britain/workshops/holbein-and-his-copyists.php>

¹⁰ See Peter Parshall, 'Imago Contrafacta: Images and Facts in the Northern Renaissance,' Art History, 1993.16.556. On copies and imitation see also: Inganno - the Art of Deception: Imitation, Reception, and Deceit in Early Modern Art (Visual Culture in Early Modernity) Eds. Sharon Gregory and Sally Ann Higson. Ashgate Publishing Ltd: 2012.

¹¹ Katherine Crawford Luber, 'Albrecht Dürer's Maximilian Portraits: An Investigation of Versions'. Master Drawings. 29.1.Spring 1991. 45.

indicate a fabricated chalk; it is possible that this question can be answered in the future as analytical techniques become more sophisticated. Whilst the combination of visual and IRR examination could clarify some of the drawing materials, it was not always possible to state whether metalpoint was used, and if it was present, which type of metal it comprised. The complexity of some of the drawings, in particular the portraits of Jane Seymour, Lady Audley, Lady Margaret Butts and Richard Southwell, which comprise several, indistinct layers of dry and aqueous media, in varying condition, made it impossible to ascertain the sequencing of materials.

Although the analytical techniques employed were invaluable tools for the identification of materials and techniques, access to analytical equipment in certain organisations prevented a thorough examination of some of the drawings. For example, it was not possible to conduct Raman analysis on the drawings of Jacob Meyer, Dorothea Kannengiesser and Anna Meyer, all of c.1526, as well as other drawings housed in the Basel Kunstmuseum. It was also not viable to unmount the 85 drawings listed in the Parker catalogue that are sandwiched between Perspex, and the encapsulation of these drawings unfortunately prevented the use of certain analytical techniques that may have helped to establish the use of metalpoint. For example, the Perspex made examination in raking light problematic, and also prevented the use of EDXRF, which would have been a useful tool for establishing the presence of metalpoint on drawings such as the portrait of Jane Seymour, Lady Audley and Lady Margaret Butts. Furthermore, the UV-filtering Perspex used for the mounting of the majority of the Windsor drawings interfered not only with the readings from Raman but also rendered readings from the use of UV light examination useless.

Historical literature often illustrates a lack of understanding of artistic practice, despite opinions being offered on the overall appearance of an artwork. Reconstruction was useful in exploring how materials behave and what would or would not have been possible, and provided an understanding of some of Holbein's working practices. However, there are limitations with reconstruction: primarily the fact that modern materials frequently differ significantly from historic ones; historic recipes tend to be inexact in terms of materials and their quantities; and important elements might be missed out. For example, reconstructing the pink priming layer revealed that the paper

must have been tethered in some way to prevent cockling during application, although authors such as Cennino Cennini do not make any mention of this in their recipes.¹²

An important outcome of this research is the ability to apply a more detailed description of the drawings. For example, watercolour and wetted dry medium are quite similar in appearance but used for different areas of a drawing. It is apparent that Holbein chose each technique to fulfill a particular role, and that there are in fact clear links between these two techniques and their location on a drawing. The ability to better describe Holbein's drawing processes meant an emphasis on the visual nature of this research. It was therefore important to be able to explain and illustrate some quite complex drawing processes. Having gathered thousands of images and details of both the drawings and the paintings, it is possible to incorporate only a very small proportion of these here. These images became an invaluable tool for making comparisons across Holbein's drawings, paintings and designs as well as with those of his contemporaries. The compilation, interpretation, and publication of these images would be an invaluable tool for future Holbein scholars.

Drawing materials are not always easy to identify visually and the study of drawings would be much aided by a revision of three key reference books for this discipline: firstly both James Watrous' 1957 publication, *The Craft of Old Master Drawings*¹³ and the revised edition of 1978 of Joseph Meder's *The Mastery of Drawing*,¹⁴ are still widely used and offer much valuable information, but would benefit from the application of new advances in technology and more comprehensive images that could be used for comparison during examination of a drawing. Secondly, Parker's catalogue is currently only available in black and white and much visual information is therefore absent.

In his Foreword to the 1945 Holbein Windsor drawing catalogue, Parker wrote that 'Wartime is unfavourable to research' and further explained the impact that had on available methods of examination.¹⁵ Parker did not examine the drawings under UV

¹² Cennino Cennini *The Craftsman's Handbook, 'Il Libro dell'Arte'*. Trans Daniel V Thompson, Jr. New York: Dover Publications Inc., 1960

¹³ James Watrous, *The Craft of Old Master Drawings*. Wisconsin: The University of Wisconsin Press, 1957.

¹⁴ Joseph Meder, *The Mastery of Drawing*. Trans. and Revised by Winslow Ames. New York: Abaris Books, Inc., 1978.

¹⁵ Parker. *The Drawings of Hans Holbein at Windsor Castle*. 1945. Foreword.

nor infra red, and as the drawings were laid down on card, a recording of the watermarks was not possible. This research has provided further information regarding Holbein's papers, better establishing their origin and use. Advances in analytical techniques have aided this research. For example, advances in IRR, have resulted in better, clearer images of underdrawings, such as that for the painting of Sir Thomas More in the Frick Collection.¹⁶ This produced a clearer and more useable format by which to make comparisons from drawing to underdrawing. Although there are still many unanswered questions in this area, future technological developments will enable a greater understanding of the relationship between the preparatory drawings and the underdrawings.

Another area for further research is the relationship between portrait drawing and miniature. For example, the portrait drawing and miniature of Lady Audley are closely related in terms of composition, but they differ considerably in scale: further study may help to reveal whether and how the drawing was used in the creation of the miniature. There are other drawings where the relationship between drawing and painting is not clear. For example, the drawing of Lady Guildford shows no signs of transfer, and her pose and attitude was changed from informal and coquettish in the drawing, to a stern formality in the final painting. However, some aspects of drawing to underdrawing do relate, such as the nose, lip-line and eye shape.

Joseph Meder posed an important question in his book, *The Mastery of Drawing*, first published in 1919: 'One is obliged to ask why, if a technical description is given at all, it has any right to be incorrect.'¹⁷ This question, still pertinent today, is a challenge to get right. In the introduction to his 1945 catalogue of the Holbein Windsor drawings, Karl Parker stated that 'The series as a whole abounds in problems, and a number of these undeniably remain unsolved, with little prospect that either time or the clarifying process of study will ever finally penetrate them.'¹⁸ Whilst some uncertainty still remains regarding the media - in particular the use of metalpoint as a tool for transfer

¹⁶ With thanks to Charlotte Hale, Paintings Conservator, Metropolitan Museum of Art for carrying out the new imaging for the painting of Sir Thomas More.

¹⁷ Joseph Meder.1978. Vol I. 7

¹⁸ Karl Parker The Drawings of Holbein at Windsor Castle. Oxford; London.Phaidon Press, 1945. 33

or for drawing, and the precise way the drawings were used - this research has contributed to the growing body of Holbein studies, and to the field of technical art history. The research methods employed have provided a comprehensive method of examining the materials and techniques of the portrait drawings in order to improve our understanding of their function. This methodology can be used as a model to effectively 'read' a drawing in a wider art historical context, and it is hoped that it will be applied in this manner to better understand drawings.

Appendix One: Analysis of the watermarks on Holbein's portrait drawings

(See Tables 3 and 3.1)

There are 18 different watermark types found on the papers that Holbein used for his portrait drawings.¹ These are labelled A to Q and listed by type in Table 3a and also listed by drawing date in Table 3b. Table 3.b offers a chance to look at a possible pattern of use according to the time of the execution of the drawings. Within these types there are variants of each, indicating that Holbein's portrait drawings were drawn on many different papers. What has also been clarified is that whilst there are a few portraits drawn on Swiss, Italian and German papers, much of Holbein's paper for portrait drawing was French in origin, whether he was working in Basel or England. France had an established paper manufacturing and export business in the sixteenth century and French papers were exported across Europe. It should be noted that using watermarks as a reference for dating or tracing the locality of papers has its complications, and paper historians have warned against the reliance on watermarks for dating or tracing the exact locality of the mill.²

There are many variations of single watermarks, not just because of the number of moulds made with that mark, but owing to distortions of both watermark and mould wires that can occur from prolonged mould use. Slight variations as a result of differentiation in shrinkage rates during drying of the paper sheets also have to be taken into account.³ However, these are important aspects to remember when carrying out any study of paper and watermarks, as such idiosyncrasies can help to establish links between papers, and perhaps offer information about patterns of use.

¹ There are a number of references that can be used for watermark identification including Briquet and Piccard which were used for this research see: Charles M Briquet, Les Filigranes: Dictionnaire Historique des Marques du Papier Dès Leur Apparition vers 1282 jusqu'en 1600. Facsimile of the 1907 ed. with supplementary material contributed by a number of scholars. Ed. Allan Stevenson. 4 vols. Amsterdam: Paper Publications Soc., 1968; this also available on line at: http://www.ksbm.oeaw.ac.at/_scripts/php/BR.php (still work in progress, so not fully uploaded); other databases referenced included the online version of Gerhard Piccard (1909-1989) who published one third of his collection in 25 volumes between 1961 and 1997 can be referenced online at: <http://www.piccard-online.de>

² See Dard Hunter, , Papermaking: The History and Technique of an Ancient Craft. New York: Dover Publications Inc., 1943.265 and Paul Needham, 'Concepts of Paper Study', Puzzles in Paper: Concepts in Historical Watermarks. London: Oak Knoll Press, 2000. 1-36.

³ See Philip Gaskell who estimated that each pair of moulds may have made 2000 sheets per day. A New Introduction to Bibliography. Oxford: Clarendon Press, 1972. 62

Dating via watermarks can be complicated by the fact that most reference books cite the date of earliest and latest use, without considering how long paper was stored for before selling, whether it was mixed with other stock, or whether the artist used the paper in the order in which it was acquired. All these factors can complicate paper and watermark research, making it an inexact science.

Fifty-six Holbein portrait drawings have full or partial watermarks.⁴ Some partial watermarks can still be identifiable as belonging to a certain type, as illustrated in Table 3a. The same type of paper traverses Holbein's first (1526-28) and second (1532-43) periods of work in England, as evidenced by papers with similar watermarks (watermark Type D). The dates allocated to these particular portrait drawings range from 1527 to 1543. Some dates of sitters' portraits are more certain, such as the earlier ones on unprepared papers, either because of dated paintings or because of contemporaneous documentation and biographies. The more arbitrary dating of the portraits of unknown sitters, or those without paintings or full biography have been assigned a wider ranging date category of 1527 -43. Although, as previously stated, we cannot be certain of the order in which the paper stock was used by Holbein, the similar watermark types of groups of drawings could point to a closer sequence in date range of a particular drawing campaign. For example, the drawings bearing watermark Type N, the Arms of Austria, have dates assigned that are closer in age range.

Whilst French papers appear to make up most of the paper stock of Holbein's portrait drawings, especially of the English periods, there are also watermarks bearing the Arms of Austria (Type N) and the Arms of Zurich (Type M). These papers could have been imported, or brought over by a visitor or by Holbein himself after his stay in Basel (1528-32). Some watermarks, such as the Gothic P (Type L), are harder to pinpoint origin and region-wise. This type may have originated in France, but appears all over

⁴ Parker 82, not attributed to Holbein but part of the Great Booke, has a deer head watermark. Parker 84, also not attributed to Holbein but part of the Great Booke, has the watermark of the rampant lion with orb and shield, close to Briquet 878. These are included in the table of watermark findings and within this survey.

Germany and the Low Countries.⁵ This watermark is also present in papers for drawings other than portraits in the collection in Basel.⁶

Holbein's early drawing papers whilst working in Augsburg and later, Basel, have watermarks of German, Swiss, and French origin. For example, variations of a watermark of a running bear, suggesting a paper from Berne, appear in many of Holbein's papers for drawings of all sorts of genre of the early 1500s.⁷ Artists would no doubt use paper-stock from the countries they were working in, whether manufactured in that country or imported. For example, Italian and French watermarks are found on Dürer's work – but then he travelled widely and picked up papers as he went.

Given the many anomalies, contradictions and differences in papermaking from region to region, establishing the original size of a sheet in relation to watermarks is not an easy job. However, sometimes the position of watermarks on a sheet offers information about the original size of a mould-made sheet of paper and therefore an approximation can be made of how many drawings may have come from one sheet. The position of the watermarks found on Holbein's drawings have established that most of Holbein's portrait drawings appear to have been executed on half, quarter and occasionally sixth sheets of what would have been several different sheet sizes.⁸ Since many 16th century watermarks were generally centred in one half of the sheet, cutting these sheets in half would account for many of the other half or quarter sheets not having watermarks at all.

The average size moulds used for papermaking in sixteenth century Europe were 356 x 483mm, with the largest sheets measuring 470 x 673mm.⁹ Some portrait drawings are large enough to indicate that they may have been executed on a complete sheet of

⁵ Written communication with paper historian Peter Bower. I am grateful to Peter Bower for his interest and even more so for his generous contribution to solutions for unravelling the often confusing world of paper analysis.

⁶ See Christian Müller, *Katalog der Zeichnungen des 15 und 16 Jahrhunderts*, part 2A 'Die Zeichnungen von Hans Holbein dem Jüngeren und Ambrosius Holbein'. Öffentliche Kunstsammlung Basel Kupferstichkabinett, Basel:Schwabe. 1996, which lists watermarks, found on Holbein's drawings of all genres in the Basel collection. 301

⁷ See Christian Müller.1996.287-303

⁸ Dürer, Antwerp April 11-17 May 1521, writes that "I drew three 'Bearing of the Cross' and two 'Mounts of Olives' on five half sheets."

⁹ Dard Hunter.1943. 224. There are many discrepancies and disagreements regarding mould sizes and it is hard to fathom exact measurements. Larger papers were made.

mould-made paper, albeit trimmed. The portrait drawing of Lady Guildford of 1527 measures 552 x 385mm; that of Nicholas Carew of 1527 measures 548 x 385mm and that of James Butler, 9th Earl of Ormond (Parker 23) of 405 x 294mm). The positioning of the watermarks and horizontal running of the chain lines when in a portrait format indicate a full-sheet was used. For example, the watermark of the paper used for the drawing of James Butler is located left of centre of the sheet, indicating a full sized sheet from a twin mould. The size of the paper becomes significant because it could reflect the size of the panel, and therefore the cost of the commission. For example, the portrait drawing of William Reskimer, c.1533, is 293 x 212mm, and the panel painting measures 464 x 337mm, with the actual drawing a one to one transfer to the panel. Whereas the portrait drawing of Lady Guildford, 1527, measures 552 x 385mm with her painted panel measuring a more substantial, but still relational 800 x 650mm. The size of the drawing of Lady Guildford is almost twice as big as that of Reskimer, and relationally so is the panel on which she is painted. The increased size of the panel in relation to the paper is to provide a better and more proportional placement within the panel. Size of paper in relation to function of the drawing and size of commission was discussed in more detail in Chapter Four.

As described above, the shape, positioning on the sheet, and sometimes the idiosyncrasies of watermarks can be an indicator that different drawings were executed on the same batch of paper, and perhaps even during particular drawing campaigns. Such outcomes are an example of using paper evidence as a tool for establishing a common place and plausibly a common date of use. This would seem to be the case for a number of portrait drawings executed during Holbein's first visit to England in 1526-28, which comprises Watermark Type A. The drawings of Lady Guildford, Sir Henry Guildford, Nicholas Carew, and Sir Thomas More (Parker 3), all of 1527, bear the exact same watermark in type, shape and idiosyncrasies; it is therefore possible to assert that these papers came from the same mould. As discussed above, watermarks in the sixteenth century would have been sewn on to the moulds and these sewing points can show up as small 'dots' on the shaped wires, which are unique for each mould. The watermarks in all these drawings are identical, especially the little kink in the outer wire of the shield. Paper bearing the watermark Type A represents five drawings on three different batches of paper from the same French region or mill.

Another watermark that may link a group of drawings is Type N, the Arms of Austria. This watermark is found on the papers of the portrait drawing of Richard Southwell of 1536, Frances, Countess of Surrey, 1532-33, A Gentleman, Unknown (Parker 44), and A Man, Unknown (Parker 68): the latter two have been allocated a wide date range of 1532-43.¹⁰ However, because of the use of this particular paper type, there is an argument to be made in bringing these drawings closer to a date of common execution, around the mid 1530s, particularly as the painted version of Richard Southwell can be precisely dated to 1536. This is also supported by the fact that the pink preparation of Frances, Countess of Surrey (Parker 18), and Richard Southwell (Parker 38), are very similar. Although the drawing of Charles de Solier, 1534/35, now outside of the Royal Collection, does not have a watermark, its streaky, stain-like pink preparation is also very similar to the drawing of Southwell and the Countess of Surrey portrait drawings. The portrait drawings of husband and wife Elizabeth, Lady Rich (Parker 55) and Richard, Baron Rich (Parker 80), both with uncertain dates of 1532-43, appear to be drawn on paper made from the same mould. However, the pink preparations on each differ, implying that they were not made with the same batch of preparation, as discussed in Chapter Three.

Watermark Type D, a French paper, encompasses both of Holbein's English periods. It was used for drawings on unprepared and prepared papers, suggesting that this type of paper was suitable for both types of drawing surfaces. The surface typography of available papers played an important role, there would need to be a compromise between the roughness needed for chalk or metalpoint, and the smoothness needed for aqueous media; Holbein's papers needed to accommodate all these things. Some portrait drawings also bear watermarks found on other genres of drawing, again suggesting that these papers were fairly universal, not just in the sense of being available, but in relation to being suitable for the task in hand. For example, the same Type N watermark is also found on papers that make up the Whitehall Cartoon, completed in 1537. This date further links it with the drawing of Southwell of 1536 and strengthens the argument for placing the other drawings with this watermark at a similar date. This also illustrates that the same type of paper was used for both large-scale cartoons and small-scale portrait drawings.

¹⁰ See Royal Collection online catalogue, <http://www.royalcollection.org.uk/microsites/Holbein/>

Generally French in origin, the hand watermark type (see Types H to K) is abundant in many forms, both gloved and ungloved. There are so many variants, in fact, that Briquet, who cites over 1000 hand watermarks, divides them into six categories many of which are hard to distinguish individually.¹¹ Watermark Type I is apparent on the paper of the drawing of Mary, Duchess of Richmond (Parker 16, 1532/33) and John Poyntz (Parker 54, 1535), but they are from different paper moulds. However, the paper used for a drawing attributed to Holbein in the British Museum of a woman seated on a settle with four children, 1532-33 (Inv.no. AN103110001, 134 x 169mm, pen and black ink over black chalk) is not just the same watermark type as these two portrait drawings, but also appears to be from the same mould as the paper used for the portrait of John Poyntz, (Parker 54). It is hard to determine exactly what this means, given that it is a small sample, but it may tell us something about Holbein's pattern of use, if we assume a certain use of a batch of purchased papers, and therefore perhaps a common date of use.

According to Briquet, the large eight-petalled watermark, Type P, is from the Lombardy region and is often found in German incunables. Lombardy's position in Northern Italy would make its presence in Basel very plausible. The watermark is found on the paper of the portrait drawing of Bonifacius Amerbach, c.1525 and Dorothea Kannengiesser of 1526. It is also found in part of the stained glass design Virgin and Child under a Renaissance Portico, c.1522/25, (Inv. 1662.36, 422 x 466mm, watercolour, black pen and ink over black chalk, white highlights). The dates of these drawings concur with the use of the paper in this and many other instances. It seems that these papers, of good to fair quality, were used for a variety of preparatory drawings in various media. Furthermore, the same papers were used for drawing and painting. Holbein portrait paintings executed on paper have also been found to bear the same types of watermark as some of his portrait drawings. Again perhaps indicating that the paper surface was suitable for many types of media and techniques. A watermark, similar to Briquet 15257 (oxhead without eyes, an early paper noted in Briquet from 1502-05, common to the Ravensburg area) has been recorded in raking light on the portrait painting, oil on

¹¹ See Briquet, Les Filigranes, 1907. Vol.3.544 and Dard Hunter. 137

paper, of Hertenstein of 1517, Metropolitan Museum, New York.¹² Furthermore, watermark Type O, recorded on the 1516 drawing of Jacob Meyer is also noted as present on the paper for the oil painting on paper, adhered to wood, of Adam and Eve of 1517 (Basel, Kunstmuseum, Inv. no: 313, 300 x 355mm).¹³ A more in-depth discussion on paper as a support for painting can be found in Chapter Four.

The pot watermark, as illustrated by Types D to G in the watermark table, is also a common French papermaker mark with many variations. The watermarks of Type E are very similar to each other and may indicate a common usage date. The same could be said of the nine drawings with watermarks in Type D, of which there are at least 7 variants of the pot watermark. The drawings with this type of watermark include those from the More family, (Parker 1 to 7) as well as the Study for the Thomas More Family Portrait itself, in Basel, (Inv.1662.31, 389 x 524), the latter of which appears to have been drawn on an undivided full sized sheet of paper. The portrait drawings of William Fitzwilliam, Earl of Southampton, Parker 66 (1536-40) and Lady Borough, Parker 40 (1532-42) have such similar watermarks, including sewing points and shapes, that it is reasonable to infer that they come from the same mould. However, the preparation layers differ, so were not from the same application of a batch of pink preparation.

Watermarks can be quite obvious on some papers and the thinner area of fibres can affect pigment absorption. Recent research has also concluded that Dürer had a preference for using paper without distracting watermarks for making prints.¹⁴ But from the presence of watermarks on paper that Holbein used, often very prominently positioned in the middle of a sitter's face, he obviously was not concerned by this aspect. This perhaps further supports the drawing's function as working drawings and not for public consumption, unlike Dürer's prints.

¹² See Briquet.1907., Vol.4.765. Maryan Ainsworth notes this watermark on advice from Basel conservator, Peter Berkes in her article "'Paternes for phiosioneamyces': Holbein's portraiture reconsidered." The Burlington Magazine 132.1044 .March 1990. 175.

¹³ See C. Müller Hans Holbein the Younger: The Basel Years 1515-1532.2006. 161 and 171.

¹⁴ Angela Campbell, 'Charismatic copper: An examination of the materials and practices used in Northern Renaissance engraving'. Oral presentation at symposium: The Renaissance Workshop: The Materials and Techniques of Renaissance Art, 10-11 May 2012, The British Museum, London.

Appendix Two: Reconstruction of a Pink Preparation

Writing in the fifteenth century, Cennino Cennini lists ingredients for a basic white preparation for paper and parchment, as described in Chapter Three. Since calcium carbonate was identified in Holbein's preparation, 'whiting' (a form of calcium carbonate or chalk) was selected as the filler for the reconstruction.¹ Vermilion was the red colourant identified by Raman analysis in Holbein's pink preparations and is what gives the flesh colour its pink hue; vermilion was therefore also used for the reconstruction. This orangey-red opaque pigment is a synthetic version of the natural red pigment, cinnabar. Cennini and the Strasbourg Manuscript both recommend vermilion as the addition for flesh tones.² Karel van Mander claimed that it 'makes all flesh glow'.³ The Strasbourg Manuscript describes how to make flesh tints according to the age of the person painted, suggesting the addition of ochre for older folk and adjusting the amount of vermilion and ochre depending on the type of skin tone to be depicted.⁴ Although yellow ochre⁵ was not identified in the flesh tone specifically by Raman analysis, this was used in the reconstruction mixtures to recreate the more salmon preparations of some of Holbein's portrait drawings.

Historic recipes list various binders including gum Arabic, linseed oil, animal product sizes, and even saliva.⁶ Rabbit skin glue was selected as the binder for the reconstruction: it is more flexible and lighter in colour than glue made from bone, and has less impact on the colour of the mixture. Mixed initially to a thick paste the mixture was then tempered with more rabbit skin glue and warm water to bring it to a

¹ Whiting, or 'Spanish white' is purified powdered white chalk (calcium carbonate) prepared by triturating common chalk with a large quantity of [water](#), which is then decanted and allowed to [deposit](#) the finely-divided particles it holds in suspension

² Cennini. *The Craftsman's Handbook, 'Il Libro dell'Arte'*. Trans Daniel V Thompson, Jr. New York: Dover Publications Inc., 1960. 12.

³ Karel van Mander, *The Lives of the Illustrious Netherlandish and German Painters*, from the First Edition of the *Schilder-boeck 1603-1604* ed. Trans. H Miedem. Doornspijk: Davaco. Vol.5. 218

⁴ *The Strasburg Manuscript: A Medieval Painter's Handbook*, trans. Viola and Rosamund Borradaile. Tiranti: London, 1966. 57

⁵ Yellow ochre was detected on the drawing of Cecily Heron, 1527, Parker 5, RL 12269, The Royal Collection, The Royal Library, Windsor, in the areas drawn in yellow chalk.

⁶ James Watrous, *The Craft of Old-Master Drawings*. Trans. and Revised by Winslow Ames. New York: Abaris Books, Inc., 1978. 15

consistency of thin cream. This was found to be ideal: too thin and it was more like a wash - like that of the drawing of Southwell - too thick and it cracked as it dried. Preparations were made up, varying the quantities of whiting, vermilion and yellow ochre to see what shades of pink could be made.⁷

The same sized mini scoop was used to measure out the dry ingredients. Each scoop was weighed: a scoop of whiting = 0.4g, a scoop of vermilion = 0.3g and yellow ochre = 0.35g. Four different shades of pink were prepared made from varying the amounts of vermilion and ochre: 'pale pink', 'pink', 'dark pink' and 'salmon', see Figure 87. As expected, the more whiting that was used, the more opaque and paler the pink. Increasing the amount of vermilion, increased the intensity of the pink, but yellow ochre was need to temper this and create a more realistic skin tone. The 'pink' sample had more vermilion than ochre whilst 'dark pink' just contained vermilion. Creating a more intense orangey pink involved adding more ochre. For example, a salmon pink was made up using 5.2g of whiting (13 scoops), 0.4g ochre (a little bit more than one scoop) and 0.25g of vermilion (a little less than one scoop), see Figure 87.1. Rabbit skin glue (of 1:6 glue: water proportions) was used to combine the pigments and filler into a stiff paste before being diluted, see Figure 87.2. Vermilion is not very miscible in more liquid solutions, which may account for the very evident particles in Holbein's pink preparations. The thick paste was then diluted to the consistency of thin cream with rabbit skin glue and water. It also became apparent that it is very hard to adjust the colour by adding more vermilion once the mixture is dilute because of the problems with the immiscibility of vermilion in liquids.

Hand-made laid paper was selected for the reconstruction. Cennini recommends stretching out parchment prior to applying the preparation, but does not mention this for the paper.⁸ It was problematic coating the paper with the preparation unless it was tethered in some way as the water in the mixture caused the paper to expand and cockle. The paper was therefore dampened and stretched using paper tape. This part of the reconstruction raised many questions regarding space needed to carry out the process as well as the method of this part of the procedure. Painting out numerous sheets at any one time would take up a lot of space. Papers made up in small batches

⁷ With thanks to Timea Talian for her assistance and supply of rabbit skin glue in the reconstruction

⁸ Cennini.¹⁰

could account for the myriad of pinks that constitute Holbein's portrait drawings. How would Holbein or a workshop assistant have stretched their paper and coated it? Untethered paper resulted in the paper not drying flat. Paper strips could have been pasted out and applied around the edges of the damp paper, stretching it as it dried. Alternatively, the edges of the paper could be pasted on the verso and attached to a flat surface. But this raised questions about what kind of surface a sixteenth century artist would stretch the paper on – walls, tables and wooden boards perhaps amongst the options.

Cennini recommends a soft bristle brush for the application of the preparation, brushed in one direction and then the other, building up to as many as 5 layers.⁹ Two coats proved sufficient not only to coat the entire sheet evenly, but also to facilitate the use of metalpoint, and aqueous and friable media. Brush strokes are not visible on the surface if the consistency of the mixture is that of thin cream. Burnishing the preparation provided a surface that resulted in the application of crisper, finer lines of chalk and watercolour but it is impossible to know if Holbein burnished his papers prior to or after preparation, as the evidence has been lost as a result of more than 500 years of wear and tear.

⁹ Cennini.10

Appendix Three: Dürer's drawing apparatus and some observations following its reconstruction and use

As discussed within the thesis, a number of factors relating to the appearance of Holbein's portrait drawings have caused numerous critics to suggest that Holbein used mechanical drawing aids, not unlike the drawing apparatus as described and illustrated by Albrecht Dürer, Figure 54.¹ Parker believed such a device would have speeded up Holbein's drawing process, thereby helping him with both the potential impatience of sitters and the increased number of commissions during his second English period (1532-43).² The emphasis on contour and apparent precision of Holbein's portrait drawings led certain historians to cite the use of this apparatus. However, when really scrutinized, Holbein's portrait drawings show him searching for the contour during the sitting, resulting in multiple lines. This somewhat contradicts the use of a drawing aide that encourages a traced line as its way of capturing a shape, or in this instance, a likeness.

A lack of contemporaneous documentation on tracing could be the result of it belonging to what art historian Linda Freeman Bauer calls the 'mechanical' side of art, and therefore not something that was readily discussed in artists' treatises.³ Whilst not exactly tracing another's work, using mechanical aids for drawing portraits is also not well documented. The drawing apparatus, as illustrated by Dürer, consisted of a wooden frame fitted with a pane of glass. The artist would use a 'sight', either a loop or point, by which to focus on the sitter. A reconstruction of this apparatus was based on the woodcut of 1525, (Figure 55).⁴ Its construction and use generated many questions about the practicality of such a device. For example, being made of wood and glass, it was not easily transportable. More importantly, it begged questions regarding 16th century glass production and its availability, size and quality.

¹ Albrecht Durer. Unterweisung der Messung. 1525, Trans. Walter L. Strauss. New York: Abaris Books, 1977.

² Parker.1945. 31

³ Linda Freeman Bauer, A Letter by Barocci and the Tracing of Finished Paintings. The Burlington Magazine . May 1986. 128.998.335-337

⁴ The drawing apparatus was made with great craftsmanship by Roger Murray, V&A

Domestic glazing was rare in 16th century England, it was expensive and a reserve of the wealthy. Window or flat glass in the form of crown glass, was not produced in significant quantities in England until the late 17th century.⁵ Prior to this, production of broad sheet glass, made in Sussex in the 13th century, had ceased by the early 16th century. Broad sheet glass is made by blowing molten glass into a cylinder that is then split and flattened onto an iron plate. This type of glass had many imperfections and would not have been easy to draw on. Crown glass, imported from France until its production in England in the 1670s, took the form of discs from being blown and flattened by being spun out into what could be fairly large sheets. From this the glass was cut to the required size. Glass from this process was not clear and flat, nor was it evenly distributed across the disc. Made from predominantly green glass in this period, these discs would have been thicker and more opaque in the middle, tapering to become thinner on the outer edges. Whilst the distortions could be reduced through grinding, bubbles and unevenness would have made drawing on such a sheet problematic. Perhaps from this we can conclude that a sheet of glass on which to draw and then transfer was not as readily available or of good quality as has been assumed.

Whilst Dürer recommended the use of his drawing apparatus for the less able portrait artist,⁶ clearly a skill not lacking in Holbein, Leonardo da Vinci advised using it for landscape and not for figure drawing.⁷ Describing the glass size as being that of half a sheet of 'royal' paper, Leonardo was more specific about its distance from the sitter: two thirds of an 'ell'⁸ from the draughtsman.⁹ Viewed through a loop or point, which focussed the eye on the same plane so as to counter a loss of positioning, the shape of the sitter was drawn directly on to the glass pane. It is unclear with what exact medium was best for drawing on the glass. Leonardo suggested red chalk or with a brush and readily soluble colour.¹⁰ If the sitter was outlined on the glass using a sticky pigment,

⁵ See the Institute of Historic Building Conservation:

http://www.ihbc.org.uk/context_archive/48/periodwindow.htm

⁶ See W L Strauss: (tr. With comm.: The Painter's Manual: A Manual of Measurement of Lines, Areas, and Solids by means of Compass and Ruler Assembled by Albrecht Durer for the Use of All Lovers of Art with Appropriate Illustrations, Arranged to be Printed in the year MDXXV by Albrecht Durer. 1977. New York: Abaris Books.

⁷ J. Meder. 1978. 410

⁸ An 'ell' was unit of measurement approximating a man's arm length from the elbow to the top of the longest finger

⁹ J. Meder. 1978. 410.

¹⁰ J. Meder. 1978. 410.

such as printers' ink, then an offset of this could be taken by pressing a sheet of paper directly on to the glass. However, this would result in an image in reverse and would then involve another transfer in order to rectify the mirror image. All this would take time; something the apparatus was supposed to have saved. More importantly, from visual analysis, the sequencing of Holbein's portrait drawings does not seem to confirm the use of such a process.

Through reconstruction and experimentation even with media applied to flat, modern glass via brush, damp chalk and a pen, it proved to be a far from straightforward process. The lack of rigidity of a brush meant drawing on glass was more problematic when trying to gauge distance to the glass whilst looking through the sight. It was difficult to know exactly when the brush would meet the glass, making an imperfect start to the line. Trained artists found it difficult to trace the contours of the sitter's face on the glass without imposing their own style of drawing. In other words, rather than *tracing* features they were *drawing* the portrait on glass. The pure act of tracing the face contours seemed better left to those who had no artistic training. This would support Dürer's idea that it was not so much suited to those who were proficient at capturing the likeness.

Parker concurred with Meder in relation to what they both considered to be the 'flat' appearance of some of Holbein's drawings and that this was due to viewing the sitter through the peep hole, using one eye to capture the image through the glass, therefore forfeiting the stereoscopic effect afforded by normal sight.¹¹ The artist David Hockney has also asserted that Holbein may have made use of mechanical aids, pointing to the rendering of Sir John More's clothing, (a drawing on unprepared paper from Holbein's first visit in 1527) arguing that the lines are made 'quickly in one go, like tracing' as well as the off-kilter positioning of the philtrum (the groove between nose and upper lip) of most sitters.¹² This twisting of the philtrum to the front of the face is only really evident in the drawing of Jacob Meyer, c1526 (see image). There are some drawings where it is problematic to work out the directional gaze of Holbein's sitters, as each eye appears to

¹¹ Parker.31

¹² David Hockney. Secret Knowledge: Rediscovering the lost techniques of the Old Masters. London: Thames and Hudson.2001.133

be very slightly different in its gaze, as seen in the portrait of Charles Wingfield, Parker 36 (RL12249, 286 x 198mm). This aspect, together with Hockney's issue could be explained by the act of drawing itself. Research carried out in to the hand and eye movements of an artist in capturing likeness produced evidence that an artist drawing a portrait from life changes his or her gaze many hundreds of times from looking up to subject and down to paper:

This changing gaze is a fundamental aspect of picture production, and a direct consequence of the subject-to-picture transformation taking place in the artist's brain.¹³

Dürer does not actually relate how to get from the glass drawing to the paper drawing stage, but once the contours of the sitter were drawn on to the glass, they could be transferred on to a paper support, either by tracing them with the paper held against the light on the glass, which is more problematic if working with opaque prepared papers, or alternatively traced with oiled paper and then on to a paper support for further working.¹⁴ Transferring the image from the glass onto the paper or via tracing paper added more processes to what was supposed to be a time saving exercise. The form transferred from glass to paper support was thought to act as a 'mechanical skeleton' on which Holbein added the other necessary accoutrements in order to render the sitter.¹⁵ However, Ganz produces a strong and practical argument against Holbein's use of the glass drawing apparatus, citing Holbein's inherent skill as an artist, rendering such an apparatus 'superfluous and inexpedient' and further that the outlining was part of Holbein's style as an artist.¹⁶ Holbein's drawings and the sequencing of the media, in the majority of cases, would not seem to support the use of a drawing apparatus.

¹³ R.C Maill and J Tchalenko., *Drawing and Cognition: Eye Movements in Portrait Drawing*. www.arts.ac.uk/research/drawing_cognition/portrait.htm. This website is a shorter version of this study which appears in *Leonardo*, Vol.34, No.1, 35-40. 2001

¹⁴ Meder.410

¹⁵ J . Meder, *The Mastery of Drawing*, translated and revised by Winslow Ames, New York, 1978 Vol. 1. 1978. 339

¹⁶ P. Ganz, *Handzeichnungen Hans Holbein des Jüngeren in Auswahl 1937*. Kritischer Katalog 1937 pxxi &18.

Appendix Four: Tables

TABLE 1: Drawing and paintings by Hans Holbein: location & inventory information for drawings that relate to paintings of the same sitter and constitute the main body of work studied for thesis

Drawing of Sitter	Location	Inv. No	Painting Location/ Inv No.
Jacob Meyer, 1516	Basel Kunstmuseum, Kupferstichkabinett	1823.137	Double portrait Inv. 312 Basel Kunstmuseum
Dorothea Kannengiesser, 1516	Basel Kunstmuseum, Kupferstichkabinett	1823.137a	
Jacob Meyer c1526	Basel Kunstmuseum, Kupferstichkabinett	1823.140	Darmstadt Madonna (no longer on loan to Städel)
Dorothea Kannengiesser, c1526	Basel Kunstmuseum, Kupferstichkabinett	1823.141	
Anna Meyer, c1526	Basel Kunstmuseum, Kupferstichkabinett	1823.142	
Sir Thomas More, 1527 Parker 3	The Royal Collection, The Royal Library, Windsor	RL12268	The Frick Collection, New York, 1921.1.77
William Warham, 1527 Parker12	The Royal Collection, The Royal Library, Windsor	RL12272	Musée du Louvre, Paris 1344
Sir Henry Guildford, 1527 Parker 10	The Royal Collection, The Royal Library, Windsor	RL12266	The Royal Collection, Windsor. RCIN 4000046
Mary, Lady Guildford, 1527	Basel Kunstmuseum, Kupferstichkabinett	1662.35	St Louis Art Museum 1:1943
William Reskimer, c1533 Parker 31	The Royal Collection, The Royal Library, Windsor	RL12237	The Royal Collection, Windsor RCIN 404422
Charles de Solier, 1534/35	Staatliche Kunstsammlungen, Kupferstichkabinett Dresden	C1977-156	Staatliche Kunstsammlungen, Gemäldegalerie, Dresden. 1890
An Unknown Gentleman, 1535 Parker 33	The Royal Collection, The Royal Library, Windsor	RL12258	The Metropolitan Museum of Art, New York. 49.7.28
Simon George of Quocote, c1535 Parker 35	The Royal Collection, The Royal Library, Windsor	RL12208	Städelsches Kunstintitut, Frankfurt. Inv.no.1065
Sir Richard Southwell, 1536 Parker 38	The Royal Collection, The Royal Library, Windsor	RL12242	Galleria degli Uffizi, Florence. 765

Drawing of Sitter	Location	Inv. No	Painting Location/ Inv No.
Jane Seymour, 1536/37 Parker 39	The Royal Collection, The Royal Library, Windsor	RL12267	Kunsthistorisches Museum, Vienna, Gemäldegalerie. GG Inv.no.881
Elizabeth, Lady Audley, c1538 Parker 58	The Royal Collection, The Royal Library, Windsor	RL12191	Miniature, Royal Collection, Windsor RCIN 422292
Edward, Prince of Wales, c1538 Parker 46	The Royal Collection, The Royal Library, Windsor	RL12200	National Gallery of Art, Washington DC, Andrew W Mellon Collection. 1937.1.64
Lady Margaret Butts, c1540/43 Parker 67	The Royal Collection, The Royal Library, Windsor	RL12264	Isabella Stewart Gardner Museum, Washington. P21e5

TABLE 2: Size of drawings and size of paintings

Sitter	Sheet size	Panel size	Notes
Jacob Meyer, 1516	281 x 190mm	385 x 310mm (each panel)	Double portrait of two panels
Dorothea Kannengiesser, 1516	286L x 201mm (293mm on right)		
Jacob Meyer c.1526	377 x 272mm	1465 x 1020mm	Darmstadt Madonna
Dorothea Kannengiesser, c.1526	390 x 280mm		
Anna Meyer, c.1526	356 x 274mm		
Sir Thomas More, 1527	402 x 301mm	749 x 603mm	
William Warham, 1527	401 x 310mm	820 x 660mm	
Sir Henry Guildford, 1527	388 x 298mm	826 x 664mm	
Mary, Lady Guildford, 1527	552 x 385mm	800 x 650mm	
William Reskimer, c.1533	293 x 212mm	464 x 337mm	
Charles de Solier, 1534/35	330 x 249mm	925 x 754mm	
An Unknown Gentleman, 1535	298 x 222mm	Diameter 305mm	Painting not attributed to Holbein
Simon George of Quocote, c.1535	281 x 193mm	310mm (diameter)	Roundel
Sir Richard Southwell, 1536	370 x 281mm	475 x 380mm	
Jane Seymour, 1536/37	503 x 285mm	654 x 407mm	
Elizabeth, Lady Audley, c.1538	292 x 207mm	56mm (diameter)	Miniature
Edward, Prince of Wales, c.1538	267 x 226mm	568 x 440mm	
Lady Margaret Butts, c1540/43	380 x 272mm	472 x 369mm	

TABLE 3a: The Watermarks of Holbein’s Portrait Drawings: By Type

Unless otherwise stated, watermarks within types are not necessarily of the same mould. See Figures 88-103, representing examples of each type (apart from Type O, for which there is no image)

Watermark Type A Paper Origin (FIG: 88)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no’s and Location
Crowned shield containing three fleur- de-lys with letter b/d (Arms of France)	Sir Thomas More	1527	Variant of Briquet 1827	Unprepared	RL12268 Parker 3 Windsor (same mould as Lady & Sir Henry Guildford & Nobleman, below)
	Sir Henry Guildford	1527	Variant of Briquet 1827	Unprepared	RL12266 Parker 10 Windsor (same mould as Parker 3, Lady Guildford & Nobleman)
	William Warham	1527	Variant of Briquet 1827	Unprepared	RL12272 Parker 12 Windsor. Not same mould as two above
	Lady Mary Guildford	1527	Variant of Briquet 1827	Unprepared	Inv.1662.35, Basel, Kunstmuseum (same mould as Parker 3,10 and Nobleman)
	Nicholas Carew	1527	Variant of Briquet 1827	Unprepared	Inv1662.34, Basel, Kunstmuseum (not same mould as others)
	Portrait of A Nobleman	1527	Variant of Briquet 1827	Unprepared	Inv.1662.122, Basel, Kunstmuseum (same mould as Parker 3 and 10 and Lady Guilford)

Watermark Type B Paper Origin (FIG.89)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Crowned shield containing three fleurs-de-lys with diagonal pattern and initials, IP/VP(?) below. France, Troyes.	Margaret, Lady Elyot	c.1532-4	Variant of Briquet 1050	Pink prepared	RL12204 Parker 14 Windsor (no image, drawing not available for photography)
	Elizabeth, Lady Vaux	c.1536	Variant of Briquet 1050	Pink prepared	RL12247 Parker 25 Windsor (different mould to Parker 34)
	Sir Nicholas Poyntz	c.1532-43	Variant of Briquet 1050	Pink prepared	RL12234 Parker 34 Windsor (different mould to Parker 25)

Watermark Type C Paper Origin (FIG: 90)	Sitter	Date of Drawing	Watermark Reference	Paper Type/Origin	Inv.no's and Location
Crowned shield topped by flower, containing cross and bird, France	Simon George of Quocoute	c.1535	Variant of Briquet 1255	Pink prepared	RL12208 Parker 35, Windsor

Watermark Type D Paper Origin (FIG: 91)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Two-handled pot with double flower cresting. France, Champagne	Sir John More	1527	Briquet 12863	Unprepared	RL12224, Parker 1 Windsor (same mould as Parker 9)
	Sir Thomas More	1527	Briquet 12863	Unprepared	RL12225, Parker 2 Windsor
	Anne Cresacre	1527	Briquet 12863	Unprepared	RL12270, Parker 7 Windsor
	Margaret Giggs	1527	Briquet 12863	Unprepared	RL12229, Parker 8 Windsor
	An Unknown Woman	1527	Briquet 12863	Unprepared	RL12217, Parker 9 Windsor (same mould as Parker 1)
	Thomas Boleyn, (James Butler 9 th) Earl of Wiltshire	c.1533	Briquet 12863	Pink prepared	RL12263, Parker 23 Windsor
	A Gentleman, Unknown	c.1532-43	close to Briquet 12863,12864 and 12866)	Pink prepared	RL12258, Parker 32 Windsor
Two-handled pot with double flower cresting. France, Champagne	Lady Borough	c.1532-43	Briquet 12863	Pink prepared	RL12193, Parker 40 Windsor (similar sewing points/wonky flower as Parker 66)
	William Fitzwilliam Earl of Southampton	c.1536-40	Briquet 12863	Pink prepared	RL12206, Parker 66 Windsor (similar sewing points/wonky flower as Parker 40)
	Sir Gavin Carew	c.1532-43	Variant of 12863	Pink prepared	RL12196, Parker 77 Windsor

Watermark Type E Paper Origin (FIG: 92)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Two handled pot no flower cresting, France	Jane, Lady Lister	c.1532-43	Variant of Briquet 12863?	Pink prepared	RL12219, Parker 20 Windsor
	Henry Howard, Earl of Surrey	c.1533-36	Variant of Briquet 12863?	Pink prepared	RL12216, Parker 29 Windsor
	Sir Charles Wingfield	c.1532-40	Variant of Briquet 12863?	Pink prepared	RL12249, Parker 36 Windsor
	A Lady Unknown	c.1532-43	Variant of Briquet 12863?	Pink prepared	RL12190, Parker 47 Windsor

Watermark Type F Paper Origin (FIG: 93)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
One handled pot with double flower cresting, France	Jean de France, Duc de Berry	c.1527	Variant of Briquet 12632	Unprepared	Inv.1662.125, Basel, Kunstmuseum

Watermark Type G Paper Origin (FIG: 94)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
One handled pot with letters, partial watermark, France?	A Gentleman: Unknown	c.1532-43	Unknown: watermark cut so not able to pinpoint in Briquet etc	Prepared	Parker 74

Watermark Type H Paper Origin (FIG: 95)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Hand topped by 5- pointed star/flower, France	Cardinal Fisher, Bishop of Rochester	c.1532	Not clear enough to select Briquet no.	Pink prepared	RL12205 Parker 13 Windsor

Watermark Type I Paper Origin (FIG: 96)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Hand with figure 3 in palm, topped by 5- pointed star/flower, France	Mary, Duchess of Richmond and Somerset	c.1532-33	Variant of Briquet 11369	Pink prepared	RL12212 Parker 16 Windsor
	John Poyntz	1535	Variant of Briquet 11369	Pink prepared	RL12233 Parker 54 Windsor
Watermark Type J Paper Origin (FIG: 97)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Hand with figure 3 in palm & initials RP across wrist, topped by 5 pointed star/flower, France	Elizabeth, Lady Rich	c.1532-43	Variant of Briquet 11387	Pink prepared	RL12271 Parker 55 Windsor (same mould as Parker 80)
	Richard, Baron Rich	c.1532-43	Variant of Briquet 11387	Pink prepared	RL12238 Parker 80 Windsor (same mould as Parker 55)

Watermark Type K Paper Origin (FIG: 98)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Hand topped by crown, France	An Ecclesiastic, Unknown	c.1535	Variant of Briquet 11391	Pink prepared	RL12199 Parker 59 Windsor
	A Lady, Unknown	c.1533-36	Variant of Briquet 11391	Pink prepared	RL12189 Parker 63 Windsor

Watermark Type L Paper Origin (FIG: 99)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Gothic Letter P with quatre foil France?	Sir Philip Hoby	c.1532-43	Briquet 8653	Pink prepared	RL12210 Parker 50 Windsor Rotterdam 1532?
Partial Watermark cut, but part of Gothic P	Lady Hoby	c.1532-43	Briquet 8653?	Pink prepared	RL12211 Parker 51 Windsor
Watermark cut, but part of Gothic P	A Lady, Unknown	c.1532-43	Briquet 8653?	Pink prepared	RL12218 Parker 62 Windsor
Not very readable but possibly Gothic P	Lord Francis Russell	c.1534-38	Briquet 8653?	Pink prepared	RL12240 Parker 70 Windsor

Watermark Type M Paper Origin (FIG: 100)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Rampant lion holding orb and shield. Arms of Zurich	Mary Zouch	c.1533-36	Briquet 878	Pink prepared	RL12252 Parker 72, Windsor
	Edward Stanley, Earl of Derby	c.1532-43	Briquet 878	Pink prepared	RL12243 Parker 52, Windsor
	Sir John Gage	c.1532-43	Briquet 878	Pink prepared	RL12207 Parker 78, Windsor
	Thomas, Baron Wentworth	c.1532-43	Briquet 878	Pink prepared	RL12248 Parker 79
	A Gentleman: Unknown	c.1532-43	Briquet 878	Pink prepared	RL12235 Parker 84, Windsor (not attributed to Holbein)

Watermark Type N Paper Origin (FIG: 101)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Crowned double-headed eagle with tailpiece. Arms of Austria	Sir Richard Southwell	1536	Variant of Briquet 1457	Pink prepared	RL12242 Parker 38, Windsor
Partial watermark of above	Frances, Countess of Surrey	1532-33	Larger variant of Briquet 1457	Pink prepared	RL12214 Parker 18 Windsor
Partial watermark of above	A Gentleman, Unknown	c.1532-43	Larger variant of Briquet 1457	Pink prepared	RL12260 Parker 44 Windsor
Partial watermark of above	A Man, Unknown	c.1532-43	Larger variant of Briquet 1457	Pink prepared	RL12221 Parker 68 Windsor

Watermark Type O Paper Origin (No Image)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Ox head surmounted by tau	Jacob Meyer	1516	Similar to Piccard 1966, section X. Müller 1996 w/m no.1	Prepared paper white/grey	Kunstmuseum, Basel

Watermark Type P Paper Origin (FIG: 102)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Large 8-petalled flower France, Lombardy	Dorothea Kannengiesser	c.1526	Similar to Briquet 6592/6596/6597/6601 See also Müller 1996, No.50	Unprepared	Inv.1823.141, Basel, Kunstmuseum
	Bonifacius Amerbach	c.1525	Similar to Briquet 6592/6596/6597/6601 See also Müller 1996, No.50.	Unprepared	Inv.1662.32, Basel

Watermark Type Q Paper Origin (FIG: 103)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Bunch of grapes France	Jacob Meyer	c.1526	Variant of Briquet 13070	Unprepared	Inv.1823.140, Basel, Kunstmuseum

Miscellaneous and Indecipherable Watermarks (No images)	Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location
Stag head with cross Type R	A Gentleman: Unknown Unknown (NB: not attributed to Holbein)	1532-43?	None in Briquet, but very similar to Gravell STG.003.1 IPH Key:C20.2, found Westminster, date of use 1495	Pink prepared	Parker 82, RL12261, Windsor
Pot?	A Gentleman: Unknown	1532-43		Pink prepared	Parker 74
Hard to read but could be hand topped by flower?	Sir Thomas Wyatt (catalogued as copy after Holbein: Parker 1945)	1532-43?		Pink prepared	RL12251 Parker 65

TABLE 3b: The watermarks on Holbein's drawings: by date

Unless otherwise stated, watermarks within types are not necessarily of the same mould

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Jacob Meyer	1516	Similar to Piccard 1966, section X. Müller 1996 w/m no.1	Prepared paper white/grey .	Kunstmuseum, Basel	O	Ox head surmounted by tau Unknown location?
Bonifacius Amerbach	c.1525	Similar to Briquet 6592/6596/6597/6601 See also Müller 1996, No.50.	Unprepared	Inv.1662.32, Basel	P	Large 8-petalled flower France, Lombardy
Dorothea Kannengiesser	c.1526	Similar to Briquet 6592/6596/6597/6601 See also Müller 1996, No.50	Unprepared	Inv.1823.141, Basel, Kunstmuseum	P	Large 8-petalled flower France, Lombardy
Jacob Meyer	c.1526	Variant of Briquet 13070	Unprepared	Inv.1823.140, Basel, Kunstmuseum	Q	Bunch of grapes France
Sir Thomas More	1527	Variant of Briquet 1827	Unprepared	RL12268 Parker 3 Windsor (same mould as Lady & Sir Henry Guildford & Nobleman, below)	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France) (same mould as Lady & Sir Henry Guildford & Nobleman)
Sir Henry Guildford	1527	Variant of Briquet 1827	Unprepared	RL12266 Parker 10 Windsor (same mould as Parker 3, Lady Guildford & Nobleman)	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France) (same mould as Parker 3, Lady Guildford & Nobleman)
William Warham	1527	Variant of Briquet 1827	Unprepared	RL12272 Parker 12 Windsor.	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France)

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Lady Mary Guildford	1527	Variant of Briquet 1827	Unprepared	Inv.1662.35, Basel, Kunstmuseum (same mould as Parker 3,10 and Nobleman)	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France)
Nicholas Carew	1527	Variant of Briquet 1827	Unprepared	Inv1662.34, Basel, Kunstmuseum	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France)
Portrait of A Nobleman	1527	Variant of Briquet 1827	Unprepared	Inv.1662.122, Basel, Kunstmuseum	A	Crowned shield containing three fleur-de-lys with letter b/d (Arms of France) (same mould as Parker 3 and 10 and Lady Guilford)
Sir John More	1527	Briquet 12863	Unprepared	RL12224, Parker 1 Windsor	D	Two-handled pot with double flower cresting. France, Champagne (same mould as Parker 9)
Sir Thomas More	1527	Briquet 12863	Unprepared	RL12225, Parker 2 Windsor	D	Two-handled pot with double flower cresting. France, Champagne
Anne Cresacre	1527	Briquet 12863	Unprepared	RL12270, Parker 7 Windsor	D	Two-handled pot with double flower cresting. France, Champagne
Margaret Giggs	1527	Briquet 12863	Unprepared	RL12229, Parker 8 Windsor	D	Two-handled pot with double flower cresting. France, Champagne
An Unknown Woman	1527	Briquet 12863	Unprepared	RL12217, Parker 9 Windsor (D	Two-handled pot with double flower cresting. France, Champagne, (same mould as Parker 1)
Jean de France, Duc de Berry	c.1527	Variant of Briquet 12632	Unprepared	Inv.1662.125, Basel, Kunstmuseum	F	One handled pot with double flower cresting France

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Cardinal Fisher, Bishop of Rochester	c.1532	Not clear enough to select Briquet no.	Pink prepared	RL12205 Parker 13 Windsor	H	Hand topped by 5-pointed star/flower France
Margaret, Lady Elyot	c.1532-4	Variant of Briquet 1050	Pink prepared	RL12204 Parker 14 Windsor (no image, drawing not available for photography)	B	Crowned shield containing three fleurs-de-lys with diagonal pattern and initials, IP/VP(?) below.
Thomas Boleyn, (James Butler 9 th) Earl of Wiltshire	c.1533	Briquet 12863	Pink prepared	RL12263, Parker 23 Windsor	D	Two-handed pot with double flower cresting. France, Champagne
Frances, Countess of Surrey	1532-33	Larger variant of Briquet 1457	Pink prepared	RL12214 Parker 18 Windsor	N	Crowned double-headed eagle with tailpiece. Arms of Austria: Partial watermark
A Gentleman, Unknown	c.1532-43	close to Briquet 12863,12864 and 12866)	Pink prepared	RL12258, Parker 32 Windsor	D	Two-handed pot with double flower cresting. France, Champagne
Lady Borough	c.1532-43	Briquet 12863	Pink prepared	RL12193, Parker 40 Windsor	D	Two-handed pot with double flower cresting. France, Champagne (similar sewing points/wonky flower as Parker 40)
A Gentleman, Unknown	c.1532-43	Larger variant of Briquet 1457	Pink prepared	RL12260 Parker 44 Windsor	N	Crowned double-headed eagle with tailpiece. Arms of Austria: Partial watermark
A Man, Unknown	c.1532-43	Larger variant of Briquet 1457	Pink prepared	RL12221 Parker 68 Windsor	N	Crowned double-headed eagle with tailpiece. Arms of Austria: Partial watermark

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Sir Gavin Carew	c.1532-43	Variant of 12863	Pink prepared	RL12196, Parker 77 Windsor	D	Two-handed pot with double flower cresting. France, Champagne
Jane, Lady Lister	c.1532-43	Variant of Briquet 12863?	Pink prepared	RL12219, Parker 20 Windsor	E	Two handled pot no flower cresting
Sir Charles Wingfield	c.1532-40	Variant of Briquet 12863?	Pink prepared	RL12249, Parker 36 Windsor	E	Two handled pot no flower cresting
A Lady Unknown	c.1532-43	Variant of Briquet 12863?	Pink prepared	RL12190, Parker 47 Windsor	E	Two handled pot no flower cresting
A Gentleman: Unknown	c.1532-43	Unknown: watermark cut so not able to pinpoint in Briquet etc	Prepared	Parker 74	G	One handled pot with letters, partial watermark France?
Sir Nicholas Poyntz	c.1532-43	Variant of Briquet 1050	Pink prepared	RL12234 Parker 34 Windsor	B	Crowned shield containing three fleurs-de-lys with diagonal pattern and initials, IP/VP(?) below. France, Troyes.
Elizabeth, Lady Rich	c.1532-43	Variant of Briquet 11387	Pink prepared	RL12271 Parker 55 Windsor	J	Hand with figure 3 in palm & initials RP across wrist, topped by 5 pointed star/flower France. (same mould as Parker 80)
Richard, Baron Rich	c.1532-43	Variant of Briquet 11387	Pink prepared	RL12238 Parker 80 Windsor	J	Hand with figure 3 in palm & initials RP across wrist, topped by 5 pointed star/flower France. (same mould as Parker 55)
Sir Philip Hoby	c.1532-43	Briquet 8653	Pink prepared	RL12210 Parker 50 Windsor Rotterdam 1532?	L	Gothic Letter P with quatre foil France?

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Lady Hoby	c.1532-43	Briquet 8653?	Pink prepared	RL12211 Parker 51 Windsor	L	Partial Watermark cut, but part of Gothic P
A Lady, Unknown	c.1532-43	Briquet 8653?	Pink prepared	RL12218 Parker 62 Windsor	L	Watermark cut, but part of Gothic P
Lord Francis Russell	c.1534-38	Briquet 8653?	Pink prepared	RL12240 Parker 70 Windsor	L	Not very readable but possibly Gothic P
Edward Stanley, Earl of Derby	c.1532-43	Briquet 878	Pink prepared	RL12243 Parker 52, Windsor	M	Rampant lion holding orb and shield. Arms of Zurich
Sir John Gage	c.1532-43	Briquet 878	Pink prepared	RL12207 Parker 78, Windsor	M	Rampant lion holding orb and shield. Arms of Zurich
Thomas, Baron Wentworth	c.1532-43	Briquet 878	Pink prepared	RL12248 Parker 79	M	Rampant lion holding orb and shield. Arms of Zurich
A Gentleman: Unknown	c.1532-43	Briquet 878	Pink prepared	RL12235 Parker 84, Windsor (not attributed to Holbein)	M	Rampant lion holding orb and shield. Arms of Zurich
Henry Howard, Earl of Surrey	c.1533-36	Variant of Briquet 12863?	Pink prepared	RL12216, Parker 29 Windsor	E	Two handled pot no flower cresting
John Poyntz	1535	Variant of Briquet 11369	Pink prepared	RL12233 Parker 54 Windsor	I	Hand with figure 3 in palm, topped by 5-pointed star/flower France
Simon George of Quocoute	c.1535	Variant of Briquet 1255	Pink prepared	RL12208 Parker 35, Windsor	C	Crowned shield topped by flower, containing cross and bird France
An Ecclesiastic, Unknown	c.1535	Variant of Briquet 11391	Pink prepared	RL12199 Parker 59 Windsor	K	Hand topped by crown France
A Lady, Unknown	c.1533-36	Variant of Briquet 11391	Pink prepared	RL12189 Parker 63 Windsor	K	Hand topped by crown France
Mary Zouch	c.1533-36	Briquet 878	Pink prepared	RL12252 Parker 72, Windsor	M	Rampant lion holding orb and shield. Arms of Zurich

Sitter	Date of Drawing	Watermark Reference	Paper Type	Inv.no's and Location	Watermark type	Description and origin
Sir Richard Southwell	1536	Variant of Briquet 1457	Pink prepared	RL12242 Parker 38, Windsor	N	Crowned double-headed eagle with tailpiece. Arms of Austria
Elizabeth, Lady Vaux	c.1536	Variant of Briquet 1050	Pink prepared	RL12247 Parker 25 Windsor	B	Crowned shield containing three fleurs-de-lys with diagonal pattern and initials, IP/VP(?) below. France, Troyes.
William Fitzwilliam Earl of Southampton	c.1536-40	Briquet 12863	Pink prepared	RL12206, Parker 66 Windsor	D	Two-handed pot with double flower cresting. France, Champagne (similar sewing points/wonky flower as Parker 66)
A Gentleman: Unknown Unknown (NB: not attributed to Holbein)	1532-43?	None in Briquet, but very similar to Gravell STG.003.1 IPH Key:C20.2, found Westminster, date of use 1495	Pink prepared	Parker 82, RL12261, Windsor	Misc. and indecipherable	Stag head with cross Type R
A Gentleman: Unknown	1532-43		Pink prepared	Parker 74	Misc. and indecipherable	Pot?
Sir Thomas Wyatt	1532-43?		Pink prepared	RL12251 Parker 65 (thought to be copy after Holbein)	Misc. and indecipherable	Hard to read but could be hand topped by flower?

TABLE 4: Survey of Signs of Transfer on Hans Holbein's Portrait Drawings

(GV indicates traced by George Vertue)

Parker/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 1/ RL12224/ Sir John More	Chalk	No
Parker 2/RL12225/ Sir Thomas More	Chalk	Yes, indentations following contours
Parker 3/RL 12268/ Sir Thomas More	Chalk	Yes, pouncing holes
Parker 4/RL12228/ Elizabeth Dauncey	Chalk	Perhaps: very slight signs of light scoring along small sections of contours (GV)
Parker 5/RL12269/ Cecily Heron	Chalk	Perhaps: small section of fine scoring on chin
Parker 6/RL12226/ John More the Younger	Chalk	No
Parker 7/RL12270/ Anne Cresacre	Chalk	No
Parker 8/RL12229/ Margaret Giggs	Chalk	No
Parker 9/RL12217/ A Woman: Unknown	Chalk	Perhaps: very fine line of light scoring on chin and eye lid & profile
Parker 10/RL12266/ Sir Henry Guildford	Chalk, touches of aqueous	No
Parker 11/RL12273/ A Woman: Unknown	Chalk	No
Parker 12/RL12272/ William Warham, Archbishop of Canterbury	Chalk	Yes, in form of indentations, some blind
Parker 13RL12205/ Cardinal Fisher	Chalks and aqueous	No
Parker 14/RL12204/Margaret, Lady Elyot	Chalk and aqueous	No
Parker 15/RL12203/ Sir Thomas Elyot	Chalk and aqueous	No (GV)
Parker 16/RL12212/ Mary, Duchess of Richmond and Somerset	Chalk	No
Parker 17/RL12215/ Henry Howard, Earl of Surrey	Chalk and touches aqueous black	No (GV)

Parker/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 18/RL12214/ Frances, Countess of Surrey	Chalk and touches of aqueous black	No
Parker 19/RL 12236/ Lady Ratcliffe	Chalk and touches of aqueous black	No
Parker 20/ RL12219 /Jane, Lady Lister	Chalk and touches of aqueous black	No
Parker 21/RL12222/ Joan, Lady Meutas	Chalk	No
Parker 22/RL12265/ Sir John Godsolve	Fully painted up, black aqueous contours	No
Parker 23/RL12263 /Thomas Boleyn, Earl of Wiltshire	Aqueous black,over chalk. Significantly painted with aqueous media.	No. (GV)
Parker 24/RL12245/ Thomas, Lord Vaux	Chalk? Aqueous black	Yes, has subtle indents that seem to follow contours, (GV)
Parker 25/RL12247/ Elizabeth, Lady Vaux	Chalk, aqueous black	Yes, although not clear if these are marks made by metalpoint
Parker 26/RL12227 /Mary, Lady Heveningham	Aqueous black over chalk	Yes, perhaps, some indentations (GV)
Parker 27/RL12257/ A Lady: Unknown	Chalk, some aqueous black	No
Parker 28/RL12209 /Margaret, Marchioness of Dorset	Chalk, fine aqueous black	Yes, around all lines for transfer, metalpoint or troughs?
Parker 29/RL12216/ Henry Howard, Earl of Surrey	Chalk some aqueous black	No (GV)
Parker 30/RL12246/ Thomas, Lord Vaux	Chalk	No
Parker 31/RL12237/ William Reskimer	Chalk	Yes, indentations on ears; costume; head; hat, hard to decipher on face
Parker 32/RL12258/ A Gentleman: Unknown	Mainly aqueous black over chalk	No (GV)
Parker 33/RL12259/ A Gentleman: Unknown	Chalk and aqueous black	Yes, not obvious but occur around head, ear, costume, less obvious on eyes, nose
Parker 34/RL12234/ Sir Nicholas Poyntz	Chalk and aqueous	No sign of transfer (GV)
Parker 35/RL12208/ Simon George of Quocoute	Aqueous black over chalk	Yes, slight in sporadic areas

Parker/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 36/RL12249/ Sir Charles Wingfield	Mainly chalk, touches of aqueous	No. aqueous on eyes, nose, mouth finely applied.
Parker 37/RL12192/ Nicholas Bourbon the Elder	Chalk and aqueous black	No (GV)
Parker 38/RL12242/ Sir Richard Southwell	Chalk and aqueous black	Yes. Indentations visible whether under or over aqueous (GV)
Parker 39/RL12267/ Queen Jane Seymour	Chalk, touches of aqueous black	Yes. (GV)
Parker 40/RL12193/ Lady Borough?	Chalk	No
Parker 41/RL12220/ A Lady: (Princess Mary?)	Chalks and aqueous black	No
Parker 42/RL12198/ Edward, Lord Clinton	Chalk	No (GV)
Parker 43/RL12244/ Sir Thomas Strange	Chalk	Yes, indentations, trough effect?
Parker 44/RL12260/ A Gentleman: Unknown	Chalk and aqueous black	No
Parker 45/RL12255/ A Lady: Unknown	Chalk, aqueous black	No
Parker 46/RL 12200/ Edward Prince of Wales	Chalk, touches of aqueous black	No
Parker 47/RL12190/ A Lady: Unknown	Some chalk, but mainly aqueous black	No (but this is cut out and stuck on to paper).
Parker 48/RL12256/ A Lady: Unknown	Chalk	No
Parker 49/RL12254/ A Lady: Unknown	Aqueous black over chalk	No (GV)
Parker 50/RL12210/ Sir Philip Hoby	Chalk and touches of aqueous black	No - as pendant pair with below, interesting as contours different in media emphasis
Parker 51/RL12211/ Lady Hoby (?)	Chalk and aqueous black	No - her contours heavier application of aqueous black

Parker/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 52/RL12243/ Edward Stanley, Earl of Derby	Aqueous black over chalk	No (GV)
Parker 53/RL12195/ George Brooke, Lord Cobham	Chalk	Yes, v faint - eyes, ear, indents follow contours
Parker 54/RL12233/ John Poyntz	Mainly chalk with touches of aqueous black	No
Parker 55/RL12271/ Elizabeth, Lady Rich	Chalk with touches of aqueous black	Yes, eyes, head gear, shoulders, everywhere really. Trough effect? (GV)
Parker 56/RL12194 /Katharine, Duchess of Suffolk	Chalk with some wet	No (GV)
Parker 57/RL 12231/ William Parr, Marquess of Northampton	Chalk, but mostly aqueous black	No signs (GV)
Parker 58/ RL12191/ Elizabeth, Lady Audley	Aqueous black over chalk	No
Parker 59/RL12199/ An Ecclesiastic: Unknown	Mainly aqueous black over chalk	No
Parker 60/RL12223/ Mary, Lady Monteagle	Chalk, aqueous black	No
Parker 61/RL12253/ A Lady: Unknown	Mainly aqueous black over chalk	No
Parker 62/RL12218/ A Lady: Unknown	Chalk with mainly aqueous black	Yes, indentations quite pronounced, some blind
Parker 63/RL12189/ A Lady: Unknown	Chalk	No (GV)
Parker 64/RL12250/Sir Thomas Wyatt	Chalk with aqueous black	No, (GV - Copied this or Parker 65)
Parker 65/RL12251/ Sir Thomas Wyatt (copy)	Aqueous black over faint chalk	Yes, slight indentations on hat following parallel lines (GV see Parker 64)
Parker 66/RL12206/ William Fitzwilliam, Earl of Southampton	Mainly chalk, some aqueous black	Yes, in form of indentations with stylus, trough effect.(GV)

Parker/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 67/RL12264/ Margaret, Lady Butts	Mainly aqueous black remains, chalk	Yes, heavy indentations and example of damage due to scoring
Parker 68/RL12221/ A Man: Unknown	Chalk, metalpoint? Touches of aqueous	No. (GV)
Parker 69/RL12239/John Russell, Earl of Bedford	Mainly chalk	No. (GV)
Parker 70/RL12201/ Lord Francis Russell	Not sure, very faded, chalk? Some aqueous	Too hard to read drawing
Parker 71/RL12201/ Edward, Prince of Wales	Chalk? Some aqueous black in touches	No (GV)
Parker 72/RL12252/ Mary Zouch	Mainly chalk, some aqueous black	No
Parker 73/RL12230/ Grace, Lady Parker	Chalk	No
Parker 74/RL12262/ A Gentleman: Unknown	Chalk	No
Parker 75/RL12241/ Sir William Sharington	Chalk	No (GV)
Parker 77/ RL12196/ Sir Gavin Carew	Unsure: looks like off-set?	Yes, pronounced but very rubbed media hard to decipher, little or no media in indents
Parker 78/RL12207/ Sir John Gage	Mainly chalk, some black aqueous	Yes, scoring on hat, eyes, back of neck, costume, cheek - v subtle. (GV)
Parker 79/RL12248 /Thomas, Baron Wentworth	Chalk and aqueous black on face	Yes, subtle scoring around hat and ears, around face (GV)
Parker 80/RL12238/Richard, Baron Rich	Chalk and some aqueous black	Yes, scored lines, face, nose, hat, some lines where costume was (GV)
Parker 81/RL12232/ Sir Thomas Parry	Chalk	No
Parker 82/RL12261/ A Gentleman: Unknown	Mainly aqueous black, some chalk	No - Parker says not by Holbein

Location/ Accession No./Sitter	Media of contours	Signs of transfer
Parker 83/RL12213/ Henry Howard, Earl of Surrey	Chalk	No - Parker says not by Holbein (GV)
Parker 84/RL12235/ A Gentleman: Unknown	Chalk	No - Parker says not Holbein
Parker 85/RL12202/ Edward, Prince of Wales	Chalk	No - Parker says not by Holbein
Basel/ Inv.1662.123/Noble English Man	Chalk	Yes, indentations
Basel/ Inv.1662.122/Noble English Woman	Chalk	Yes, indentations
Basel Inv. Anna Meyer study for Darmstadt Madonna	Chalk	Yes, extensive indentations
Jacob Meyer study for Darmstadt Madonna	Chalk	Yes, extensive indentations
Dorothea Meyer study for Darmstadt Madonna	Chalk	Yes, extensive indentations
Basel/ Inv.1662.34/Nicholas Carew	Chalk	No
Basel/ Inv. 1662.35/Lady Guildford	Chalk	No
Basel/ Inv. 1823.137a/Dorothea Meyer	Silverpoint, touches of black chalk	No visible signs but hard to decipher because examined in framed
Basel/ Inv.1823.137/Jacob Meyer	Silverpoint, touches of black chalk	No visible signs but hard to decipher because examined in framed
Basel/ Inv.1662.32/Bonifacius Amerbach	Chalks	No
Dresden/Inv. C1977-156/Charles de Solier	Aqueous black over chalk	No
British Museum/ Inv. 1910,0212.105/ Unknown English Woman	Primarily chalk, some aqueous black	No (this drawing has been cut around and stuck to secondary backing)

Location/ Accession No./Sitter	Media of contours	Signs of transfer
British Museum/ Inv. 1975,0621.22/Portrait of a Lady, formerly thought to be Anne Boleyn.	Primarily chalk, some aqueous black	No
Louvre/ Inv. RF 4651/Thomas Wriothesley, Earl Of Southampton	Mainly aqueous over chalk	Yes, clothing, eye, lip line, hat (this drawing has been cut around and stuck to secondary backing)

TABLE 5: Signs of transfer (*= prepared papers)

Sitter	Drawn Contour Media	Signs of Transfer/Location on Drawing	Underdrawing information
Jacob Meyer, 1516*	Silver point predominantly, with touches of black chalk - lip line, eye lines, chin line.	None apparent	These two drawings form a double portrait and both have a one to one relationship with the painting and underdrawing, also schematic suggesting a pattern for transfer. With slight adjustments from underdrawn lines to finished painting, ie: nose of Jacob.
Dorothea Kannengiesser, 1516*	Silver point predominantly, with touches of black chalk - lip line, eye lines, chin line.	None apparent	
Jacob Meyer c1526	Chalk: black some red	Heavily indented, around most contours, salient features, hair etc	The underdrawings for these portraits have a complex history. ¹ Holbein worked on the painting twice.
Dorothea Kannengiesser, c1526	Chalk: red and black	Heavily indented, around most contours, salient features, hair etc	
Anna Meyer, c1526	Chalk: red and black	Heavily indented, around most contours, salient features, hair etc	
Sir Thomas More, 1527	Chalk: mainly black, some red	Small pricked holes following most contours	Frick portrait underdrawing pounced; not quite one to one in all areas but most Schematic underdrawing from pattern, not quite one to one match, but certain features match exactly features.

¹ See Jochen Sander, 'The Darmstadt Madonna', Hans Holbein Portraitist of the Renaissance, Royal Cabinet of Paintings Mauritshuis. Waanders Publishers:Zwolle. 2003. 37-45

Sitter	Contour Media	Signs of Transfer/Location on Drawing	Underdrawing information
William Warham, 1527	Chalks: mainly black, some red	Indentations, both blind ie, not quite on contours & indents along drawn contours, creating sharper line: around hat; hair; either side of red collar; around black of coat; v slight indent lip line & eyes. Some carbon flecks on verso.	Louvre portrait shows schematic underdrawing as if from pattern (not seen as part of this investigation)
Sir Henry Guildford, 1527	Chalk: mainly black, some red	None apparent	Royal Collection portrait shows schematic underdrawing as if from pattern; not quite one to one but matches with certain features
Mary, Lady Guildford, 1527	Chalk: mainly black, some red	None apparent	Schematic underdrawing from pattern, not quite one to one match, but certain features match exactly, suggesting drawing used
William Reskimer, c1533*	Chalk: mainly black	Indentations around some contours as though traced with fine point, not metal, creating thin black line along certain contours: clothing, back of neck, ear, back of head, around hat	Schematic from pattern; more or less one to one match with drawing
Charles de Solier, 1534/35*	Chalk: mainly black	None apparent	Underdrawing barely visible; but measurements taken of drawn face are significantly smaller than painted face; some changes in underdrawing to eyes, mouth and nose may indicate smaller?
An Unidentified Man, 1535*	Chalks, mainly black, eyes, nose, lip line in aqueous black	Indentations along some contours made with fine tool, not metal, leaving sharp black line: around ear, back of head, around hat, garment outlines & folds and some blind indentations on shirt (over white pigment)	Schematic as if from pattern; more or less one to one match with drawing

Sitter	Contour Media	Signs of Transfer/Location on Drawing	Underdrawing information
Simon George of Quocote, c1535*	Mainly aqueous black over chalk, garments & feather in black chalk	Indentations following contours of costume, ear; forehead (blind indentation); tracing tool type uncertain;	Schematic underdrawing from pattern, not quite one to one match, but certain features match exactly
Sir Richard Southwell, 1536*	Black chalk and black aqueous media for hat, eye lid line, back of neck, nose, lip line and part of face profile	Indentations following contours of costume,	Underdrawing not available for comparison but from the literature the drawing corresponds to the painted surface but c2003 still not IRR undertaken. (HH p of the ren)
Jane Seymour, 1536/37*	Chalk: black, aqueous black along lip line, nostril/end of nose; profile, eyelids	Indentations following contours of beading of headdress; contour of face where inked; v slight indent on eye contours;	Underdrawing not available for comparison but from the literature it appears that most drawn and painted contours match exactly
Elizabeth, Lady Audley, c1538*	Chalk: black and some fine lines of aqueous black around lower face left profile, eye lids, nose and lip line	None apparent	Miniatures don't tend to have underdrawings as such and obviously the miniature is much smaller than the drawing.
Edward, Prince of Wales, c1538*	Chalk: black, very eroded. Black aqueous media on lip line and eye lids	None apparent	Underdrawing not available for comparison but literature states that drawing slightly smaller in all dimensions than the portrait that it could have been used for (NG Washington). Further underdrawing not characteristic of a tracing
Lady Margaret Butts, c1540/43*	Chalk: black but very abraded; black aqueous media around head, shirt, nose, lip line, eyes	Heavily indented lines around most contours: costume, nose, eyes, jowls, frown, hat, eyelashes; tool used uncertain but could be metalpoint	Underdrawing mosaic imagery only available for comparison. The literature states that the underdrawing contours have a close correspondence with the drawing contours on a one to one basis. (see Ainsworth, Paternes) including underdrawing from drawing that is not seen in painting

Table 6: Drawing information




Table No: 6 (R = Raman result)	Jacob Meyer 1516	Dorothea Kannengiesser 1516	Jacob Meyer c.1526
Substrate	White/grey preparation on paper (examined framed)	White/grey preparation on paper, adhered to wood (examined framed)	Unprepared, white laid paper
Coloured chalks/location	Red: cheeks, tip of nose; eyes; mouth; chin	Red: cheeks, tip of nose, eyes, chin	Red: flesh tone, lips, eyes Brown: None Yellow: flesh tone?
Black chalk/location	In touches over silverpoint contours, ie: along chin, nose, beret, forming lip line	In touches over most silverpoint contours ie: on chin, nose beret, lip line, eyes,	Most contours of the drawing, lip Line, shading and stubble on face, hair, Perhaps also pupils? Eyelashes? Eyebrows?
White Chalk/location	None	None	None
Aqueous black/location	None	None	Pupils? Eyelashes? Brows?
Watercolour/location	None	None	Green wash around sitter Painted in around head/body
Ink/location	None	None	None
Metalpoint drawing/location	Silver (from visual, not instrumental Analysis)	Silver (from visual, not instrumental Analysis)	None
White highlights/location	None	None	None
Potential Signs of Transfer	None evident	None evident	Indentation along most contours: Some blind, some over media.
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 269 x 191mm	 255 x 201mm	 377 x 272mm




Table No: 6 (R = Raman result)	Dorothea Kannengiesser c.1526	Anna Meyer c.1526	Sir Thomas More 1527
Substrate	Unprepared, white laid paper	Unprepared, white laid paper	Unprepared, cream laid paper
Coloured chalks/location	Red: flesh tone, face contour, eyes, lips Brown: headdress and clothing Yellow: flesh tone?	Red: nose contour; flesh tone; eye definition; modelling, lips, dress sash, hands Brown: hair Yellow: hair, dress detail	Red: flesh tone; eye definition; facial modelling; part of face contour under hat and true left side of face; eyebrows; costume under chin; fur; lips. Brown: fur; hair Yellow: yellow ochre (R 2004); gold chain; fur
Black chalk/location	Most contours of drawing, lip line, Shading on face and clothing. Perhaps also pupils? Eyelashes? Eyebrows?	Contours of dress and face; over Coloured chalk of hair, dress details	Contours; hat, stumped & overdrawn with linear marks. Hair, stumped & thin strands overdrawn; fur. Pupils? Lashes? Eyebrows?
White Chalk/location	None	None	None
Aqueous black/location	Pupils? Eyelashes? Brows?	Eye lashes? Pupil?	Pupils? Eye lashes? Eyebrows?
Watercolour/location	None	Green wash around sitter Painted in around head/body. Iris.	Iris: azurite R
Ink/location	None	None	None
Metalpoint drawing/location	None	None	None
White highlights/location	None	None	None
Potential Signs of Transfer	Indentation along contours: Some blind, some over media.	Indentation along contours: Some blind, some over media, following head shape and facial contour and facial features.	Pricked holes along most contours indicating transfer via pouncing
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 390 x 280mm	 356 x 274mm	 402 x 301mm




Table No: 6 (R = Raman result)	William Warham 1527	Sir Henry Guildford 1527	Lady Mary Guildford 1527
Substrate	Unprepared, cream laid paper	Unprepared, cream laid paper	Unprepared, white laid paper
Coloured chalks/location	Red: flesh tone, eye definition facial modelling, lips, collar Brown: fur Yellow: fur	Red: flesh tone, eye definition facial modelling, lips, true left face contour Brown: flesh tone Yellow: flesh tone?	Red: flesh tone; facial modelling, lips, eye definition; face contour forehead Brown: headpiece, flesh tone Yellow: jewellery; headpiece; gold chains across dress
Black chalk/location	Contours, facial features, shading, hat, coat, Lip line? Pupils? Lashes? Eyebrows?	Contours, eyebrows, eyes, lip line, shading, hair - wetted out and drawn over in thin strands	Contours; eyes; headpiece; costume; shading of face & costume
White Chalk/location	Whites of eyes	None	None evident as drawing media
Aqueous black/location	Lip line? Pupils? Lashes? Eyebrows?	Pupils? Lashes?	Eyelash, eyelid, lip line
Watercolour/location	Iris	Iris	Brown: irises
Ink/location	None	Brown ink line on section of hat, True left side by forehead	None
Metalpoint drawing/location	None	None	None
White highlights/location	None	None (whites of eyes created from Paper left blank	Aqueous: None Whites of eyes - paper left blank.
Potential Signs of Transfer	Indentations along contours, some blind, others over media; around hat, hair, collar, shoulders, in part in eye area.	None	No obvious signs of having been traced
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 401 x 310mm	 388 x 298mm	 552 x 385m




Table No: 6 (R= Raman result)	William Reskimer c.1533	Charles de Solier 1534/35	An Unkown Gentleman (Parker 33) 1535
Substrate	Pink prepared, cream laid paper. Vermilion/calcium carbonate: R	Pink prepared, cream laid paper	Pink prepared, cream laid paper. Vermilion/calcium carbonate: R
Coloured chalks/location	Red: flesh tone, facial modelling, lips, eye definition. Brown: beard; flesh tone; clothing (near collar), hair Yellow: beard, hair	Red: facial modelling, lips, eye definition; hair and facial hair. Brown: facial hair, hair Yellow: facial hair, hair, hat badge	Red: facial modelling, lips, eye Definition, facial hair, hair Brown: facial hair, hair Yellow: facial hair, hair
Black chalk/location	Contours; hat, clothing	Contours; hat; eyes, costume; Shading of face;	Contours, clothing, hat, face
White Chalk/location	None evident as drawing media	None evident as drawing media	None evident as drawing media
Aqueous black/location	Pupils? Eyelashes?	Hat; lip line; eyebrows; eyes; hair; Facial hair; jowls; wrinkles; nose	Eye contours, nostrils & nose, Lip line, pupils, eyebrows, lashes, moustache
Watercolour	Green: irises	Green: irises	Blue: irises; opaque white for shirt
Ink	None	None	None
Metalpoint drawing/location	None	None	None
White highlights/location	None	Aqueous: nose tip; eye-lashes; eye-brows; hair; facial hair	Aqueous: Nose, remnants on shirt
Potential Signs of Transfer	Indented lines around ear, back of head, around hat, parts of clothing	None	Indented lines tracing contours: evident on ear; parts of costume
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 293 x 212mm	 330 x 249mm	 298 x 222mm




Table No: 6 (R = Raman result)	Simon George of Quocote c.1535	Sir Richard Southwell 1536	Jane Seymour 1536/37
Substrate	Pink prepared, cream laid paper Vermilion/calcium carbonate: R	Pink prepared, cream laid paper Vermilion: R	Pink prepared, cream laid paper Vermilion/calcium carbonate: R
Coloured chalks/location	Red: flesh tone, eye definition facial modelling, lips, facial hair Brown: none Yellow: facial hair	Red: flesh tone, facial modelling, lips, eye definition. Brown: none Yellow: chain, skin tone	Red: flesh tone; eye definition; lips Brown: headdress Yellow: headdress banding and Decoration.
Black chalk/location	Costume contours, shading of face, Feather, under hat and hair, eye brows	Contouring of costume, face, Shading of hat, lettering across centre, left and right	Most contours; shading of face & costume; wetted out on headdress
White Chalk/location	None	None	None
Aqueous black/location	Facial contours, ear, eyes, nose, hair, facial hair,	Lip line, eyes, pupils, nose, hat, in parts of the hair.	Facial contour? eyes, eyelids; eye- lashes; eyebrows; circling around irises; pupils; nostrils, lip line
Watercolour/location	Green: iris	Brown: irises	Bluey-green: irises
Ink/location	None	Pen inscription, right hand side	None
Metalpoint drawing/location	None	See below in transfer	See below in transfer
White highlights/location	None	None	Aqueous highlight on true left pupil
Potential Signs of Transfer	Traced - indented lines on costume contours, nape of neck, parts of ear, where hat meets head	Indented lines, perhaps with metalpoint stylus which has left a drawn mark	Indented lines, perhaps with metalpoint stylus which has left a drawn mark
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 281 x 193mm	 370 x 281mm	 503 x 285mm




Table No: 6 (R = Raman)	Lady Audley c.1538	Edward, Prince of Wales 1538	Lady Margaret Butts c.1541/43
Substrate	Pink prepared, cream laid paper Vermilion/calcium carbonate: R	Pink prepared, cream laid paper. Vermilion/calcium carbonate: R	Pink prepared, cream laid paper Vermilion/calcium carbonate: R
Coloured chalks/location	Red: facial modelling; lips; eye definition; headdress; Brown: hair, lips Yellow: blended in headdress	Red: eyes, lips Brown: None Yellow: None	Red: eyes, frown, lips Brown: headdress Yellow: flesh tone?
Black chalk/location	Small sketch upper RH corner, Costume, face contours,	Face contour, hat	Costume contours, headdress, face
White Chalk/location	None	None	None
Aqueous black/location	Lip line, nose, eyes, lashes, hair strands, eyebrows	Lip line, pupils, eye lid, nostrils	Eyes, headdress, parts of hair, shirt, nose, Lip line, jowls, pupils,
Watercolour/location	Blue-grey: irises	Blue: Irises	Blue: irises
Ink/location	None	None	None
Metalpoint drawing/location	Lead not ruled out for depiction of necklace	None	Unconfirmed
White highlights/location	None	None	Remnants of white on shirt
Potential Signs of Transfer	No signs of transfer	None	Heavily indented along most contours - costume and face/features/ around iris, pupil etc
Scale representations of drawings to illustrate relational sizes to other drawings, with actual sizes below.	 292 x 207mm	 267 x 226mm	 380 x 272mm

Table 7: Jacob Meyer zum Hasen (Figure 1)

Sitter: Jacob Meyer zum Hasen Figure 1	Date: 1516	Size: 281 x 190mm
Location: Basel Kunstmuseum, Kupferstichkabinett	Inv.no: 1823.137	

Substrate: this drawing was examined glazed so any observations listed here are limited by its housing. It is executed on grey/white prepared paper. The drawing is in fair condition. The preparation was applied evenly. Damage from a horizontal fold, 128mm up from the bottom edge, has caused loss to the preparation. The distinct darkening of the preparation was evident from the contrast to its outer, paler edges, perhaps indicating darkening of a lead white ground.

Sequencing of Materials: there is no sign of a chalk underdrawing, indicating that the metalpoint was the first media in the drawing sequence; the warm brown hue indicates silverpoint. Silverpoint is used to create most of the drawing's contours. It is used repeatedly over the same line or area to create darker tones: evident from the repeated stroked creating the sitter's curly hair. Exploiting the medium to its full potential, silverpoint is used to shade areas such as the face and hat as well as create the crisp contours for the drawing. Annotations alluding to colour have been written with silverpoint, top left:

an ogen Schwarz/beret rot – mosfarb/brauenn gelber dan das har/grusenn with brauenn

(colour of the eyes (black), beret (red) and for the 'brows to be more yellow than the hair').

A crimson red chalk, added after the contours were established, indicates the shape of the sitters' eyes as well as the flesh tone. It is applied in strokes across the drawing, providing colour to the face and is more concentrated in certain areas, such as the nose, cheeks and chin and lips. Black chalk, applied last in the sequence, overlays the silverpoint in dashes along some contours such the chin. It is present mainly on the sitter's salient features; it is still apparent on one side of his iris (true left) for example.

Scatterings of black chalk, along the contours of the hat for instance, would suggest that it was more prevalent, but is now lost.

Signs of transfer: it is not possible to determine if the sporadic indentations along the drawing's contours are the result of the drawing process, or of having been traced for transfer.

Table 8: Dorothea Kannengiesser (Figure 2)

Sitter: Dorothea Kannengiesser Figure 2	Date: 1516	Size: 286, left, rising to 293mm, right, x 201mm
Location: Basel Kunstmuseum, Kupferstichkabinett	Inv.no: 1823.137a	

Substrate: this drawing was examined glazed so any observations listed here are limited by its housing. Executed on grey/white prepared paper, laid down on to a thin wooden panel. The drawing is in poor condition, with what looks like tidemarks from water damage, as well as an old tear (left edge) and a horizontal fold, 128mm up from the bottom edge. The fold has caused loss to the preparation. The darkening of the preparation, perhaps from inclusion of lead white and light exposure. The preparation has worn thin in some areas, showing the discolouration of the paper underneath. The wooden panel is visible on the outer edges.

Sequencing of Materials: there is no sign of a chalk underdrawing, therefore it has been assumed that the metalpoint is the first media in the drawing sequence; the warm brown hue indicates silverpoint. Silverpoint is used to create most of the drawing's contours. It is used repeatedly over the same line or area to create darker tones: evident from the repeated stroked on the plaited necklace and shaded areas of the headdress. It is also used to shade certain areas, such as under her chin for example. Silverpoint defines the pattern of the detail on the sitter's dress (true left, medallion-type pattern): something that is translated into the painted version.

A crimson red chalk, added after the contours were established, indicates the shape of the sitters' eyes as well as the flesh tone. It is applied in strokes across the drawing, providing colour to Dorothea's face, and is more concentrated in certain areas, such as her cheeks, chin and lips. Black chalk, applied last in the sequence, overlays the silverpoint in dashes along some contours such the chin, eyelid lines and along some clothing contours It is present mainly on the sitter's salient

features; it is still apparent on one side of his iris (true left) for example.

Scatterings of black chalk, along the contours of the hat for instance, would suggest that it was once more prevalent, but is now lost.

Signs of transfer: it is not possible to determine if the sporadic indentations along the drawing's contours are the result of the drawing process, or of it having been traced for transfer.

Table 9: Jacob Meyer zum Hasen (Figure 4)

Sitter: Jacob Meyer zum Hasen Figure 4	Date: c.1526	Size: 377 x 272mm
Location: Basel Kunstmuseum, Kupferstichkabinett	Inv.no: 1823.140	

Substrate: executed on cream/white unprepared laid paper with a green watercolour wash painted in around sitter, not quite up to the drawing's outlines. The drawing is in fair condition but has some staining over the surface of paper. Some stains have been touched out with opaque white pigment. The drawing has been lined with Japanese paper and inlaid into paper.

Sequencing of Materials: Fine lines of black chalk constitute most of the contouring of the drawing: including costume and profile of the sitter. Red chalk also plays an early part in the delineation of the eyes. The flesh tone is a blend of red and black chinks, with a more concentrated use of red on the sitter's cheeks, lips and nose. The flesh tone spills out slightly over the contour of the nose. Black chalk has been wetted out to cover a large area creating the sitter's hair. This is then overdrawn with thin black chalk, creating strands of hair and changing a flat block of colour into a more three-dimensional depiction of hair. The sitter's stubble is created by short strokes of thin black chalk, as is the lip line. Leaving the paper blank creates the whites of the eyes. The iris is depicted with watercolour, but it is not absolutely clear if the eye lashes, eyelid line, pupil and eyebrows are created in an aqueous or dry black medium.

Signs of transfer: there is evidence of transfer in the form of heavy indentations following most of the drawings contours: seen on the face, (including features), around head and hair, eyebrows, costume outlines and folds - in some cases creating very sharp, crisp black lines from pushing the media into the trough of the indentation. There is some blind indentation also where the tracing marks stray from the media.

Table 10: Dorothea Kannengiesser (Figure 5)

Sitter: Dorothea Kannengiesser Figure 5	Date: c.1526	Size: 390 x 280mm
Location: Basel Kunstmuseum, Kupferstichkabinett	Inv.no: 1823.141	

Substrate: executed on cream/white unprepared laid paper with a greyish tinge to it. The drawing is in fair condition although does show signs of damage: top left hand corner missing and repaired; repair to large tear centre of costume; surface and ingrained dirt; and some staining across the surface of paper. Some stains have been touched out with opaque white pigment. The drawing has been lined with Japanese paper and inlaid into a paper. The top of the headdress ends abruptly and is slightly cut off at top edge, suggesting the sheet has been trimmed.

Sequencing of Materials: Red chalk is used to depict the nose and face profile of the sitter; this has been overdrawn with black chalk in some places. Fine lines of black chalk constitute most of the contouring of the drawing: for some facial features, and shading of face and clothing. Although red chalk played some part in the contouring and eye delineation, it is mainly used to depict the sitter's flesh tone and is more concentrated in the cheek and mouth area. Leaving the paper blank creates whites of eyes. Brown chalk is used to colour in parts of the headdress as well as the inner lapel area. The iris is depicted with watercolour, but it is not absolutely clear if the eye lashes, eyelid line, pupil and eyebrows are created in an aqueous or dry black medium.

Signs of transfer: evidence of transfer in the form of heavy indentations following most of the drawings contours: seen on the face, (including features), around head and hair, eyebrows, headdress outlines and folds, and costume outlines and folds - in some cases creating very sharp, crisp black lines from pushing the media into the trough of the indentation. There is some blind indentation also where the tracing marks stray from the media.

Table 11: Anna Meyer (Figure 6)

Sitter: Anna Meyer Figure 6	Date: c.1526	Size: 356 x 274mm
Location: Basel Kunstmuseum, Kupferstichkabinett	Inv.no: 1823.142	

Substrate: executed on cream/white unprepared laid paper with a green watercolour wash painted in around sitter, almost up to the outlines of the sitter. The drawing is in fair condition but has some staining over the surface of paper. Some stains have been touched out with opaque white pigment. The drawing has been lined with Japanese paper and inlaid into a paper.

Sequencing of Materials: Black chalk appears to have been applied first, and constitutes most of the contouring of the drawing: the face profile and features, and the contours and intricate patterning of the dress are drawn with black chalk. The black chalk is used in different ways: as a fine stick creating the thin lines of the dress patterning and hair strands, and as thicker, broader lines, seen in the banding of the dress. The amount of detailing on the sitter's dress is in contrast to the sparse detail on those drawings of her mother (Dorothea Kannengiesser, c.1526) and father (Jacob Meyer, c.1526),

Although red chalk played some part in the contouring, ie: slight red contour on tip of nose and eye, it is mainly used to depict the pale flesh tone. Leaving the paper blank creates whites of eyes. A more intense russet red chalk is used to colour in the sash of the dress. The hair is a blend of yellow and brown chalks that has then been drawn over with black chalk, delineating hair strands and creating shading at the top of the sitter's head. The golden yellow chalk is also used to pick out details of the dress around the collar. The iris is depicted with watercolour but it is not absolutely clear if the eyelashes, eye lid line, pupil and eyebrows are created in an aqueous or dry black medium.

Signs of transfer: evidence of transfer in the form of indentations, following contours of drawing on face, (including features), around head and hair, eyebrows, ear area (seen within hair but overdrawn), but none on the dress contour or intricate patterning of the

dress. Some blind indention ie: on top of her head, where the traced line slightly overshoots the drawn contour.

Table 12: Sir Thomas More (Figure 8)

Sitter: Sir Thomas More Figure 8	Date: 1527	Size: 402 x 301mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL12268 Parker 3	

Substrate: executed on creamy-white, unprepared, laid paper. The condition is fair. Small repair, visible in transmitted light, has been made to the right hand edge, infilling missing section. Sharp curtailing of hat, top and right hand edge, indicates the drawing was trimmed. The drawing is inscribed from the left and across the top: *Tho: Moor Ld Chancelour*, in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: the presence of pouncing holes has somewhat obscured what media makes up the contours, and therefore what may have been laid down first in the sequence of drawing. However, black chalk establishes some contouring of the face. Red chalk is used to delineate the eyes, not just the shape but also the eyebrows, and is still visible as a contour along parts of the sitter's true left profile and part of forehead contour, just under the hat line, true left. Red chalk, blended with black, is used for the flesh tone, and facial modelling. Red chalk is further used to depict the lips and the patch of russet red cloth under the chin of clothing. Black chalk is used in broad sweeping strokes to fill in the black of the hat, more intense in some places, creating light and shade. Brown chalk is used to depict the fur of the colour as well as the sitter's hair. Thin strokes of black chalk are used to create wispy tips of the brown fur colour, used just on the outer edges of the collar. Yellow ochre chalk is present in a band representing a cold chain.

Leaving the paper blank creates the whites of the eyes as well as the white shirt collar. The irises are depicted in azurite, (as indicated by Raman analysis, carried out in 2004). The pupils could be black chalk or black aqueous pigment. The presence of either dry or

aqueous media is also hard to confirm in the depiction of the eyelashes, pupils, and eyebrow hair overlaying the hairs depicted in red chalk.

Signs of Transfer: contours of the drawing are pricked for transfer, illustrated by the regularly spaced holes that follow all salient features and outlines

Table 13: William Warham, Archbishop of Canterbury (Figure 10)

Sitter: William Warham, Archbishop of Canterbury Figure 10	Date: 1527	Size: 401 x 310mm
Location: The Royal Collection, The Royal Library, Windsor		Inv.no: RL12272 Parker 12

Substrate: executed on creamy-white, unprepared, laid paper. The condition is fair. There is evidence of the drawing having been folded, both horizontally (fold line just under red of collar, 140mm from bottom edge) and vertically, (to the left hand side of the face of Warham, 40mm from left hand edge). Re-folding this drawing along each fold would leave only his face visible and perhaps implies it was once folded for framing. There are some staining and marks on paper. Abrasion and scratches to fur part of drawing could be intentional, although this only occurs on one side of the fur lapel, which makes it seem out of place and not part of the design. There are some fingerprint type smudges to the black chalk of the true left hand collar. Some skinning on verso, evident in transmitted light. Sharp curtailing of hat indicates the paper may have been trimmed. The drawing is inscribed from the left and across the top: *Waramus Arch Bp Cant*, in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: Black chalk establishes most of the drawing's contours. Red chalk is used to delineate the eyes. The flesh tone is applied aqueously within and up to the contours of the face, using a thin wash that contains vermilion. This is overlaid and shaded using red and white chalks, creating a particularly pink area to the sitter's true left cheek. Red chalk is used in a more concentrated manner on the lips, especially the top lip (the bottom lip being practically non-existent), cheeks and nose. It has also been used to colour in the sitter's collar. Black chalk is further used for shading and for colouring aspects of the clothing and hat and in large blocks of colour. It appears

wetted out in the hat and coat area. The fur of Warham's collar is defined using a blend of yellow and brown and black chinks. Finer lines of black chalk are used to create wisps of hairs on the fur collar. The presence of either dry or aqueous media is also hard to confirm in the depiction of the eyelashes, pupils, eyebrows and lip line. The whites of the eyes appear to have been created by the application of white chalk. The irises are created using a greeny brown watercolour. Pupils could be black chalk or black aqueous pigment.

Signs of Transfer: there are signs of transfer in the form of indentations – some blind, some following the contours of the drawing. The ones that follow the drawing creating thinner, more defined contours caused from pushing in the media whilst tracing. These are seen around the hat and shoulder, for example, as well as either side of the red collar, creases of upper nose and following the fringe of the sitter's hair. Faint and sporadic indentations are also seen around the sitter's eyes, lower lid.

Table 14: Sir Henry Guildford (Figure 12)

Sitter: Sir Henry Guildford Figure 12	Date: 1527	Size: 388 x 298mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL 12266, Parker 10	

Substrate: executed on creamy-white, unprepared, laid paper. The condition is fair but there is some oily staining, partly linear but mainly scattered spots. There is a central horizontal fold, measuring 142mm from the bottom edge on the left hand side, rising to 152mm up from bottom edge on the right hand side. A rope mark from the paper drying process extends roughly either side of the fold line. Sharp curtailing of hat indicates the paper may have been trimmed. The drawing is inscribed from the left and across the top: *Harry Guldeford Knight*, in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex ‘sandwich’ method, described in Chapter One.

Sequencing of Materials: Black chalk establishes most of the drawing’s contours. Red chalk is used to delineate the eyes and is still visible also along some facial features, ie: sitter’s true left upper profile, and around nose tip, but is overdrawn with black. The whites of the eyes appear to have been created by leaving this area blank. The facial contours are filled in with a flesh tone, (not quite extending to the entire neck area), created by stumping red, black chalk and yellow (?), chalks. Black chalk is used extensively to compose the sitter’s costume and hat as well as to shade the face, creating a rather furry effect to the sitter’s true left cheek. Black chalk creates the lip line and is wetted out to create the hair and then drawn over with thin chalk in a linear fashion, creating strands. The irises are created from what appears to be a brown watercolour. Pupils could be black chalk or black aqueous pigment. The presence of either dry or aqueous media is also hard to confirm in the depiction of the eyelashes and eyebrows.

Signs of Transfer: there are no signs of transfer.

Table 15: Lady Mary Guildford (Figure 14)

Sitter: Lady Mary Guildford Figure 14	Date: 1527	Size: 552 x 385mm
Location: Basel Kunstmuseum, Kupferstichkabinett		Inv.no: 1662.35

Substrate: executed on creamy-white, unprepared, laid paper; the size, orientation of the chain lines (vertical), as well as the location of the watermark (towards the lower edge) indicate it was executed on a whole sheet of mould-made paper. The paper is in fair condition, although there is some staining, a repaired tear (left hand edge) and ingrained dirt. There is a central horizontal fold, 265mm up from the bottom edge (not quite half way). The drawing has been inlaid and mounted.

Sequencing of Materials: The drawing has suffered some erosion of the chalks. The sequencing of media is not always clear because of the multi-layering of the chalks. Black and red chalks appear to have been applied first. The red chalk delineates the eye shape, for example, whilst the black chalk creates the bulk of the contouring, capturing the shape of the sitter's face and costume. Black chalk plays a major part, making up both initial drawing contours as well as reinforcing lines that need more definition, such as the lip line, edges of the dress contours and encircling some yellow decoration on the top of the dress bodice. The black chalk is used in various ways: in thin sticks for the finer details such as the necklace and true left shoulder line and then in a more solid, wider form to create broad sweeping blocks of black, filling in the larger areas. A composition of blended chalks (mainly red but with, yellow and black) creates the flesh tone of the sitter's face and chest. Leaving the paper blank in the eye area creates the whites of the eyes. Broad sweeps of a golden yellow chalk are under and over the black chalk depicting the bodice, but fill in the black borders of the headdress. Wetted out brown chalk fills in the headdress banding. Although hard to decipher, brown watercolour appears to have been used for the irises, and a dry brush with black aqueous media picks out the eyelid lines, pupils and eyelashes.

Signs of transfer: there are no signs of transfer.

Table 16: William Reskimer (Figure 16)

Sitter: William Reskimer Figure 16	Date: c.1533	Size: 293 x 212mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL12237 Parker 31	

Substrate: executed on pink prepared, laid paper. The condition is fair. The pink preparation is applied evenly. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. There is a speckling of silvery grey spots, most prevalent on the outer edges, perhaps the result of darkening vermilion (see Chapter Three). A rectangular shaped stain is obvious, its top edge is across the forehead of the sitter; its origin is unknown. Damage, resembling a patch, is evident on the sitter's face, next to the true left eye. Condition reports from the 1970s at Windsor suggest that this is was in fact a flap of paper that had been folded backwards, which was then unfolded and re-positioned during the conservation and remounting campaign (see Chapter One for information on treatment and mounting). The drawing is inscribed from the left and across the top: *Reskeimeer a Cornish* and then continuing on the right side, *Gent:* in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: Black chalk establishes most of the drawing's contours. Red chalk is used to delineate the eyes. The contour of the nose, rather thick in comparison to many other portraits, appears to be a combination of black and red chalk. The flesh tone, already established by the pink preparation, is further enhanced and individualised with red and black chalk, adding shape and depth. Black chalk is used for shading and for colouring aspects of the clothing and hat. The beard is an array of coloured chinks, layering red, brown and yellow smudges and then thin strands of each hue of chalk, as well as black, picking out individual hairs to create depth. Some brown

chalk is also used to colour in an aspect of the sitter's clothing, above the coat collar. The presence of either dry or aqueous media is hard to confirm in the depiction of the eyes, but pupils appear to be rendered in aqueous black, as do the eyelashes. The irises are created in a beautiful bluey green, leaving lighter patches to create highlights in the eyes.

Signs of Transfer: there are signs of transfer in the form of indentations along some of the contours of the drawing: the ear, the outline following the back of the sitter's head and parts of the clothing, for example. These create a thinner, more defined contour caused from pushing in the media whilst tracing. None of the sitter's more salient facial features, such as eyes, and nose contour are indented.

Table 17: Charles de Solier, Sieur de Morette (Figure 18)

Sitter: Charles de Solier, Sieur de Morette Figure 18	Date: 1534/35	Size: 330 x 249mm
Location: Staatliche Kunstsammlungen, Kupferstichkabinett Dresden	Inv.no: C1977-156	

Substrate: executed on pink prepared, laid paper. The condition is fair. All four corners have been cut off, leaving the paper in a lozenge shape. The drawing has been laid down onto a secondary thin board, decorated with gold, pink and black wash lines. The pink preparation is streaky in application and more wash-like than opaque. It is hard to account for the curiously patchy look of the outer edges of the preparation, where it looks like it has been wiped off. There are stains and grubby marks across the surface. There are a number of collectors' marks, bottom right hand corner: 'R' = J Richardson, 'RH' = R Holditch and 'WE' = William Esdaile

Sequencing of Materials: There is a high level of finish and attention to detail on the sitter's face in this drawing; the condition of the media is very good. The layering of different types of media makes it harder to be sure of the exact order of the drawing process. However, black chalk plays a significant part in establishing the contouring of the clothing and aspects of the face. It is not possible to establish if red chalk played a more important role in the initial drawing in capturing the sitter's features because of the overdrawing of other media, but it does delineate the eye shape before other media is laid on top. The foundation of the flesh tone from the pink preparation is further modelled with red and black chalk, used more intensely in some areas than others (under the eyes, around the nose, edges of the cheeks, for instance), creating depth and shadow. The texture of the chalks over the paper appears skin-like. Although the black hat has been painted in a black watercolour wash, there is evidence of the initial drawing having been in black chalk, as lines appear from beneath the hat.

Touches of yellow chalk appear on the edge of the blank hat badge. Yellow chalk plays a more significant part in the depiction of Solier's magnificent beard and head of hair.

Blended and then layered in strands with a redder chalk provide an effective way of depicting the beard. These are then further overlaid with aqueous black and white opaque watercolour, applied with a brush. The head hair, although slightly darker, is also formed in this way.

The sitter's irises, a beautiful deep nuanced green, are encircled with black aqueous media.

Aqueous black media is used in different ways: as fine and precise lines seen in the nose, lip lines and eyelids; and it is also used to add the individual hairs of the eyebrows, where it is painted over the yellow and red-blended chalk foundation. The pupils are also painted in black.

Finally, white opaque watercolour forms the highlight on the end of Solier's nose as well as the grey/white areas of the beard. It is used with delicacy to depict the grey eyelashes.

Signs of Transfer: there are no signs of transfer on this drawing.

Table 18: Unknown Gentleman (Figure 20)

Sitter: Unknown Gentleman Figure 20	Date: 1535	Size: 298 x 222mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL12208 Parker 33	

Substrate: executed on pink prepared, laid paper. The condition is fair. The pale pink preparation is applied evenly. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. There are stains and grubby marks across the surface. The drawing has no inscription. There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: black chalk establishes most of the drawing's contours, for the face and costume of the sitter. Black chalk is used to colour and add patterning to the jacket. It is also used to different intensities to create light and shade on the black hat. Red chalk is used to delineate the eyes and add definition to the shape of the face. It is also for the facial hair, mixed with yellow to produce a gingery colour; this is slightly darker for the rendition of the head hair. The head hair is overdrawn with black chalk, creating thin strands of individual hairs. The irises are formed out of a striking aqua blue watercolour. Aqueous black media, applied by brush, defines facial features: the eyes are painted delicately, picking out their shape, encircling the iris, forming the pupils, eyelashes and the eyebrows. Aqueous black also forms the lip line, nose and nostrils and the individual hairs of the moustache, adding depth to the chalk media below. There is a small red sequence of a design (?) on the upper left hand edge, executed with a very fine stick of red chalk, illustrating the potential delicacy of the medium.

Signs of Transfer: there are signs of transfer in the form of indentations along some of the contours of the drawing: the ear, the outline following the back of the sitter's head

and parts of the clothing, for example. These create a thinner, more defined contour caused from pushing in the media whilst tracing. None of the sitter's more salient facial features, such as eyes, lip line and nose contour are indented.

Table 19: Simon George of Quocote (Figure 22)

Sitter: Simon George of Quocote Figure 22	Date: c. 1535	Size: 281 x 193mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL12208 Parker 35	

Substrate: executed on pink prepared, laid paper. The condition is fair. The pale pink preparation is applied evenly. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. There are stains and grubby marks across the surface. A horizontal fold mark measures 148mm up from the bottom edge. A vertical mark running through the sitter's face does not appear to be the result of a fold. The drawing has been inscribed, lower edge, to the right: *S George of Cornwall* in gold and red, in a script similar to that found on the drawing of Sir Philip Hoby, (Parker 50). There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: The layering of different types of media in this drawing makes it harder to be sure of the exact order of the drawing process. Most initial contours are overpainted in aqueous black; the exception to this is the rendering of the costume in black chalk, which has been abraded and is now very faint. Black chalk is used to shade the face, depict the hat feather and render the eyebrows; it is also still visible as the initial media to depict the sitter's hair. It is not possible to establish if red chalk played a more important role in the initial drawing in capturing the sitter's features because of the overdrawing of other media, but it does delineate the eye shape before other media is laid on top. The foundation of the flesh tone from the pink preparation is further modelled with red chalk, giving definition to the nose, lips, ear, eyelids and part of the cheek.

Yellow and red chinks are blended to depict the facial hair. Aqueous black media is used in different ways: as fine and precise lines, seen in the nose, eye and lip lines, and

in the individual hairs that overlay the yellow and red chalk of the moustache. Intermittent strokes of black are applied to suggest the beard on the chin and on the side of the face. The profile of the sitter's face is followed with precision; a small flick of the brush as it is taken off the line is visible just before the tip of the nose. A mass of intense black colours the sitter's hat. The eyelids and eyelashes are similarly depicted with finesse. The pupils are also painted in black. A moss-green watercolour, encircled with black, is used to establish the iris; using a less intense hue creates the highlights.

Signs of Transfer: there are signs of transfer in the form of indentations along some of the contours of the drawing: the ear, the nape of the neck parts of the clothing, for example, (see Fig.22.4). The tracing tool has left a mark (costume area) but it does not appear to be metalpoint and the lines were still partly visible in IR, this could be explained by the fact that the initial contours were drawing with black chalk (for a detailed discussion of past and present interpretations, see Chapter 4). None of the sitter's more salient facial features, such as eyes, lip line and nose contours are indented.

Table 20: Sir Richard Southwell (Figure 24)

Sitter: Sir Richard Southwell Figure 24	Date: 1536	Size: 370 x 281mm
Location: The Royal Collection, The Royal Library, Windsor		Inv.no: RL12242

Substrate: executed on pink prepared, laid paper. The condition is fair. The pink preparation is streaky in application and more wash-like than opaque. Brush marks are clearly visible. Microscopic examination revealed an even, but dense dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. There are stains and grubby marks across the surface. Skinning on verso is evident in transmitted light. Paper has been trimmed, indicated by curtailing of lettering. An annotation in black ink written vertically on the right hand edge reads: *Die augen ein wenig gelbatt* (the eyes a little yellowish). The drawing is inscribed from the left and across the top: *Rich: Southwell Knight* in crimson overlaid with gold pigment. It is also inscribed centre, left...*NNO* and centre, right: *ETTATIS SVA/33* in black chalk. There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: The layering of different types of media in this drawing makes it harder to be sure of the exact order of the drawing process and there is still uncertainty about the media of some of the lines. However, black chalk plays a significant part in establishing the contouring of the clothing and aspects of the face. It is not possible to establish if red chalk played a more important role in the initial drawing in capturing the sitter's features because of the overdrawing of other media, but it does delineate the eye shape before other media is laid on top. The foundation of the flesh tone from the pink preparation is further modelled with red chalk, used more intensely in some areas than others (nose and lips, for instance). The texture of the chalk in these areas appears grainy. Black chalk also appears to have been used in this fashion

in shading the face and on thicker lines on the costume. Wetted black chalk is used to colour the hat. The line that delineates the nape of the neck is drawn inside the chalked shading – suggesting a change to the drawing.

Aqueous black media is used in different ways: as fine and precise lines, seen in the nose and lip line. Small strokes on the lip line create the creases of the lip. The eyelids and eyelashes are similarly depicted with finesse. The pupils are also painted in black. It is not clear if the true left side of the sitter's face is outlined in chalk or aqueous black, although the chin line is picked out in aqueous black. There are some areas of aqueous black, which are not so sympathetic to the rest of the drawing's detailing: for example, the hat contours and shading and aspects of the hair are created in thicker blocks of black. Brown watercolour depicts the irises, encircled with aqueous black. Yellow chalk picks out the colour of the sitter's gold chain, which is just visible on the left-hand side. Red and black chinks, present on the clothing in parallel lines, have been drawn over the primary lines of black chalk and the indented, traced lines.

Signs of Transfer: there are signs of transfer on this drawing in the form of indentations that follow most of the drawn lines of the costume (see Fig.24.5). The only facial areas that have indented lines are parts of the ear, nape of the neck and the sitter's fringe. The media of this drawing is not always identifiable; abrasion of the black chalk makes it unclear if the tracing tool has left a trough into which the black chalk sits, or if the marks are made by a metalpoint. When examined under IR, the indented lines do not disappear, which would be expected with metalpoint drawing in silver, but this could be explained by the fact that the initial contours were drawn with black chalk (for a detailed discussion of past & present interpretations, see Chapter 4). Raman analysis detected carbon in these indented lines, which could be residues of black chalk.

Table 21: Jane Seymour (Figure 26)

Sitter: Jane Seymour Figure 26	Date: 1536/37	Size: 503 x 285mm
Location: The Royal Collection, The Royal Library, Windsor		Inv.no: RL 12267, Parker 39

Substrate: very pale pink prepared paper measuring 503 x 285mm, including an additional strip attached to the bottom edge, measuring 65mm on the right hand edge, 69mm on the left: the overlap is about 2mm. The similarity of the papers and the way the drawing material overlaps the join indicate that this strip is contemporaneous. There are two fold lines, one 211mm up from the bottom edge, the other 53mm up from the bottom edge. The surface texture indicates that the drawing was executed on the felt-side of the paper. The pink preparation is evenly applied and quite pale in tone. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. The drawing is inscribed: *Jane Seymour Queen* in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: the drawing is in poor condition, making it difficult to interpret. But it is evident that red chalk was applied first to establish the sitter's eyes. Although much abraded, there are still traces of red chalk for further modelling of the face and flesh tone, and it is evident around the nostrils and on the lips. It is not possible to establish if red chalk played a more important role in the initial drawing in capturing the sitter's features because of the overdrawing of other media as well as the abrasion.

The black chalk is also abraded, but seems to have played a vital part in establishing many of the contours of the drawing. Black chalk is prevalent on the sitter's headdress, facial shading and striations on the headband. It was also used to draw the beaded

necklace, shade the sitter's face, and for the costume. Wetted black chalk was used to depict the black part of the headdress: wetting it helped fill a larger area more quickly.

Yellow and brown chalks were added after the contouring of the headdress. The brown chalk appears blended and stumped. The colour, and light and shade of the irises were established with bluey-green watercolour. Black aqueous media, applied with a brush, was applied last. The black aqueous media encircling the bluey-green irises was applied with a drier brush. A wetter and more intense black was used to render the pupils, eyelashes, and the eyelids. Under magnification a slight white highlight is visible on Seymour's true left eye.

Signs of transfer: the drawing has a number of lines, some of which are indented, such as beading on the headdress, nostrils, face contour and costume. The lines, both indented and not, that are visible on the costume and hands do not always follow the composition exactly. At present, their function is unknown and it is unclear whether they are tracing marks made by a stylus, or lines drawn with metal point. Raman analysis detected carbon in these indented lines, which could be residues of black chalk. When examined under IR, the indented lines remained visible, which indicates silverpoint was not used, but the visibility of the line could be explained by the fact that the initial contours were drawn with carbon-based black chalk. Indented lines following the contours of the beading on the headdress, nostrils, eyelid and face provide evidence of signs of transfer.

Table 22: Lady Elizabeth Audley (Figure 28)

Sitter: Lady Elizabeth Audley Figure 28	Date: c.1538	Size: 292 x 207mm
Location: The Royal Collection, The Royal Library, Windsor		Inv.no: RL 12191, Parker 58

Substrate: pink prepared paper. The priming has been applied evenly, although there are some areas of blotchy stains as well as some darkening of vermilion on the outer edges (see Chapter One). There is an infill repair on her true right shoulder. The surface texture indicates that the drawing was executed on the wire-side of the paper. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. There was also a more sporadic scattering of a blue pigment, which could not be identified. Annotations on the drawing, perhaps in lead point or black chalk, indicate colours of the dress and jewellery: on the dress: 'samet' (velvet) and 'rot damast' (red damask). On the brooch: 'rot' (red) and 'w', thought to indicate white and 'go (?)' (gold) on the necklace. A sketch of a small cloverleaf to the right of the pendant indicates green. There is a small sketch of a woman's face and naked torso, upper right hand corner, in fine black chalk. The drawing is inscribed from the left and across the top: *The Lady Audley*, in crimson over-laid with gold pigment. There are residues of pink preparation on the verso. There are touches of reddish-pink pigment around edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex 'sandwich' method, described in Chapter One.

Sequencing of Materials: The red chalk was applied first to establish the sitter's eyes, followed by black chalk and then the aqueous media - black and the blue-grey watercolour for the irises, applied with a brush. It is not possible to establish if red chalk played a more important role in the initial drawing in capturing the sitter's features because of the overdrawing of other media, and extensive media loss. Red chalk also features in delineating the sitter's headdress. Although much abraded, there

are still traces of red chalk for modelling of the face and flesh tone, seen around the nostrils. Red chalk, brown chalk and what appears to be vermilion-based watercolour were used to model the lips: a feature that is still strong in tone; this illustrates the complexity of Holbein's layering of materials.

Black chalk appears to have been used to establish the contour of the face, which was overlaid with black aqueous media. The black chalk is much abraded and virtually nothing of the costume lines remain, making the media harder to read. It is, however, still legible as shading (under chin) and is present on the sitter's headdress, over the yellow chalk and as single hairs drawn over the brown chalk depicting the hair. Black chalk is evident under the aqueous intense black of the lip line, suggesting it was used prior to the addition of the more permanent aqueous media.

The black aqueous media was applied last, with a brush, to establish the lip line, nose, eyes, eyelashes, eyebrows as well as hair strands; this media was positively identified with Raman as carbon based. Nostril definition shows Holbein using multiple small strokes of the brush. Aqueous black media fixed the lines, added depth and was easily applied without disturbing the underlying, more friable layers.

The media of the necklace and the annotations are more problematic to identify. Both have previously been catalogued as metalpoint. Under IR, both areas are still legible; this could indicate the presence of lead point, but makes silverpoint unlikely as silverpoint disappears in IR. Under magnification, the media of the necklace appears to be black chalk, and further, supported by the Raman analysis, which detected carbon. However, the exact nature of this media has still not been definitively identified.

Signs of transfer: there are no indented lines on this drawing, but since the act of tracing does not always leave an indentation, it is not possible to say if it has been traced over or not.

Table 23: Edward, Prince of Wales (Figure 30)

Sitter: Edward, Prince of Wales Figure 30	Date: c.1538	Size: 267 x 226mm
Location: The Royal Collection, The Royal Library, Windsor	Inv.no: RL12200 Parker 46	

Substrate: executed on pink prepared, laid paper. The condition is fair in terms of substrate, but poor in terms of image loss. Microscopic examination revealed an even dispersion of vermilion and calcium carbonate, both confirmed with Raman analysis. The pink preparation is applied evenly but appears quite blotchy. The drawing is inscribed from the left and across the top: *Edward Prince* in crimson overlaid with gold pigment. There are touches of reddish-pink pigment around the edges from previous mounting method (see Chapter One). The drawing has been mounted using the Perspex ‘sandwich’ method, described in Chapter One.

Sequencing of Materials: There is very little in the way of drawing media left on this portrait. Black chalk is still obvious in the delineation of the face contour and aspects of the hat. Red chalk is just about evident in the delineation of the eyes and the rendering of the sitter’s plump lips. Black aqueous media is used to create the lip line, eye lids, pupils and nostrils. The irises are just about visible and appear to be executed in a blue watercolour.

Signs of Transfer: there are signs no signs of transfer on this drawing.

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